



PAKISTAN ENGINEERING COUNCIL

ESTABLISHMENT OF PEC ENGINEERING COMPLEX AT DHA CITY KARACHI

CONSTRUCTION OF BOUNDARY WALL & GATE HOUSES (PHASE – I, PACKAGE – 1)

BIDDING & CONTRACT DOCUMENTS

VOLUME-I

INVITATION TO BIDS
INSTRUCTIONS TO BIDDERS
BIDDING DATA
FORM OF BID & APPENDICES TO BID
BILL OF QUANTITIES
CONDITIONS OF CONTRACT
SPECIFICATION
DRAWINGS

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INVITATION FOR BIDS



INSTRUCTIONS TO BIDDERS (IB)



INSTRUCTIONS TO BIDDERS

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INSTRUCTIONS TO BIDDERS

A. GENERAL

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|-------------|-------------------------|--|
| IB.1 | Scope of Bid | <p>1.1 The Employer as defined in the Bidding Data hereinafter called "the Employer" wishes to receive bids for the construction and completion of works as described in these Bidding Documents, and summarized in the Bidding Data hereinafter referred to as the "Works".</p> <p>1.2 The successful Bidder will be expected to complete the Works within the time specified in the Bidding Data.</p> |
| IB.2 | Source of Funds | <p>2.1 The Employer has applied for/received a funding from the source(s) in various currencies towards the cost of the project specified in the Bidding Data and it is intended that part of the proceeds of this funding will be applied to eligible payments under the Contract for which these Bidding Documents are issued.</p> |
| IB.3 | Eligible Bidders | <p>3.1 This Invitation for Bids is open to all Bidders meeting the following requirements at the time of submission of Bids and thereafter:</p> |

- (a) Duly prequalified for this bidding process;
- (b) Duly licensed by the Pakistan Engineering Council (PEC) in the category relevant to the value of the Works in the relevant field of specialization.

However, a Foreign Constructor can submit provisional licence with its Bid but the Foreign Constructor will be required to submit standard licence after award of Contract and before start of work.

Foreign Constructor shall not be eligible to participate in bidding individually. Foreign Constructor shall enter into joint venture with Pakistani Constructor registered with the Pakistan Engineering Council in equivalent/compatible category and submit the joint venture agreement to the Employer before participating in bidding in accordance with PEC Construction and Operation of Engineering Works Bye-laws, 1987;

- (c) Pakistani Constructor must be on Active Taxpayer List of the Federal Board of Revenue and provincial revenue authority/ board where applicable; and
- (d) All partners constituting the Bidder including proposed subcontractors do not appear in the list of debarred/blacklisted firms and individuals on the websites of PEC and Federal & Provincial Procurement Regulatory Authorities and have not been declared debarred/blacklisted by foreign country, international organizations or other foreign institutions.



- IB.4 Eligible Materials, Equipment and Services**
- 4.1 All materials, equipment and services to be supplied under this Contract shall have their origin in eligible countries 7ndirectl under paragraph 4.4 hereunder.
- 4.2 For purpose of this Clause, "origin" means the place where the Goods are mined, grown or produced or from where the ancillary services are supplied. Goods are produced when, through manufacturing, processing or substantial and major assembling of components, a commercially recognized product results that is substantially different in basic characteristics or in purpose or utility from its components.
- 4.3 The origin of Goods and Services is distinct from the nationality of the Bidder.
- 4.4 Eligible countries to participate in this bidding process are those which have been notified by Ministry of Interior, Government of Pakistan as Business Friendly Countries (BVL); information can be accessed through following link:
<http://www.dgip.gov.pk/Files/Visa%20Categories.aspx#L>
- IB.5 One Bid per Bidder**
- 5.1 Each Bidder shall submit only one Bid either by himself, or as a partner in a joint venture. A Bidder who submits or participates in more than one Bid (other than alternatives pursuant to Clause IB.17) will be disqualified.
- IB.6 Site Visit**
- 6.1 The Bidders are advised to visit and examine the Site of Works and its surroundings and obtain for themselves on their own responsibility all information that may be necessary for preparing the Bid and entering into a contract for construction of the Works. All cost in this respect shall be at the Bidder's own expense.
- 6.2 The Bidders and any of their personnel or agents will be granted permission by the Employer to enter upon his premises and lands for the purpose of such inspection, but only upon the express condition that the Bidders, their personnel and agents, will release and indemnify the Employer, his personnel and agents from and against all liability in respect thereof and will be responsible for death or personal injury, loss of or damage to property and any other loss, damage, costs and expenses incurred as a result of such inspection.
- B. BIDDING DOCUMENTS**
- IB.7 Contents of Bidding Documents**
- 7.1 The Bidding Documents, in addition to Invitation for Bids, are those stated below and should be read in conjunction with any Addenda issued in accordance with Clause IB.9:



1. Instructions to Bidders;
2. Bidding Data;
3. Evaluation Criteria and Qualification Updating Forms;
4. General Conditions (GC);
5. Particular Conditions (PC):
 - Part A – Contract Data;
 - Part B – Special Provisions;
6. Specifications (SP):
 - Part A – Specific Provisions;
 - Part B – Technical Provisions;
7. Letter of Bid;
8. Schedules to Bid;
9. Standard Forms:
 - (i) Form of Bid Security;
 - (ii) Letter of Acceptance;
 - (iii) Form of Contract Agreement;
 - (iv) Form of Performance Security;
 - (v) DAAB Agreement;
 - (vi) Form of Mobilization Advance Guarantee;
10. Drawings.

7.2 The Bidders are expected to examine carefully the contents of all the above documents. Failure to comply with the requirements of Bid submission will be at the Bidder's own risk. Pursuant to Clause IB.26, bids which are not substantially responsive to the requirements of the Bidding Documents will be rejected.

IB.8 Clarification of Bidding Documents, Pre-Bid Meeting

- 8.1 Any prospective Bidder requiring any clarification(s) in respect of the Bidding Documents may notify the Employer in writing at the Employer's address indicated in the Invitation for Bids. The Employer will respond to any request for clarification which he receives earlier than the period specified in the **Bidding Data**, prior to the deadline for submission of bids.
- 8.2 Copies of the Employer's response will be forwarded to all purchasers of the Bidding Documents, including a description of the enquiry but without identifying its source.
- 8.3 The Employer may, on his own or at the request of any prospective Bidder(s), hold a pre-bid meeting to clarify issues and to answer any questions on matters related to the Bidding Documents. The date, time and venue of pre-bid meeting, if convened, are as stipulated in the **Bidding Data**. All prospective Bidders or their authorized representatives shall be invited to attend such a pre-bid meeting.
- 8.4 The Bidders are requested to submit questions, if any, in writing so as to reach the Employer not later than seven (7) days before the proposed pre-bid meeting.



**IB.9 Amendment
of Bidding
Documents**

- 8.5 Minutes of the pre-bid meeting, including the text of the 9ndirect raised and the replies given, will be transmitted without delay to all purchasers of the Bidding Documents. Any modification of the Bidding Documents listed in Sub- Clause IB.7.1 hereof which may become necessary as a result of the pre-bid meeting shall be made by the Employer exclusively through the issue of an Addendum pursuant to Clause IB.9 and not through the minutes of the pre-bid meeting.
- 8.6 Absence at the pre-bid meeting will not be a cause for disqualification of a Bidder.
- 9.1 At any time prior to the deadline for submission of bids, the Employer may, for any reason, whether at his own 9ndirectly or in response to a clarification requested by a prospective Bidder, modify the Bidding Documents by issuing addendum.
- 9.2 Any addendum thus issued shall be part of the Bidding Documents listed in Sub-Clause IB.7.1 hereof and shall be communicated in writing to all purchasers of the Bidding Documents. Prospective Bidders shall acknowledge receipt of each addendum in writing to the Employer.
- 9.3 Such addendum shall be issued not later than number of days prior to the deadline for submission of bids, specified in the **Bidding Data**. To afford prospective Bidders reasonable time in which to take an addendum into account in preparing their bids, the Employer may extend the deadline for submission of bids in accordance with Clause IB.20.

C. PREPARATION OF BIDS

**IB.10 Cost of
Bidding**

- 10.1 The Bidders shall bear all costs associated with the preparation and submission of their respective bids and the Employer will in no case be responsible or liable for those costs, regardless of the conduct or outcome of the bidding process.

**IB.11 Language
of Bid**

- 11.1 The Bid and all correspondence and documents related to the Bid exchanged by a Bidder and the Employer shall be in the Bid language stipulated in the **Bidding Data** and Particular Conditions of Contract. Supporting documents and printed literature furnished by the Bidders may be in any other language provided the same are accompanied by duly certified translation of the relevant parts in the Bid language, in which case, for 9ndirec of 9ndirectly of the bid, the translation in Bid language shall prevail.



**IB.12 Documents
Comprising
the Bid**

- 12.1 Each Bidder shall:
- (a) submit duly filled in, signed and stamped Letter of Bid and completed Schedules to Bid as required, including priced Bill of Quantities, in accordance with Clause IB.18 hereof;

- (b) submit Bid Security in accordance with Clause IB.16 hereof;
- (c) submit alternative proposal, if permissible in accordance with Clause IB.17;
- (d) submit a written power of attorney authorizing the signatory of the Bid to act for and on behalf of the Bidder. The name and position held by each person signing the authorization must be typed or printed below the signature;
- (e) submit the Qualification Updating Forms duly filled in, signed and stamped along with requisite attachments, to establish that the Bidder continues to meet the Eligibility and Qualification Criteria set out in the Pre-Qualification Documents and as provided in the Section "Evaluation Criteria and Qualification Updating Forms";
- (f) furnish a technical proposal taking into account the various Schedules to Bid, specially the following:
 - Schedule-C to Bid, Proposed Construction Schedule;
 - Schedule-D to Bid, Method of Performing the Work;
 - Schedule-E to Bid, List of Major Equipment;
 - Schedule-F to Bid, Organization Chart for Supervisory Staff;and other pertinent information, such as mobilization programme, etc.

12.2 Bids submitted by a joint venture of two (2) or more firms specified in **Bidding Data**, shall comply with the following requirements:

- (a) the bid, and in case of a successful bid, the Form of Contract Agreement shall be signed by all members so as to be legally binding on all partners;
- (b) one of the joint venture partners shall be nominated as being in-charge; and this authorization shall be evidenced by submitting a power of attorney signed by legally authorized signatories of all the joint venture partners;
- (c) the partner-in-charge shall always be duly authorized to deal with the Employer regarding all matters related with and/or incidental to the execution of Works as per the terms and Conditions of Contract and in this regard to incur any and all liabilities, receive instructions, give binding undertakings and receive payments on behalf of the joint venture;
- (d) all partners of the joint venture shall at all times and under all circumstances be liable jointly and severally for the execution of the Contract in accordance with the



Contract terms and a statement to this effect shall be included in the authorization mentioned under Sub-Para(b) above as well as in the Letter of Bid and in the Form of Contract Agreement (in case of a successful bid); and

- € a copy of the agreement entered into by the joint venture partners shall be submitted with the bid stating the conditions under which it will function, its period of duration, the persons authorized to represent and obligate it and which persons will be directly responsible for due performance of the Contract and can give valid receipts on behalf of the joint venture, the proportionate participation and corresponding duties & responsibilities of the several firms forming the joint venture, and any other information necessary to permit a full appraisal of its functioning. No amendments/ modifications whatsoever in the joint venture agreement shall be agreed to between the joint venture partners without prior written consent of the Employer.

12.3 Bidders shall also submit proposals of work methods and schedule, in sufficient detail to demonstrate the adequacy of the Bidders' proposals to meet the technical specifications and the completion time referred to in Sub-Clause IB.1.2 hereof.

IB.13 Bid Prices

13.1 The price and discount if any quoted by the Bidders in the Letter of Bid and in the Bill of Quantity shall conform to the requirement specified below:

13.2 The Bidder shall quote any discounts and the methodology for their application.

13.3 If bids are being invited for individual lots (contracts) or for any combination of lots, the Bidders can offer discounts for the individual lots (contracts) as well as for award of more than one Contract and shall specify in their bid.

13.4 Unless stated otherwise in the Bidding Documents, the Contract shall be for the whole of the Works as described in Sub-Clause IB.1.1 hereof, based on the unit rates and/or prices.

13.5 The Bidders shall fill in rates and prices for all items of the Works described in the Bill of Quantities. Items against which no rate or price is entered by a Bidder will not be paid for by the Employer when executed and shall be deemed covered by rates and prices for other items in the Bill of Quantities.

13.6 All duties, taxes and other levies payable by the Contractor under the Contract, or for any other cause, as on the date 28 days prior to the deadline for submission of bids shall be included in the rates and prices and the total Bid Price submitted by a Bidder.



Additional/reduced duties, taxes and levies due to subsequent additions or changes in legislation shall be reimbursed/ deducted as per Sub Clause 13.6 [*Adjustment for Changes in Laws*] of the Conditions of Contract.

- 13.7 The rates and prices quoted by the Bidders are subject to adjustment during the performance of the Contract in accordance with the provisions of Sub-Clause 13.7 [*Adjustments for Changes in Cost*] of the General Conditions of Contract. The Bidders shall furnish the prescribed information for the price adjustment formulae in Schedule-A to Bid, and shall submit with their bids such other requisite supporting information if 12ndirec under the said Schedule.

IB.14 Currencies of Bid and Payment

- 14.1 The unit rates and the prices shall be quoted by the Bidder entirely PKR.

A Bidder expecting to incur expenditures in other currencies for inputs to the Works supplied from outside the Employer's country (referred to as the "Foreign Currency Requirements") shall indicate in Table III of Schedule-A to Bid the proportion of the Bid Price (excluding Provisional Sums) needed by him for the payment of such Foreign Currency Requirements; in such case the unit rates and the prices shall be quoted by the Bidder in Equivalent PKR.

- 14.2 The rates of exchange to be used by the Bidder for currency conversion shall be the TT Selling Rates published or authorized by the State Bank of Pakistan prevailing on the date twenty eight (28) days prior to the deadline for submission of bids. Such rates shall be notified by the Employer not later than fourteen (14) days prior to the deadline for submission of Bids.

For the purpose of payments, the exchange rates used in Bid preparation shall apply for the duration of the Contract.

IB.15 Bid Validity

- 15.1 Bids shall remain valid for the period stipulated in the **Bidding Data** after the date of Bid Opening specified in Clause IB.23.

- 15.2 In exceptional circumstances, prior to expiry of the original bid validity period, the Employer may request that the Bidders extend the period of validity for a specified additional period which normally may not be more than the original bid validity period. The request and the responses thereto shall be made in writing. A Bidder may refuse the request without forfeiting his Bid Security. A Bidder agreeing to the request will not be required or permitted to modify his bid, but will be required to extend the validity of his Bid Security for the period of the extension, and in compliance with Clause IB.16 in all respects.



IB.16 Bid Security

- 16.1 Each Bidder shall furnish, as part of his bid, a Bid Security in original form in the amount stipulated in the **Bidding Data** in PKR or an equivalent amount in a freely convertible currency.

- 16.2 The Bid Security shall be, at the option of the Bidder, in the form of Call Deposit Receipt (CDR)/ Pay Order or a Security issued in the prescribed form included in the Bidding Documents, by (a) a Scheduled Bank in Pakistan or (b) a foreign bank duly counter-guaranteed by a Scheduled Bank in Pakistan or (c) an Insurance Company listed in the **Bidding Data** and rated by PACRA/VIS of rating as provided in Table below in favour of the Employer valid for a period 14 days beyond the Bid Validity date. The Bid Security of Joint Venture shall be in the name of Joint Venture or Lead/either Firm of the JV or in ratio of shares of the individual JV partners, submitting the bid.

Bid Price (In Eq. million PKR)	Minimum Rating of Insurance Companies
Up to 1000	A (+)
1001 to no limit	AA

[Note: Insurance Company includes Joint Ventures of Insurance Companies also]

- 16.3 Any Bid not accompanied by an acceptable Bid Security shall be rejected by the Employer as non-responsive.
- 16.4 The Bid Securities of the Bidders except the lowest three will be returned by the Employer within twenty eight (28) days from the opening of Bids, provided a Bidder requests for the return of its Bid Security, or upon the expiry of original validity of Bid Security or as extended, whichever is earlier.
- 16.5 The Bid Security of the lowest three Bidders including the successful Bidder will be returned when the successful Bidder has furnished the required Performance Security.
- 16.6 The Bid Security may be forfeited:
- if the Bidder withdraws his bid except as provided in Sub Clause IB.22.1;
 - if the Bidder does not accept the correction of his Bid Price pursuant to Sub Clause IB.28.2 hereof; or
 - in the case of successful Bidder, fails to furnish the required Performance Security.
- 16.7 In case of annulment, all Bids submitted and specially, Bid securities, shall be returned to the Bidders within 14 days of annulment.
- 17.1 Unless otherwise specified in the **Bidding Data**, alternative proposal(s) shall not be considered.
- 17.2 Should any Bidder consider that he can offer any advantages to the Employer by a modification to the designs, specifications or other conditions, he may, in addition to his Bid to be submitted in strict compliance with the Bidding Documents, submit any alternative proposal(s) containing (a)



IB.17 Alternative Proposals by Bidder

relevant design calculations; (b) technical specifications; (c) proposed construction methodology; and (d) any other relevant details/conditions, provided always that the total sum entered on the Letter of Bid shall be that which represents complete compliance with the Bidding Documents.

IB.18 Format and Signing of Bid

17.3 Alternative proposal(s), if any, of the Bidder having submitted most advantageous Bid only may be considered by the Employer as the basis for the award of Contract to such Bidder.

18.1 Bidders are particularly directed that the amount entered on the Letter of Bid shall be for performing the Contract strictly in accordance with the Bidding Documents.

18.2 All Schedules to Bid are to be properly completed and signed.

18.3 No alteration is to be made in the Letter of Bid nor in the Schedules thereto except in filling up the blanks as directed. If any such alterations be made or if these instructions be not fully complied with, the Bid may be rejected.

18.4 Each Bidder shall prepare by filling in the forms completely and without alterations one (1) original and number of copies, specified in the **Bidding Data**, of the documents comprising the Bid as described in Clause IB.12 and clearly mark them "ORIGINAL" and "COPY" as appropriate. In the event of discrepancy between them, the original shall prevail.

The Bidder shall also provide complete searchable PDF versions as well as Word, Excel, etc., versions of the Bid if so required in the **Bidding Data**.

18.5 The original of the Bid shall be typed or written in indelible ink and shall be signed by a person or persons duly authorized to sign on behalf of the Bidder pursuant to Sub-Clause IB.12.1(d) hereof. All pages of the Bid shall be initialled and stamped by the person or persons signing the bid.

18.6 The Bid shall contain no alterations, omissions or additions, except to comply with instructions issued by the Employer, or as are necessary to correct errors made by the Bidder, in which case such corrections shall be initialled by the person or persons signing the Bid.

18.7 Bidders shall indicate in the space provided in the Letter of Bid their full and proper addresses at which notices may be legally served on them and to which all correspondence in connection with their bids and the Contract is to be sent.

18.8 Bidders should retain a copy of the Bidding Documents and the Bid as their file copy.

18.9 All documents executed outside Pakistan required to be submitted with the Bid must be certified by Pakistani Embassy in the respective country(ies).



IB.19 Sealing and Marking of Bids

D. SUBMISSION OF BIDS

- 19.1 Each Bidder shall submit his Bid as under:
- (a) ORIGINAL and each copy of the Bid shall be separately sealed and put in separate envelopes and marked as such.
 - (b) The envelopes containing the ORIGINAL and copies will be put in one sealed envelope and addressed / identified as given in Sub Clause IB.19.2 hereof.
- 19.2 The inner and outer envelopes shall:
- (a) be addressed to the Employer at the address provided in the **Bidding Data**;
 - (b) bear the specific identification of this bidding process as specified in the **Bidding Data**, and
 - (c) provide a warning not to open before the time and date for bid opening, as specified in the **Bidding Data**.
- 19.3 In addition to the identification required in Sub-Clause IB.19.2 hereof, the inner envelope shall indicate the name and address of the Bidder to enable the Bid to be returned unopened in case it is declared "late" pursuant to Clause IB.21.
- 19.4 If the outer envelope is not sealed and marked as above, the Employer will assume no responsibility for the misplacement or premature opening of the Bid.
- 20.1
- (a) Bids must be received by the Employer at the address specified no later than the time and date stipulated in the **Bidding Data**.
 - (b) Bids with charges payable will not be accepted, nor will arrangements be undertaken to collect the bids from any delivery point other than that specified above. Bidders shall bear all expenses incurred in the preparation and delivery of Bids. No claims will be entertained for refund of such expenses.
 - (c) Where delivery of a Bid is by mail and the Bidder wishes to receive an acknowledgment of receipt of such Bid, he shall make a request for such acknowledgment in a separate letter attached to but not included in the sealed Bid envelope.
 - (d) Upon request, acknowledgment of receipt of Bids will be provided to those making delivery in person or by messenger.
- 20.2 The Employer may, at his discretion, extend the deadline for submission of Bids by issuing an amendment in accordance with Clause IB.9, in which case all rights and obligations of the Employer and the Bidders previously subject to the original deadline will thereafter be subject to the deadline as extended.

IB.20 Deadline for Submission of Bids



- IB.21 Late Bids**
- 21.1 (a) Any Bid received by the Employer after the deadline for submission of bids prescribed in Clause IB.20 shall be declared late, rejected and returned unopened to such Bidder.
- (b) Delays in the mail, delays of person in transit, or delivery of a Bid to the wrong office shall not be accepted as an excuse for failure to deliver a Bid at the proper place and time. It shall be the Bidder's responsibility to determine the manner in which timely delivery of his Bid will be accomplished either in person, by messenger or by mail.
- IB.22 Modification, Substitution and Withdrawal of Bids**
- 22.1 Any Bidder may modify, substitute or withdraw his Bid after Bid submission provided that the modification, substitution or written notice of withdrawal is received by the Employer prior to the deadline for submission of bids.
- 22.2 The modification, substitution, or notice for withdrawal of any Bid shall be prepared, sealed, marked and delivered in accordance with the provisions of Clause IB.19 with the outer and inner envelopes additionally marked "MODIFICATION", "SUBSTITUTION" or "WITHDRAWAL" as appropriate.
- 22.3 No Bid may be modified by a Bidder after the deadline for submission of Bids except in accordance with Sub Clauses IB.22.1 and 28.2.
- 22.4 Withdrawal of a Bid during the interval between the deadline for submission of Bids and the expiration of the period of Bid validity specified in the Letter of Bid may result in forfeiture of the Bid security in pursuance to Clause IB.16.

E. BID OPENING AND EVALUATION

- IB.23 Bid Opening**
- 23.1 The Employer will open the Bids including withdrawals, substitution and modifications made pursuant to Clause IB.22, in the presence of Bidders' representatives who choose to attend, at the time, date and location stipulated in the **Bidding Data**. The Bidders' representatives who are present shall sign a register evidencing their attendance.
- 23.2 Envelopes marked "MODIFICATION", "SUBSTITUTION" or "WITHDRAWAL" shall be opened and read out first. Bids for which an acceptable notice of withdrawal has been submitted pursuant to Clause IB.22 shall not be opened. Only bids that are opened and read out at Bid opening shall be considered further.
- 23.3 The Bidder's name, total Bid Price and price of any alternative proposal(s), any discounts, Bid modifications, substitution and withdrawals, the presence or absence of Bid security, and such other details as the Employer may consider appropriate, will be announced by the Employer at the opening of Bids. Only discounts and alternative proposals



read out at Bid opening shall be considered for evaluation. The Letter of Bid and the Summary Bill of Quantities are to be initialled by representative(s) of the Employer attending Bid opening. The Employer shall neither discuss the merits of any Bid nor reject any Bid (except for late Bids, in accordance with Sub-Clause IB 21.1).

23.4 The Employer shall prepare minutes of the Bid opening, including the information disclosed to those present in accordance with the Sub-Clause IB.23.3.

IB.24 Process to be Confidential

24.1 Information relating to the examination, clarification, evaluation and comparison of Bids and recommendations for the award of Contract shall not be disclosed to Bidders or any other person not officially concerned with such process before the announcement of the result of Bid evaluation in the form of final evaluation report giving justification for acceptance or rejection of Bids which shall be done at least fifteen (15) days prior to award of Contract. The announcement to all Bidders will include table(s) comprising read out prices, discounted prices, price adjustments made, final evaluated prices and recommendations against all the Bids evaluated. Any effort by a Bidder to influence the Employer's processing of Bids or Contract award decisions may result in the rejection of such Bidder's Bid. Whereas any Bidder feeling aggrieved may lodge a written complaint not later than five (5) days after the announcement of the final evaluation report.

IB.25 Clarification of Bids

25.1 To assist in the examination, evaluation and comparison of Bids, the Employer may, at his discretion, ask any Bidder for clarification of his Bid, including breakdowns of unit rates and lump sum prices. Any clarification submitted by a Bidder that is not in response to a request by the Employer shall not be considered. The request for clarification and the response shall be in writing. No change in the price or substance of the Bid shall be sought, offered or permitted except as required to confirm the correction of arithmetic errors discovered by the Employer in the evaluation of the Bids in accordance with Clause IB.28.

25.2 The Employer may, at his discretion, ask any Bidder for confirmation/submission of missing information to clarify its Bid. However, the Employer does not have an obligation to request any additional information or clarification with respect to missing or deficient information in a Bid. The Employer may reject any Bid as non-responsive if found materially incomplete, obscure, irregular or omitting any material information required to be submitted in accordance with the Bidding Documents.

25.3 If a Bidder does not provide clarifications of its Bid by the date and time set reasonably (not less than seven (7) days) in the Employer's request for clarification, the Employer may proceed with the evaluation based on the information submitted in the Bid without waiting for the Bidder's response.



IB.26 Examination of Bids and Determination of Responsiveness

- 26.1 Prior to the comparison of Bids, the Employer will determine whether each Bid is substantially responsive to the requirements of the Bidding Documents.
- 26.2 The Employer's determination of a Bid's responsiveness is to be based on the contents of the Bid itself, as defined in Sub-Clause IB.12.
- 26.3 A substantially responsive Bid is one which meets the requirements of the Bidding Documents, 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 Works; or
 - (ii) limit in any substantial way, inconsistent with the Bidding Documents, the Employer's rights or the Bidder's obligations under the proposed Contract; or
 - (b) if rectified, would unfairly affect the competitive position of other Bidders presenting substantially responsive Bids.
- 26.4 During the evaluation of Bids, the following definitions apply:
- (a) "Deviation" is a departure from the requirements specified in the Bidding Documents;
 - (b) "Reservation" is the setting of limiting conditions or withholding from complete acceptance of the requirements specified in the Bidding Documents; and
 - (c) "Omission" is the failure to submit part or all of the information or documentation required in the Bidding Documents.
- 26.5 The Employer shall examine the technical aspects of the Bid submitted in accordance with Sub-Clause IB.12.1(f), in particular, to confirm that all requirements stated in Specifications have been met without any material deviation, reservation or omission.
- 26.6 If a Bid is not substantially responsive to the requirements of the Bidding Documents, it will be rejected by the Employer, and may not subsequently be made responsive by correction or withdrawal of the non-conforming deviation, reservation or omission.

IB.27 Nonmaterial Nonconformities

- 27.1 Provided that a Bid is substantially responsive, the Employer may waive any nonconformities in the Bid.
- 27.2 Provided that a Bid is substantially responsive, the Employer may request that the Bidder submit the necessary information or documentation, within a reasonable period of time, to rectify nonmaterial nonconformities in the Bid related to documentation requirements. Requesting information or



documentation on such nonconformities 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.

- 27.3 Provided that a Bid is substantially responsive, the Employer 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 other lowest two evaluated substantially responsive Bidders. If the price of the item or component cannot be derived from the price of other substantially responsive Bids, the Employer shall use a suitable CSR, adjusted to the date 28 days earlier to the Bid submission date or its best assessment.

IB.28 Correction of Arithmetic Errors

- 28.1 Bids determined to be substantially responsive will be checked by the Employer for any arithmetic errors. Errors will be corrected by the Employer as follows:
- (a) where there is a discrepancy between the amounts in figures and in words, the amount in words will govern.
 - (b) where there is a discrepancy between the unit rate and the line item total resulting from multiplying the unit rate by the quantity, the unit rate as quoted will govern, unless in the opinion of the Employer there is an obviously gross misplacement of the decimal point in the unit rate, in which case the line item total as quoted will govern and the unit rate will be corrected.
 - (c) if there is an error in a total corresponding to the addition or subtraction of subtotals, the subtotals shall prevail and the total shall be corrected.
- 28.2 The amount stated in the Letter of Bid will be adjusted by the Employer in accordance with the above procedure for the correction of errors and with the concurrence of the Bidder, shall be considered as binding upon the Bidder. If the Bidder does not accept the corrected Bid Price, his Bid will be rejected, and the Bid security shall be forfeited in accordance with Sub Clause IB.16.6(b) hereof.

IB.29 Evaluation and Comparison of Bids

- 29.1 The Employer will evaluate and compare only the Bids determined to be substantially responsive in accordance with Clause IB.26. The Employer shall use the criteria and methodologies listed in this Clause. No other evaluation criteria or methodologies shall be permitted.
- 29.2 In evaluating and comparing the Bids, the Employer will determine for each Bid the evaluated Bid Price by adjusting the Bid Price as follows:
- (a) making any correction for arithmetic errors pursuant to Clause IB.28;



- (b) price adjustment due to discounts offered in accordance with Sub-Clause IB.23.3;
- (c) excluding Provisional Sums and the provision, if any, for contingencies in the Summary Bill of Quantities, but including competitively priced daywork;
- (d) making an appropriate price adjustment for any quantifiable nonmaterial nonconformities in accordance with Sub-Clause IB.27.3; and
- (e) the additional evaluation factors are specified in Section Evaluation Criteria and Qualification Updating Forms.

29.3 The estimated effect of the price adjustment provisions of the Conditions of Contract, applied over the period of execution of the Contract, shall not be taken into account in Bids' comparison.

IB.30 Abnormally Low Bids

30.1 If the Bid Price of the successful Bidder is more than 15% below the lower of the Employer's estimate of the cost of work to be performed under the Contract or average of other lowest two evaluated substantially responsive Bids, the Employer may require the Bidder to produce detailed price analyses for any or all items of the Bill of Quantities to demonstrate the internal consistency of those prices with the construction methods and schedule proposed. After evaluation of the price analyses, the Employer may require an additional Performance Security by 10% of the difference of the Bid Price as determined hereinabove upto issuance of Taking Over Certificate at the expense of the successful Bidder to a level sufficient to protect the Employer against financial loss in the event of default of the successful Bidder under the Contract. The Bids having Bid Price lower than 25% shall be liable to be rejected.

IB.31 Unbalanced or Front Loaded Bids

31.1 If the Bid of the successful Bidder is seriously unbalanced (Front Loaded) in relation to the average of other evaluated substantially responsive Bids, the Employer during execution of contract may pay against measured quantities of significantly higher quoted line item(s) rate(s) with respect to same line item(s) rate(s) determined from the average of other lowest two evaluated substantially responsive Bids as instructed by the Engineer. The balance line item(s) rate(s) may be paid against the same measured quantities at the time of issuance of Taking Over Certificate or as instructed by the Engineer.



IB.32 Award Criteria

F. AWARD OF CONTRACT

32.1 Subject to Clauses IB.33 and IB.39, the Employer will award the Contract to the Bidder whose Bid has been determined as most advantageous Bid (substantially responsive to requirements of the Bidding Documents with the lowest evaluated Bid Price).

**IB.33 Employer's
Right to Annul
the Bidding
Process**

33.1 Notwithstanding Clause IB.32, the Employer reserves the right to annul the bidding process and reject all Bids, at any time prior to award of Contract, without thereby incurring any liability to the affected Bidders or any obligation.

The Employer shall upon request communicate to any Bidder who submitted a Bid, the grounds for its rejection of all Bids but is not required to justify those grounds. Rejection of all Bids shall be notified to all Bidders promptly.

**IB.34 Notification of
Award**

34.1 Prior to expiration of the period of Bid validity prescribed by the Employer, the Employer will notify the successful Bidder in writing ("Letter of Acceptance") that his Bid has been accepted. This letter shall name the sum which the Employer will pay the Contractor in consideration of the execution and completion of the Works by the Contractor as prescribed by the Contract (hereinafter and in the Conditions of Contract called the "Accepted Contract Amount").

The Letter of Acceptance will also state the remedies with respect to Sub-Clauses IB.30 & IB.31 if applicable.

34.2 No negotiation with the Bidder having submitted most advantageous Bid or any other Bidder shall be permitted, however, Employer may have clarification meetings before issuing Letter of Acceptance to get clarified any item in the Bid evaluation report.

34.3 The Letter of Acceptance/ notification of award and its acknowledgement/acceptance by the Bidder will constitute the formation of the Contract, binding the Employer and the Bidder till signing of the formal Contract Agreement.

34.4 Upon furnishing by the successful Bidder of a Performance Security, the Employer will promptly notify the other Bidders that their Bids have been unsuccessful and return their Bid securities in accordance with Sub-Clause IB.16.5.

**IB.35 Performance
Security**

35.1 The successful Bidder shall furnish to the Employer a Performance Security in the form and the amount stipulated in the Conditions of Contract and additional Performance Security if applicable under IB.30 as stated in the Letter of Acceptance, within a period of 28 days after the receipt of Letter of Acceptance.

35.2 Failure of the successful Bidder to comply with the requirements of Sub Clause IB.35.1 or Clauses IB.36 or IB.37 shall constitute sufficient grounds for the annulment of the award, forfeiture of the Bid security and to award the Contract to the Bidder having submitted next advantageous Bid.



**IB.36 Signing of
Contract
Agreement**

36.1 Within 14 days from the date of furnishing of acceptable Performance Security under the Conditions of Contract, the Employer will notify the successful Bidder to depute its representative with appropriate Power of Attorney to sign the Contract Agreement in the form provided in the Bidding Documents, incorporating all agreements between the parties.

- 36.2 The formal Agreement between the Employer and the successful Bidder shall be executed within 14 days of the receipt of the above stated notification by the successful Bidder from the Employer.
- IB.37 Integrity Pact** 37.1 The Bidder shall sign and stamp the Integrity Pact provided at Schedule-J to Bid in the Bidding Documents for all Federal Government procurement contracts exceeding PKR ten million. Failure to provide such Integrity Pact shall make the Bidder non-responsive.
- IB.38 Instructions not Part of Contract** 38.1 Bids shall be prepared and submitted in accordance with the Instructions to Bidders which are provided to assist the Bidders in preparing Bids but do not constitute part of the Contract.
- IB.39 Corrupt and Fraudulent Practices** 39.1 The Employer will reject a Bid if it determined that the bidder recommended for award, or any of its personnel, or its agents, or its sub-contractors, service providers, suppliers and/or their employee, has, directly or indirectly, engaged in corrupt, fraudulent, collusive, coercive, or obstructive practices in competing for the contract under this bidding.
- 39.2 The Employer will blacklist and hence forthwith debar a Constructor or individual, at any time, in accordance with the prevailing Public Procurement Rules 2004.



BIDDING DATA (BD)



BIDDING DATA

IB Clause Reference	Bidding Data
1.1	Name and address of the Employer: Pakistan Engineering Council (PEC), Attaturk Avenue (East) G-5/2, P.O. Box: 1296, Islamabad PABX: 051 9206974, 051 9219500, 0519219036, 0519219037, 051 9219038
1.1	Name of the Project & Summary of the Works: Name of Project: Establishment of PEC Engineering Complex at DHA City Karachi Name of Works: Construction of Boundary Wall & Gate Houses (Phase - I, Package - I)
1.2	Time for Completion for the Works: Six (06) Calendar Months
2.1	Name of the Borrower/Source of Funding: Pakistan Engineering Council (PEC)
2.1	Amount and type of Funding: PEC's Own Funds
3.1	<p>Eligible Bidders</p> <p>Text of IB 3.1 is replaced by the following</p> <p><i>This Invitation for E-Bid is open to all Bidders meeting the following requirements at the time of submission of Bids and thereafter: The Company Profile / Technical Proposal, therefore, be containing following documentary evidences</i></p> <ul style="list-style-type: none"> <i>i) Duly valid licensed by the Pakistan Engineering Council (PEC) in category C4 or above with specialization codes CE10 & CE11.</i> <i>ii) Registered with Federal Board of Revenue (FBR) for Income Tax and Sindh Revenue Board (SRB) for Sales Tax and active Tax Payer at both the authorities.</i> <i>iii) At least One (01) similar Construction Works costing Rs. 150 Million or Two (02) similar Construction Works costing Rs. 100 Million each executed in last 05 years. (Information regarding similar construction works shall be supported by copies (attested by Notary Public) of documents such as Letter of Award/Acceptance, Contract Agreement, Completion Certificate and any other relevant document establishing the Cost of similar works.)</i> <i>iv) Average Turn Over for the last 05 years should not be less than Rs. 150 Million. (information regarding turn over shall be supported by attested copies of last 05 years' Audited Financial Statement carried out by Audited Firms licensed by Institute of Chartered Accountants of Pakistan) and (or Tax Returns approved by FBR.)</i> <i>v) The Bidder should submit an undertaking on stamp paper duly attested by Oath Commissioner stating that (i) the firm has not been blacklisted previously by any government department, (ii) the firm currently is not in litigation with any government department (iii) the information stated in profile are true.</i>



IB Clause Reference	Bidding Data
8.0	<p>Clause IB 8 is deleted and replaced with the following:</p> <p>8.1 Any prospective bidder requiring any clarification in respect of the bidding Documents may raise queries through e-PADS within five (05) days of the publication of the advertisement and/or availability of the Bidding Documents on the e-PADS.</p> <p>8.2 The Employer's response will be uploaded through the same system that will be available to all prospective Bidders, including a description of the enquiry but without identifying its source.</p> <p>8.3 Pre-Bid Conference will not be held. Any clarification may be sought from the Employer as per the provision of sub-clause IB 8.1, if required.</p>
9.2	Any Addendum thus issued shall be part of the Bidding Documents listed in Sub-Clause IB 7.1 hereof and shall be published by the Employer on e-PADS.
9.3	Number of days: <i>Five (05)</i>
11.1	Bid language: <i>English</i>
12.1	<p>The Bid shall comprise one (01) encrypted package to be uploaded on e-PADS, containing the following</p> <ol style="list-style-type: none"> 1. Documents listed in IB 3.1 of Bidding Data as Company Profile / Technical Proposal. 2. Duly filled in, signed and stamped all other volumes of the Bidding documents available on e-PADS. 3. A Scan copy of Bid Security in accordance with Clause IB 16 hereof.
12.2	Maximum number of JV Partners shall be <i>Nil</i> <i>JV not allowed for this Project</i>
14.1	Bidders to quote entirely in <i>Pak. Rs</i>
15.1	Period of Bid Validity: <i>Ninety (90) days after the deadline for Bid submission</i>
16.1	Amount of Bid Security: <i>Lump sum Rs. 5,000,000/-. (Pak Rupees Five Million only)</i>
16.2	List of Insurance Companies: Any Insurance Company A(+) Rated by PACRA/VIS
16.3	<p>Text of Sub-Clause IB 16.3 is deleted and replaced with the following:</p> <p><i>The Bidder shall submit, before submission of Bids, the Bid Security in original physically at the office of the Employer and shall also upload its scan copy on distinct standard entry at e-PADS to be furnished as a part of his e-Bid.</i></p>
17.1	Alternative Proposal(s) by the Bidder <i>shall not be</i> considered.
18.4	The bidder shall prepare the Bid as described in Bidding Data against Sub-Clause 12.
18.5	<p>Add the following at the end of this sub-clause:</p> <p><i>In addition, the bidders are instructed to prepare INDEX of their documents showing page number and content therein the documents and place it at the start to facilitate in searching of relevant detail. the</i></p>



19.1	<p>Clause IB 19.1 is deleted and replaced with the following:</p> <ol style="list-style-type: none"> 1 Each bidder shall submit his bid in "pdf" format on e-PADS through the system and bidder shall encrypt the entries electronically in the form of one encrypted package. 2 The Bid should comprise of documents listed in IB 12 of Bidding Data.
19.2(a)	<p>Employer's address for the purpose of Bid submission: <i>As stated in Tender Notice</i></p>
19.2(b)	<p>Name and Number of the Contract: <i>Will be provided in Letter of Acceptance</i></p>
20.1(a)	<p>Text of Sub-Clause IB 20.1 is deleted and replaced with the following: <i>Bids - must be uploaded by the Bidder online through e-PADS at https://eprocure.gov.pk no later than the deadline for submission of bids.</i></p>
21	<p>The Clause IB 21 is deleted in its entirety and replaced with the following: 21.1 Bid cannot be uploaded on e-PADS after the deadline of submission of bid.</p>
22	<p>Clause IB 22 is deleted in its entirety and replaced with the following:</p> <ol style="list-style-type: none"> 22.1 The Bidder shall have the option to modify or withdraw the Bids after electronic submission provided that such modification or withdrawal is done through e-PADS prior to the deadline for submission of e-bid. 22.2 No Bid shall be modified by the Bidder after the deadline for submission of Bids except in accordance with sub-clause [B 22.1 and 28.2. 22.3 Withdrawal of a Bid during the interval between submission of bids and expiration of the period of Bid Validity may result in forfeiture of Bid Security in pursuance to Clause IB 16
23	<p>Clause IB 23 is deleted in its entirety and replaced with the following:</p> <ol style="list-style-type: none"> 23.1 <i>The Employer will open the Bids electronically at the time, date & location stipulated in the Invitation for e-Bids</i> 23.2 <i>The Bidders' name, total Bid Price, any discounts, the presence/absence of bid security, and such other details as the Employer may consider appropriate, will be announced by the Employer electronically on the website.</i>
26.1	<p>Examination of Bids and Determination of Responsiveness/Qualification: Text of Sub-Clause IB26.1 is replaced as under</p> <ol style="list-style-type: none"> a) <i>Initially Bid Security shall be checked for its Responsiveness to Bid. Absence/failure of submission of required Bid Security shall result in rejection of Bid and sealed Bid shall be returned at the instant.</i> b) <i>All bids received shall be opened and evaluated for responsiveness in accordance with sub-clause IB.26 and correction of mathematical errors shall be made as per sub-clause IB.28. Eligibility of the lowest bidder then shall be carried out to determine its eligibility as per information or documents required and so provided; if he fails to be eligible /qualified as per criteria stated in IB3.1 above, , then same exercise is repeated for 2nd lowest bidder and so on till responsive bidder or lowest evaluated bid is determined.</i>



	c) <i>Verification and up-to-date information: The Employer may verify the previous working, experience and financial statements made by the bidders in their bids.</i>
26.5	Text of Sub-Clause IB26.5 is replaced as under <i>The Employer shall examine the technical aspects of the Bid submitted in accordance with Sub-Clause IB. 3.1 & 12.1, to confirm that all requirements stated in Specifications have been met without any material deviation, reservation or omission.</i>
34.1	he text is deleted and replaced with following: <i>The Employer through e-PADS shall publish the results of final bid evaluation and make it available for the Bidders. Prior to expiration of the period of Bid validity prescribed by the Employer, the Employer through the e-PADS shall upload the ("Letter of Acceptance") as well as in writing that his Bid has been accepted. This letter shall name the sum which the Employer will pay the Contractor in consideration of the execution and completion of the Works by the Contractor as prescribed by the Contract (hereinafter and in the Conditions of Contract called the "Accepted Contract Amount"). The Letter of Acceptance will also state the remedies with respect to Sub-Clauses IB.30 & IB.31 if applicable.</i>
35.1	Text "28 days" stated in IB 35.1 is deleted and replaced with "14 days.



**LETTER OF BID
AND
SCHEDULES TO BID**



LETTER OF BID

Bid Reference No. _____
[Name of Contract/ Works]

To: _____

Gentleman,

1. Having examined the Bidding Documents including Instructions to Bidders, Bidding Data, Conditions of Contract, Specifications, Schedules to Bid including Bill of Quantities, Drawings and Addenda Nos. _____ for the execution of the above-named Works, we, the undersigned, offer to execute and complete such Works and remedy any defects therein in conformity with the said Bidding Documents and Addenda for the sum of Equivalent PKR _____ (Eq. Pak Rupees _____) or such other sum as may be ascertained in accordance with the said conditions.
2. We meet the eligibility requirements in accordance with IB.3.
3. We, including any Subcontractors for any part of the Contract, are not debarred/ blacklisted by the Employer, any Government/Semi Government/Public Department in Pakistan or foreign country, international organizations or other foreign institutions.
4. Our subcontractors or suppliers for any part of the Contract, if any, shall have nationalities from eligible countries, in accordance with IB.4.4.
5. We understand that all the Schedules attached hereto form part of this Bid.
6. As security for due performance of the undertakings and obligations of this Bid, we submit herewith a Bid Security in the amount of PKR _____ (Pak. Rupees. _____) drawn in your favour or made payable to you and valid for a period of _____ days beginning from the date Bids are opened.
7. We undertake, if our Bid is accepted, to commence the Works and to complete the whole of the Works comprised in the Contract within the time stated in Contract Data.
8. We agree to abide by this Bid for the period of _____ days, inclusive of 14 days beyond Bid validity period (as mentioned at Sr. No. 6 above) and it shall remain binding upon us and may be accepted at any time before the expiration of that period.
9. Unless and until a formal Agreement is prepared and executed, this Bid, together with your written acceptance thereof, shall constitute a binding contract between us.
10. We do hereby declare that the Bid is made without any collusion, comparison of figures or arrangement with any other Bidder for the Works.
11. We understand that you are not bound to accept the lowest or any Bid you may receive.
12. We undertake that all the information and documents submitted with the Bid are genuine, and in case of incorrect information of fake documents we shall be liable for punitive action under the Applicable Law.



Dated this _____ day of _____ 20____

Signature: _____

in the capacity of _____ duly authorized to sign Bids for and on behalf of

(Name of Bidder in Block Capitals)
(Seal)

Address: _____

Witness:

Signature: _____

Name: _____

Address: _____

Occupation _____



SCHEDULE OF ADJUSTMENT DATA**Schedule of Cost Indexation**

[The formulae for price adjustment shall be of the following general type:]

$$P_n = a + b L_n / L_o + c E_n / E_o + d M_n / M_o + \dots$$

where:

"P_n" is the adjustment multiplier to be applied to the estimated Contract value in the relevant currency of the work carried out in period "n", this period being a month;

"a" is a fixed coefficient, stated in the relevant table of adjustment data, representing the non-adjustable portion in contractual payments;

"b", "c", "d", ... are coefficients representing the estimated proportion of each cost element related to the execution of the Works as stated in the relevant table of adjustment data; such tabulated cost elements may be indicative of resources such as labour, equipment and materials;

"L_n", "E_n", "M_n", ... are the current cost indices or reference prices for period "n", expressed in the relevant currency of payment, each of which is applicable to the relevant tabulated cost element on the date 49 days prior to the last day of the period (to which the particular Payment Certificate relates); and

"L_o", "E_o", "M_o", ... are the base cost indices or reference prices, expressed in the relevant currency of payment, each of which is applicable to the relevant tabulated cost element on the Base Date.

The weightings (coefficients) for each of the factors of cost stated in the following table(s) of adjustment data shall only be adjusted if they have been rendered unreasonable, unbalanced or inapplicable, as a result of Variation(s).

If the currency in which the Contract price is expressed is different from the currency of the country of origin of the indices, a correction factor will be applied to avoid incorrect adjustments of the Contract price. The correction factor shall be: Z_0 / Z_1 , where,

Z_0 = the number of units of currency of the origin of the indices which equal to one unit of the currency of the Contract Price on the Base date, and

Z_1 = the number of units of currency of the origin of the indices which equal to one unit of the currency of the Contract Price on the Date of Adjustment.



A-2
Schedule-A to Bid

SCHEDULE OF ADJUSTMENT DATA

The source of prices & weightages for use in the adjustment formula under Clause 13.7 shall be as follows:

Cost Element	Description	Weightages	Applicable Price Source Government of Pakistan (GP) Federal Bureau of Statistics (FBS) Monthly Statistical Bulletin.
(i)	(ii)	(iii)	(iv)
a	Fixed Portion		
b	Labour		(Rate from FBS Monthly Bulletin of Labourer (un-skilled) per day shall be taken as representative of all types of Labour (skilled / unskilled) deployed at site)
c	Aggregate (Crush)		(Rate from FBS Monthly Bulletin of Bags (Raata) shall be taken as representative of all types of aggregates (fine/coarse) used at the site)
d	Cement		(Rate from FBS Monthly Bulletin of OPC cement (local) per bag shall be taken as representative of all types of cement used at the site)
e	Reinforcing Steel & Structural Steel		(Rate from FBS Monthly Bulletin of ½" Ø Round M.S. Bars 40 Grade per tonne shall be taken as representative of all types and diameters of Steel Reinforcement)
g	POL (High Speed Diesel HSD) (HSD shall be taken as representative of all kind of fuels used in connection with the Contract)		As announced by Pakistan State Oil (PSO)
	Total	1.00	

Notes:

- The base prices shall be those applying 28 days prior to the latest day for submission of Bids. Current prices shall be those applying 28 days prior to the last day of the billing period.
- The prices for the cost elements shall be used for the City where the Site is located. In-case the Site is not listed in the monthly statistical Bulletin, the prices for the nearest City listed in the Bulletin shall be used.
- Any fluctuation in the prices of materials other than those given above shall not be subject to adjustment of the Contract Price and shall be deemed to be included in the rates and prices quoted by the Bidders.



SCHEDULE OF ADJUSTMENT DATA**Table II. Foreign Currency (FC) For Bill Nos. _____**

[In the Table below, the Bidder shall (a) indicate amount of foreign currency payment, (b) indicate the source and base values of indices for the different foreign currency elements of cost, (c) derive its proposed weightings of foreign currency payment, except the non-adjustable portion which will be filled in by the Employer.

[If the Bidder wishes to incur in more than one foreign currency (up to two currencies permitted) then this table should be repeated for each foreign currency.]

Index code	Index description	Source of index	Base value and date	Bidder's related source currency in type/amount	Equivalent in FC1	Bidder's proposed weighting
(i)	Non-adjustable					A: _____
(ii)						B: _____
(iii)						C: _____
(iv)						D: _____
(v)						E: _____
				Total		1.00



SCHEDULE OF ADJUSTMENT DATA**Table III. Foreign Currency Requirements**

[With reference to Sub Clause IB.14.1, the Bidder shall provide information below on the proportion of various currencies in which he requires payment to be made. The Bidders shall also indicate Factors (inputs) related to the requirement of respective currencies.]

Sr. No	Currency (name)	Percentage payable in currency	Factors (inputs) to which the Requirements Refer
1.	LC (Pak. Rs.)		* General Expenses Manpower, Local Staff, Expatriate Staff, Spare Parts, Fuel & Lubricants, Hydraulic Binder, Timber & Plywood, Additives & Protectives, Joints & Waterstops, Explosives-Fuses-Detonators, Re-Steel & Wire mesh, Metal Pipes & Fittings, Structural Steel, Miscellaneous Metals, Concrete Pipes, PVC Pipes, Build Materials, Sub-Contractor, Drilling & Grouting Sub-Contractor Third Party Supplies, Import Charges, General Expenses, Plants.
2.	FC1 (US \$ Dollar)		* Expatriate Staff, Spare Parts, Hydraulic Binder, Timber & Plywood, Additives & Protectives, Drilling Materials, Miscellaneous, Sub-Contractor, Import Charges, General Expenses, Plants.
3.	FC2 (EUR € EURO)		* Expatriate Staff, Spare Parts, Additives & Protectives, Welding Materials, Miscellaneous, Electrical Sub-Contractor, Import Charges, General Expenses, Equipment, Plants.
TOTAL		100.00	

[*The above Factors (Inputs) related to the requirement of respective currencies, are for guidance only, and shall be indicated specific to the Contract.]



SCHEDULE OF ADJUSTMENT DATA

Table IV. Summary of Payment Currencies

[In the Table below, the Bidder shall list the exchange rates used in the currency conversion with reference to Sub Clause 1B.14.2.]

Name of payment currency	a Amount of currency	b Rate of exchange (local currency per unit of foreign)	c Local currency equivalent $c = a \times b$	d Percentage of Total Bid Price (TBP) $\frac{100 \times c}{TBP}$
Local currency (Pak. Rs)		1.00		
FC1				
FC2				
Total Bid Price				100.00
Provisional sums expressed in local currency	[To be entered by the Employer]		[To be entered by the Employer]	
TOTAL BID PRICE (including provisional sum)				



BILL OF QUANTITIES

A. Preamble:

1. The Bill of Quantities shall be read in conjunction with the Conditions of Contract, Specifications and Drawings.
2. The quantities given in the Bill of Quantities are estimated and provisional, and are given to provide a common basis for bidding. The basis of payment will be the actual quantities of work executed and measured by the Contractor and verified by the Engineer and valued at the rates and prices as given in the priced Bill of Quantities, where applicable, and otherwise at such rates and prices as the Engineer may fix as per the Contract.
3. The rates and prices as given in the priced Bill of Quantities shall, except insofar as it is otherwise provided under the Contract include all costs of Contractor's plant, labour, supervision, materials, execution, insurance, profit, taxes and duties, together with all general risks, liabilities and obligations set out or implied in the Contract. Furthermore, all duties, taxes and other levies payable by the Contractor under the Contract, or for any other cause, as on the date 28 days prior to deadline for submission of Bids, shall be included in the rates and prices and the total Bid Price submitted by the Bidder.
4. A rate or price shall be entered against each item in the priced Bill of Quantities, whether quantities are stated or not. The cost of items against which the Contractor will have failed to enter a rate or price shall be deemed to be covered by other rates and prices entered in the Bill of Quantities.
5. The whole cost of complying with the provisions of the Contract shall be included in the items provided in the priced Bill of Quantities, and where no items are provided, the cost shall be deemed to be distributed among the rates and prices entered for the related items of the Works, or the same shall be determined by the Engineer in accordance with Clause 13, General Conditions.
6. General directions and description of work and materials are not necessarily repeated nor summarised in the Bill of Quantities. References to the relevant sections of the Bidding Documents shall be made before entering prices against each item in the Bill of Quantities.



**ESTABLISHMENT OF PEC ENGINEERING COMPLEX
AT DHA CITY PHASE - I, KARACHI
CONSTRUCTION OF BOUNDARY WALL AND GATE HOUSE -1, 2 & 3
SUMMARY OF BID PRICE**

CODE	DESCRIPTION	AMOUNT IN PAK. RUPEES
C. CIVIL WORKS		
BW BOUNDARY WALL		
00A	Permanent boundary wall	_____
00B	Chain link fence boundary wall	_____
00C	RCC Concrete railing boundary wall	_____
GH Gate House		
01GH	Gate House - 01, Main boulevard east	_____
02GH	Gate House - 02, Education avenue	_____
03GH	Gate House - 03, Tram line corridor	_____
P. PLUMBING WORKS		
E. ELECTRICAL WORKS		
01EA	Gate House - 01, Main boulevard east	_____
02EA	Gate House - 02, Education avenue	_____
03EA	Gate House - 03, Tram line corridor	_____
T. TELECOMMUNICATION WORKS		
01TA	Gate House - 01, Main boulevard east	_____
01TB	Gate House - 01, Main boulevard east	_____
02TA	Gate House - 02, Education avenue	_____
02TB	Gate House - 02, Education avenue	_____
03TA	Gate House - 03, Tram line corridor	_____
03TB	Gate House - 03, Tram line corridor	_____
A- Sub Total Bid Price Rs.		_____
B- Sindh Sales Tax @ 15% Rs.		_____
C- Total Bid Price of Entire Works Rs.		_____



**ESTABLISHMENT OF PEC ENGINEERING COMPLEX
AT DHA CITY PHASE - I, KARACHI**

CONSTRUCTION OF PERMANENT BOUNDARY WALL

A - PERMANENT BOUNDARY WALL

BILL OF QUANTITIES

Item	Description	Unit	Qty	Rate (Rs.)	Amount (Rs.)
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C. CIVIL WORKS

EARTHWORKS

Ref. Sec No. 1100

00A-1C	Excavation in all kind of sub-surface material (soft / rock) upto any depth including disposal of surplus / rejected excavated material to designated places complete in all respects and/or as directed by the Engineer.	Cft.	9900		
00A-2C	Fill & backfill with selected material obtained from required excavation including watering and compaction in layers complete in all respects and/or as directed by the Engineer.	Cft.	8000		
00A-3C	Fill & backfill with selected material obtained from outside sources including watering and compaction in layers complete in all respects and/or as directed by the Engineer.	Cft.	8000		

REINFORCEMENT

Ref. Sec No. 2200

00A-4C	Hot rolled billet deformed steel bars conforming to ASTM A-615 grade 60 conforming to ASTM A-615 including the cost of straightening, cutting, bending, binding, wastage and such overlaps as are not shown over the drawings, placing in position on chairs, tying with binding wires etc. complete in all respects and/or as directed by the Engineer.	tonne	28		
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PLAIN AND REINFORCED CONCRETE

Ref. Sec No. 2100,2300

Providing and laying cement concrete mixing, transporting, hoisting, placing, form works (shuttring) and its removal complete in all respects as per drawings / details, specifications and/or as directed by the Engineer.

00A-5C	Class 'E' concrete (800 PSI Cylindrical strength) using ordinary portland cement in under foundations / footings.	Cft.	990		
00A-6C	Class 'D' plain cement concrete (1200 PSI Cylindrical strength) using ordinary portland cement in situ.	Cft.	1680		
00A-7C	Rainforced cement concrete Class - B (3000 PSI cylindrical strength) using ordinary portland cement in following structural elements (sub & super structure) including form works fixing and its removal etc. complete in all respects and/or as directed by the Engineer.				
	a) Foundations / footings	Cft.	1596		



A - PERMANENT BOUNDARY WALL**BILL OF QUANTITIES**

Item	Description	Unit	Qty	Rate (Rs.)	Amount (Rs.)
	b) Columns (upto plinth)	Cft.	380		
	c) Plinth beams	Cft.	1680		
	d) Columns (above plinth)	Cft.	1805		
	e) Coping beams (fair face)	Cft.	631		
CC JALI					
Ref. Sec.No. 4100, 2300					
00A-8C	Providing and fixing 2" thick CC jali of approved design, pattern and quality including setting in 1:2 cement sand mortar etc. complete in all respects and/or as directed by the Engineer.	Sft.	10040		
WATER PROOFING					
Ref. Sec.No. 6412					
00A-9C	Two coats of hot bitumen grade 10/20 @ of 1Kg./Sq.m. per coat to all structural concrete surfaces in contact with earth as specified.	Sft.	7081		
00A-10C	Expansion joint complete in all respects as shown on drawings / details and/or as directed by the Engineer. <i>Note: 1 inch Wide Expansion Joint at spacing of 150 feet C/C (typ.)</i>	Rft.	250		
BARBED WIRE					
Ref. Sec.No. 3000					
00A-11C	Providing, fabrication and fixing barbed wire comprising of angle iron (2" x 2" x 1/8"), barbed wire (12 Gauge) and all other fixing accessories and hardwares etc. including fixing in position complete in all respect as shown on the drawings / details and/or as directed by the Engineer.	Rft.	1700		
CEMENT PLASTER					
Ref. Sec.No. 6521					
00A-12C	3/4 inch thick 1:4 cement sand plaster to specified exterior surfaces, making groove in plaster as specified etc. complete in all respects and/or as directed by the Engineer.	Sft.	36585		
PAINTING					
Ref. Sec.No. 6700					
00A-13C	Providing and applying three (03) coats of weather resistant paint (approved quality & colour) to specified exterior surfaces including primer, surface preparation and cleaning etc. complete in all respects and/or as directed by the Engineer.	Sft.	36585		

Total Cost of Permanent Boundary Wall Works Rs.

Carried over to Summary



**ESTABLISHMENT OF PEC ENGINEERING COMPLEX
AT DHA CITY PHASE - I, KARACHI
CONSTRUCTION OF CHAIN LINK FENCE BOUNDARY WALL**

B - CHAIN LINK FENCE BOUNDARY WALL

BILL OF QUANTITIES

Item	Description	Unit	Qty	Rate (Rs.)	Amount (Rs.)
C. CIVIL WORKS					
EARTHWORKS					
Ref. Sec.No. 1100					
00B-1C	Excavation in all kind of sub-surface material (soft / rock) upto any depth including disposal of surplus / rejected excavated material to designated places complete in all respects and/or as directed by the Engineer.	Ct.	736		
00B-2C	Fill & backfill with selected material obtained from required excavation including watering and compaction in layers complete in all respects and/or as directed by the Engineer.	Ct.	400		
00B-3C	Fill & backfill with selected material obtained from outside sources including watering and compaction in layers complete in all respects and/or as directed by the Engineer.	Ct.	500		
PLAIN AND REINFORCED CONCRETE					
Ref. Sec.No. 2100,2300					
00B-4C	Plain cement concrete (1:2:4) 2500 PSI cylindrical strength using ordinary portland cement in following structural elements including form work (shutting) and its fixing & removal etc. complete in all respect and/or as directed by the Engineer.				
	a) Foundations / footings / pedestal / base / coping etc.	Ct.	761		
CHAIN LINK FENCE					
Ref. Sec.No. 3000					
00B-5C	Providing, fabricating and fixing chain link fence comprising of 3" dia (10 Gauge) G.I. pipe (Intermediate & end post), link chain fabric 3' x 3' mesh (12 Gauge), straining wire (8 Gauge), tension & brace bands, 3/8" dia nut bolt with washers, 3" dia (12 Gauge) pipe horizontal (bottom and top), extraover G.I. pipe 2" dia (10 Gauge), angle iron (2" x 2" x 1/8"), barbed wire (12 Gauge) and all other fixing accessories and hardware etc. including fixing in position complete in all respect as shown on the drawings / details and/or as directed by the Engineer.	Rt.	1056		

Total Cost of Chain link fence Boundary Wall Works Rs.

Carried over to Summary



**ESTABLISHMENT OF PEC ENGINEERING COMPLEX
AT DHA CITY PHASE - I, KARACHI**

CONSTRUCTION OF RCC RAILING BOUNDARY WALL

C - RCC RAILING BOUNDARY WALL

BILL OF QUANTITIES

Item	Description	Unit	Qty	Rate (Rs.)	Amount (Rs.)
C. CIVIL WORKS					
EARTHWORKS					
Ref. Sec.No. 1100					
00C-1C	Excavation in all kind of sub-surface material upto any depth including disposal of surplus / rejected excavated material to designated places complete in all respects and/or as directed by the Engineer.	Cft.	9900		
00C-2C	Fill & backfill with selected material obtained from required excavation including watering and compaction in layers complete in all respects and/or as directed by the Engineer.	Cft.	8000		
00C-3C	Fill & backfill with selected material obtained from outside sources including watering and compaction in layers complete in all respects and/or as directed by the Engineer.	Cft.	8000		
REINFORCEMENT					
Ref. Sec.No. 2200					
00C-4C	Hot rolled billet deformed steel bars conforming to ASTM A-615 grade 60 conforming to ASTM A-615 including the cost of straightening, cutting, bending, binding, wastage and such overlaps as are not shown over the drawings, placing in position on chairs, tying with binding wires etc. complete in all respects and/or as directed by the Engineer.	tonne	2		
PLAIN AND REINFORCED CONCRETE					
Ref. Sec.No. 2100,2300					
00C-5C	Class 'F' concrete using sulphate resistant cement in foundations.	Cft.	990		
00C-6C	Reinforced cement concrete Class - B (3000 PSI cylindrical strength) using ordinary portland cement in following structural elements (sub & super structure) including form works fixing and its removal etc. complete in all respects and/or as directed by the Engineer.				
	a) Foundations / footings	Cft.	246		
	b) Columns (upto plinth)	Cft.	58		
	c) Plinth beams	Cft.	114		
	d) Fair face RCC Railing (vertical & horizontal structural elements) including the cost of anchors, bolts, nuts, washers, all other fixing accessories & hardware, lifting, placing, fixing / installation in position, form work / molds fixing & its removal etc. complete in all respects and/or as directed by the Engineer.	Cft.	73		
WATER PROOFING					
Ref. Sec.No. 6412					
00C-7C	Two coats of hot bitumen grade 10/20 @ of 1Kg./Sq.m. per coat to all structural concrete surfaces in contact with earth as specified.	Sft.	1192		

Total Cost of RCC Railing Boundary Wall Works Rs.

Carried over to Summary



**PAKISTAN ENGINEERING COUNCIL
ESTABLISHMENT OF PEC ENGINEERING COMPLEX
AT DHA CITY KARACHI PHASE-1
CONSTRUCTION OF GATE HOUSE - 1**

GATE HOUSE - 1

BILL OF QUANTITIES

Item No.	Description	Unit	Qty	Rate (Rs.)	Amount (Rs.)
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C CIVIL WORKS

EARTHWORKS

Ref. Sec.No. 1100

01-1C Excavation in all kinds of sub-surface materials (Soft/Rock) up to any depths including disposal of surplus/rejected all the required excavated material to designated places and upto any lead & lift complete in all respects as shown on the drawings, specifications and/or as directed by the Engineer.

Qty. 5402

01-2C Fill and backfill with selected material including watering, compaction etc. complete in all respects as shown on the drawings, specifications (material for backfilling shall be approved by the Engineer and shall be placed in layers not exceeding 6 inches) and/or as directed by the Engineer.

a) Obtained from required excavation

Qty. 1256

b) Obtained from outside sources.

Qty. 713

STONE SOLING

Ref. Sec.No. 1330

01-3C 6 inch thick stone soling including binding material, watering and compaction etc. complete in all respects and/or as directed by the Engineer.

Sft. 223

TERMITE CONTROL TREATMENT

Ref.Spec. No.1600

01-4C Provide and spray approved pesticide solution as per manufacturer's recommendation in excavated earth, consolidated layer of earth or earth under floor etc. complete as per specifications by approved agency of Termite Control for building (Note: Rinth area will be measured for payment) complete in all respects and/or as directed by the Engineer.

Sft. 278

REINFORCEMENT

Ref. Sec.No. 2200

01-5C Providing and laying reinforcement bars using hot rolled deformed billet steel bars "Grade 60" conforming to ASTM A-615 including the cost of straightening, cutting, bending, binding (using 16 gauge G.I. wire), wastage and such overlaps as are not shown over the drawings, placing in position on chairs, tying with binding wires, etc., in all kinds of RCC work complete in all respects.

Tonne 28



GATE HOUSE - 1

BILL OF QUANTITIES

Item No.	Description	Unit	Qty	Rate (Rs.)	Amount (Rs.)
PLAIN AND REINFORCED CONCRETE					
Ref. Sec.No. 2100, 2200, 2300					
Providing and laying cement concrete mixing, transporting, hoisting, placing, form work, scaffolding, vibrating and curing etc., including the cost of form work and its removal complete as per drawings and specifications (but excluding the cost of the reinforcement) and/or as directed by the Engineer.					
01-6C	Class E cement concrete 800 psi at 28 days (Cylinder Strength) using ordinary Portland cement (OPC) complete in all respects and/or as directed by the Engineer.	Cft.	2104		
01-7C	Class D cement concrete 1200 psi at 28 days (Cylinder Strength) using ordinary Portland cement (OPC) complete in all respects and/or as directed by the Engineer.	Cft.	13		
01-8C	Class B Reinforced cement concrete 3000 psi 28 days (Cylinder Strength) using ordinary Portland cement (OPC) in following sub-structures complete in all respects as shown on the drawings, specifications and/or as directed by the Engineer.				
	a) Footings/Foundations	Cft.	1662		
	b) Columns upto plinth	Cft.	362		
	c) Plinth Beams	Cft.	278		
01-9C	Class B Reinforced cement concrete 3000 psi 28 days (Cylinder Strength) using ordinary Portland cement (OPC) in following super-structures complete in all respects as shown on the drawings, specifications and/or as directed by the Engineer.				
	a) Columns	Cft.	1656		
	b) Beams & lintels	Cft.	629		
	c) Slab & Projection	Cft.	115		
BLOCK MASONRY					
Ref. Sec.No. 4200					
01-10C	Block masonry wall of the following thickness set in 1:3 cement sand mortar including stiffener columns, anchor bars, D.P.C & curing etc. Complete in all respects as shown on drawings and as per specifications (<i>anchor bars shall be paid in BOQ Item No. 01-5C</i>).				
	a) 6" thick	Cft.	2270		



GATE HOUSE - 1

BILL OF QUANTITIES

Item No.	Description	Unit	Qty	Rate (Rs.)	Amount (Rs.)
CARPENTRY & JOINERY WORK					
Ref. Spec. No. 4600 & 6700					
01-11C	Providing and fixing wooden Engineered doors of the following type consisting of Metal Chowkhat/frame 16 SWG and door shutter solid core commercial ply wood with 3mm thick approved veneer on both side with groove shutters consists of 2" thick 4" wide frame of Red Meranti wood filling with MDF approved quality including hold fast, hinges, mortice lock (approved quality), striking plates s.s. finish, door closer tower bolts, 10 mm lipping and beading/architrave, painting / polishing and Kick plate/wired glass view panel and etc. complete in all respects as shown on drawings / specifications and/or as directed by the Architect / Engineer (sample approved by the Architect / Engineer).				
	a) Type D2	Sft.	18		
ALUMINUM WORKS					
Ref. Spec. No. 6220 & 6250					
01-12C	Providing and fixing fully glazed anodized aluminum Windows of approved manufacturer using 2mm thick 4" wide extruded sections, glazed with distortion free 6mm thick tempered glass including floor machine, SS Handles, all other fixing accessories, hardware's, PVC / rubber gasket and sealant complete as per schedule & specifications and/or as directed by the Architect / Engineer (sample as approved by the Architects/Engineer).	Sft.	25		
uPVC Door, windows and ventilators					
01-13C	providing and fixing uPVC door partial glazing of the following type of approved quality, including lock, handles, all other fixing accessories, hardware's etc. complete in all respects as shown on the drawings/details and/or as directed by the Engineer.				
	a) Type D1	Sft.	44		
WATER PROOFING AND BUILT-UP ROOFING					
Ref. Sec.No. 6411					
01-14C	Providing and laying water proofing treatment over roof slab complete in all respects as shown on the drawings/details, specifications and/or as directed by the Engineer.	Sft.	223		
01-15C	Two coats of emulsified bitumen cold applied to all structural concrete surfaces in contact with earth of approved manufacturer's, complete in all respects and/or as directed by the Engineer.	Sft.	2292		
CEMENT PLASTER					
Ref. Sec.No. 6521					
01-16C	1/2 inch thick 1:6 cement sand plaster to specified interior surfaces etc. complete in all respects as shown on the drawings and specifications and/or as directed by the Engineer.				
	a) Ceiling	Sft.	189		
	b) Internal walls	Sft.	745		
01-17C	3/4 inch thick 1:4 cement sand plaster to specified exterior surfaces, groove in plaster as specified etc. complete in all respects as shown on the drawings and/ or as directed by the Engineer.	Sft.	5218		

GATE HOUSE - 1

BILL OF QUANTITIES

Item No.	Description	Unit	Qty	Rate (Rs.)	Amount (Rs.)
FLOOR AND WALL FINISHES					
Ref. Sec.No. 6531, 6600					
01-18C	4" thick Class-D cement concrete (1:3:6) in sub-floor using sulphate resistance cement (SRC) complete in all respects and/or as directed by the Engineer.	Sft.	200		
01-19C	Providing and laying full body Porcelain tile flooring (premium quality) in approved color/shade and texture Setting tile in cement slurry, filling the joint with matching grout, Class - C cement concrete base, washing, cleaning and curing etc. Complete in all respects as shown on the drawings/details and/or as directed by the Engineer.				
	a) 24"X24" on Room	Sft.	189		
	b) 12"X24" on Toilet	Sft.	11		
01-20C	Providing and laying porcelain tile skirting and dado (premium quality) in approved color/shade and texture (matched with flooring), setting tile in cement slurry, filling the joint with matching grout, rough base cement sand plaster (1:6), washing, cleaning and curing etc. complete in all respect as shown on the drawing/details and/or as directed by the Engineer.				
	a) 24"X4" Skirting	Sft.	27		
	b) 24"X12" (Up to 7'-0") Dado	Sft.	208		
01-21C	Pre-polished Verona Marble (premium quality) on floor/landing, tread, riser & skirting of the following of approved color, quality, size including bull nosing, grinding, polishing & buffing, making groove filled with rubber sealant, washing, cleaning, curing & cement concrete base/mortar (1:3) etc. complete in all respects as shown on the drawings/details and/or as directed by the Engineer.				
	a) On Steps (3'X12"X3/4" Thick one Piece)	Sft.	13		
	b) Riser (3'X6"X3/4" Thick one Piece)	Sft.	9		
PAINTING					
Ref. Sec.No. 6700					
01-22C	Providing and applying painting (Nippon/ICI or approved equivalent) on the following surfaces including surface preparation & priming coat etc. as per manufacturer's recommendation complete in all respects and/or as directed by the Engineer. (sample approved prior to execution of the works).				
	a) 3 Coats of distemper on Ceiling.	Sft.	189		
	b) 3 Coats of emulsion paint on Wall	Sft.	745		
01-23C	Providing and applying 3 coats of weather resistant paint (Nippon/ICI or approved equivalent) to exterior surfaces including surface preparation & priming coat etc. as per manufacturer's recommendation complete in all respects and/or as directed by the Engineer. (sample approved prior to execution of the works).	Sft.	5218		



GATE HOUSE - 1

BILL OF QUANTITIES

Item No.	Description	Unit	Qty	Rate (Rs.)	Amount (Rs.)
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MISCELLANEOUS

- | | | | | | |
|--------|---|------|------|--|--|
| 01-24C | Providing and fixing precast fair face rain water spouts of approved quality with cement sand mortar (1:2) etc. complete in all respect as shown on the drawing and or as directed by the Engineer. | No. | 2 | | |
| 01-25C | Providing, and laying pavers comprising of compaction, preparation of subgrade, 8" thick sub-base, 6" thick base, 2" thick sand cushion and 80mm thick pavers of approved quality complete in all respect as shown on the drawings/details and or as directed by the Engineer. | Sft. | 1175 | | |
| 01-26C | Providing and laying pre-cast fair faced Kerb block size 914x204x150mm of approved quality by Envicrete, including setting, jointing, pointing in cement sand mortar (1:4), earth works, lean concrete (class -"E"), haunching concrete (class-"D") etc. complete in all respects as shown on drawings/detail and/or as directed by the Engineer. | Rft. | 429 | | |

STRUCTURAL STEEL WORKS

- | | | | | | |
|--------|--|-----|-------|--|--|
| 01-27C | Design, supplying, fabricating, installation & fixing structural steel members (Grade-A36) including connection plates, nut & bolts, anchors, embedded parts, all other fixing accessories, hardwares, two (02) coats of epoxy paint system of approved quality, colour, sand blasting, surface preparation and cleaning etc. complete in all respects and/or as directed by the Engineer. | Kg. | 30000 | | |
|--------|--|-----|-------|--|--|

Note: Shop drawings required for the work including all kinds of fabrication, field erection, installation, placement and layout drawings shall be furnished by the Contractor for approval of the Architect / Engineer.

Total Cost of (Civil Works) Rs. _____

Carried Over to Summary _____



**PAKISTAN ENGINEERING COUNCIL
ESTABLISHMENT OF PEC ENGINEERING COMPLEX
AT DHA CITY KARACHI PHASE-1
CONSTRUCTION OF GATE HOUSE - 2**

GATE HOUSE - 2

BILL OF QUANTITIES

Item No.	Description	Unit	Qty	Rate (Rs.)	Amount (Rs.)
C. CIVIL WORKS					
EARTHWORKS					
Ref. Sec.No. 1100					
02-1C	Excavation in all kinds of sub-surface materials (Soft/Rock) up to any depths including disposal of surplus/rejected all the required excavated material to designated places and upto any lead & lift complete in all respects as shown on the drawings, specifications and/or as directed by the Engineer.	Cft.	2532		
02-2C	Fill and backfill with selected material including watering, compaction etc. complete in all respects as shown on the drawings, specifications (material for backfilling shall be approved by the Engineer and shall be placed in layers not exceeding 6 inches) and/or as directed by the Engineer.				
	a) Obtained from required excavation.	Cft.	1435		
	b) Obtained from outside sources.	Cft.	738		
STONE SOLING					
Ref. Sec.No. 1330					
02-3C	6 inch thick stone soling including binding material, watering and compaction etc. complete in all respects and/or as directed by the Engineer.	Sft.	142		
TERMITE CONTROL TREATMENT					
Ref.Spec. No.1600					
02-4C	Provide and spray approved pesticide solution as per manufacturer's recommendation in excavated earth, consolidated layer of earth or earth under floor etc. complete as per specifications by approved agency of Termite Control for building (Note: <i>Pinth area will be measured for payment</i>) complete in all respects and/or as directed by the Engineer.	Sft.	231		
REINFORCEMENT					
Ref. Sec.No. 2200					
02-5C	Providing and laying reinforcement bars using hot rolled deformed Tinne billet steel bars "Grade 60" conforming to ASTM A-615 including the cost of straightening, cutting, bending, binding (using 16 gauge G.I. wire), wastage and such overlaps as are not shown over the drawings, placing in position on chairs, tying with binding wires, etc., in all kinds of RCC work complete in all respects.	Tonne	17		



GATE HOUSE - 2

BILL OF QUANTITIES

Item No.	Description	Unit	Qty	Rate (Rs.)	Amount (Rs.)
CARPENTRY & JOINERY WORK					
Ref. Spec. No. 4600 & 6700					
02-11C	Providing and fixing wooden Engineered doors of the following type consisting of Metal Chowkhat/frame 16 SWG and door shutter solid core commercial ply wood with 3mm thick approved veneer on both side with groove shutters consists of 2" thick 4" wide frame of Red Meranti wood filling with MDF approved quality including hold fast, hinges, mortice lock (approved quality), striking plates s.s. finish, door closer tower bolts, 10 mm Lipping and beading/architrave, painting / polishing and Kick plate/wired glass view panel and etc. complete in all respects as shown on drawings / specifications and/or as directed by the Architect / Engineer (sample approved by the Architect / Engineer).				
	a) Type D2	Sft.	18		
ALUMINUM WORKS					
Ref. Spec. No. 6220 & 6250					
02-12C	Providing and fixing fully glazed anodized aluminum Windows & Ventilators of approved manufacturer using 2mm thick 4" wide extruded sections, glazed with distortion free 6mm thick tempered glass including Floor machine, SS Handles, all other fixing accessories, hardware's, PVC / rubber gasket and sealant complete as per schedule & specifications and/or as directed by the Architect / Engineer (sample as approved by the Architects/Engineer).				
	a) Type - W1	Sft.	24		
	b) Type - V1	Sft.	4		
UPVC Door, windows and ventilators					
02-13C	Providing and fixing UPVC door partial glazing of the following type of approved quality, including lock, handles, all other fixing accessories, hardware's etc. complete in all respects as shown on the drawings/details and/or as directed by the Engineer.				
	a) Type D1	Sft.	44		
WATER PROOFING AND BUILT-UP ROOFING					
Ref. Sec.No. 6411					
02-14C	Providing and laying water proofing treatment over roof slab complete in all respects as shown on the drawings/details, specifications and/or as directed by the Engineer.	Sft.	180		
02-15C	Two coats of emulsified bitumen cold applied to all structural concrete surfaces in contact with earth of approved manufacturer's, complete in all respects and/or as directed by the Engineer.	Sft.	1366		
CEMENT PLASTER					
Ref. Sec.No. 6521					
02-16C	1/2 inch thick 1:6 cement sand plaster to specified interior surfaces etc. complete in all respects as shown on the drawings and specifications and/or as directed by the Engineer.				
	a) Ceiling	Sft.	184		
	b) Internal walls	Sft.	641		
02-17C	3/4 inch thick 1:4 cement sand plaster to specified exterior surfaces, groove in plaster as specified etc. complete in all respects as shown on the drawings and/ or as directed by the Engineer.	Sft.	4280		



GATE HOUSE - 2

BILL OF QUANTITIES

Item No.	Description	Unit	Qty	Rate (Rs.)	Amount (Rs.)
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FLOOR AND WALL FINISHES

Ref. Sec.No. 6531, 6600

02-18C	4" thick Class-D cement concrete (1:3:6) in sub-floor using sulphate resistance cement (SRC) complete in all respects and/or as directed by the Engineer.	Sft.	189		
02-19C	Providing and laying full body Porcelain tile flooring (premium quality) in approved color/shade and texture Setting tile in cement slurry, filling the joint with matching grout, Class - C cement concrete base, washing, cleaning and curing etc. Complete in all respects as shown on the drawings/details and/or as directed by the Engineer.				
	a) 24"X24" on Room	Sft.	142		
	b) 12"X24" on Toilet	Sft.	43		
02-20C	Providing and laying porcelain tile skirting and dado (premium quality) in approved color/shade and texture (matched with flooring), setting tile in cement slurry, filling the joint with matching grout, rough base cement sand plaster (1:6), washing, cleaning and curing etc. complete in all respect as shown on the drawing/details and/or as directed by the Engineer.				
	a) 24"X4" Skirting	Sft.	23		
	b) 24"X12" (Up to 7'-0") Dado	Sft.	206		
02-21C	Pre-polished Verona Marble (premium quality) on floor/landing, tread, riser & skirting of the following of approved color, quality, size including bull nosing, grinding, polishing & buffing, making groove filled with rubber sealant, washing, cleaning, curing & cement concrete base/mortar (1:3) etc. complete in all respects as shown on the drawings/details and/or as directed by the Engineer.				
	a) On Steps (3'X12"X3/4" Thick one Piece)	Sft.	13		
	b) Riser (3'X6"X3/4" Thick one Piece)	Sft.	9		

PAINTING

Ref. Sec.No. 6700

02-22C	Providing and applying painting (Nippon/ICI or approved equivalent) on the following surfaces including surface preparation & priming coat etc. as per manufacturer's recommendation complete in all respects and/or as directed by the Engineer. (sample approved prior to execution of the works).				
	a) 3 Coats of distemper on Ceiling.	Sft.	184		
	b) 3 Coats of emulsion paint on Wall	Sft.	641		
02-23C	Providing and applying 3 coats of weather resistant paint (Nippon/ICI or approved equivalent) to exterior surfaces including surface preparation & priming coat etc. as per manufacturer's recommendation complete in all respects and/or as directed by the Engineer. (sample approved prior to execution of the works).	Sft.	4280		



GATE HOUSE - 2

BILL OF QUANTITIES

Item No.	Description	Unit	Qty	Rate (Rs.)	Amount (Rs.)
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MISCELLANEOUS

02-24C	Providing and fixing precast fair face rain water spouts of approved quality with cement sand mortar (1:2) etc. complete in all respect as shown on the drawing and or as directed by the Engineer.	No.	2		
02-25C	Providing, and laying pavers comprising of compaction, preparation of subgrade, 8" thick sub-base, 6" thick base, 2" thick sand cushion and 80mm thick pavers of approved quality complete in all respect as shown on the drawings/details and or as directed by the Engineer.	Sft.	702		
02-26C	Providing and laying pre-cast fair faced Kerb block size 914x204x150mm of approved quality by Enwcrete, including setting, jointing, pointing in cement sand mortar (1:4), earth works, lean concrete (class "E"), haunching concrete (class "D") etc. complete in all respects as shown on drawings/detail and/or as directed by the Engineer.	Rft.	320		

STRUCTURAL STEEL WORKS

02-27C	Design, supplying, fabricating, installation & fixing structural steel members (Grade-A36) including connection plates, nut & bolts, anchors, embedded parts, all other fixing accessories, hardware, two (02) coats of epoxy paint system of approved quality, colour, sand blasting, surface preparation and cleaning etc. complete in all respects and/or as directed by the Engineer. <i>Note: Shop drawings required for the work including all kinds of fabrication, field erection, installation, placement and layout drawings shall be furnished by the Contractor for approval of the Architect / Engineer.</i>	Kg.	15000		
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Total Cost of (Civil Works) Rs. _____

Carried Over to Summary _____



**PAKISTAN ENGINEERING COUNCIL
ESTABLISHMENT OF PEC ENGINEERING COMPLEX
AT DHA CITY KARACHI PHASE-1
CONSTRUCTION OF GATE HOUSE - 3**

GATE HOUSE - 3

BILL OF QUANTITIES

Item No.	Description	Unit	Qty	Rate (Rs.)	Amount (Rs.)
C. CIVIL WORKS					
<u>EARTHWORKS</u>					
Ref. Sec.No. 1100					
03-1C	Excavation in all kinds of sub-surface materials (Soft/Rock) up to any depths including disposal of surplus/rejected all the required excavated material to designated places and upto any lead & lift complete in all respects as shown on the drawings, specifications and/or as directed by the Engineer.	Cft.	2532		
03-2C	Fill and backfill with selected material including watering, compaction etc. complete in all respects as shown on the drawings, specifications (material for backfilling shall be approved by the Engineer and shall be placed in layers not exceeding 6 inches) and/or as directed by the Engineer.				
	a) Obtained from required excavation.	Cft.	1435		
	b) Obtained from outside sources.	Cft.	738		
<u>STONE SOLING</u>					
Ref. Sec.No. 1330					
03-3C	6 inch thick stone soling including blinding material, watering and compaction etc. complete in all respects and/or as directed by the Engineer.	Sft.	142		
<u>TERMITE CONTROL TREATMENT</u>					
Ref.Spec. No.1600					
03-4C	Provide and spray approved pesticide solution as per manufacturer's recommendation in excavated earth, consolidated layer of earth or earth under floor etc. complete as per specifications by approved agency of Termite Control for building (Note: Floor area will be measured for payment) complete in all respects and/or as directed by the Engineer.	Sft.	231		
<u>REINFORCEMENT</u>					
Ref. Sec.No. 2200					
03-5C	Providing and laying reinforcement bars using hot rolled deformed Tonne billet steel bars "Grade 60" conforming to ASTM A-615 including the cost of straightening, cutting, bending, binding (using 16 gauge G.I. wire), wastage and such overlaps as are not shown over the drawings, placing in position on chairs, tying with binding wires, etc., in all kinds of RCC work complete in all respects.	Tonne	17		



GATE HOUSE - 3

BILL OF QUANTITIES

Item No.	Description	Unit	Qty	Rate (Rs.)	Amount (Rs.)
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PLAIN AND REINFORCED CONCRETE

Ref. Sec.No. 2100, 2200, 2300

Providing and laying cement concrete mixing, transporting, hoisting, placing, form work, scaffolding, vibrating and curing etc., including the cost of form work and its removal complete as per drawings and specifications (but excluding the cost of the reinforcement) and/or as directed by the Engineer.

03-6C	Class E cement concrete 800 psi at 28 days (Cylinder Strength) using ordinary Portland cement (OPC) complete in all respects and/or as directed by the Engineer.	Cft.	121		
03-7C	Class D cement concrete 1200 psi at 28 days (Cylinder Strength) using ordinary Portland cement (OPC) complete in all respects and/or as directed by the Engineer.	Cft.	13		
03-8C	Class B Reinforced cement concrete 3000 psi 28 days (Cylinder Strength) using ordinary Portland cement (OPC) in following sub-structures complete in all respects as shown on the drawings, specifications and/or as directed by the Engineer.				
	a) Footings/Foundations	Cft.	634		
	b) Columns upto plinth	Cft.	326		
	c) Plinth Beams	Cft.	203		
03-9C	Class B Reinforced cement concrete 3000 psi 28 days (Cylinder Strength) using ordinary Portland cement (OPC) in following super-structures complete in all respects as shown on the drawings, specifications and/or as directed by the Engineer.				
	a) Columns	Cft.	1038		
	b) Beams & lintels	Cft.	279		
	c) Slab & Projection	Cft.	96		

BLOCK MASONRY

Ref. Sec.No. 4200

03-10C Block masonry wall of the following thickness set in 1:3 cement sand mortar including stiffener columns, anchor bars, D.P.C & curing etc. Complete in all respects as shown on drawings and as per specifications (*anchor bars shall be paid in BOQ Item No. 01-5C*).

	a) 6" thick	Cft.	1057		
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GATE HOUSE - 3

BILL OF QUANTITIES

Item No.	Description	Unit	Qty	Rate (Rs.)	Amount (Rs.)
CARPENTRY & JOINERY WORK					
Ref. Spec. No. 4600 & 6700					
03-11C	Providing and fixing wooden Engineered doors of the following type consisting of Metal Chowkhat/frame 16 SWG and door shutter solid core commercial ply wood with 3mm thick approved veneer on both side with groove shutters consists of 2" thick 4" wide frame of Red Meranti wood filling with MDF approved quality including hold fast, hinges, mortice lock (approved quality), striking plates s.s. finish, door closer tower bolts, 10 mm Lipping and beading/architrave, painting / polishing and Kick plate/wired glass view panel and etc. complete in all respects as shown on drawings / specifications and/or as directed by the Architect / Engineer (sample approved by the Architect / Engineer).				
	a) Type D2	Sft.	18		
ALUMINUM WORKS					
Ref. Spec. No. 6220 & 6250					
03-12C	Providing and fixing fully glazed anodized aluminum Windows & Ventilators of approved manufacturer using 2mm thick 4" wide extruded sections, glazed with distortion free 6mm thick tempered glass including Floor machine, SS Handles, all other fixing accessories, hardware's, PVC / rubber gasket and sealant complete as per schedule & specifications and/or as directed by the Architect / Engineer (sample as approved by the Architects/Engineer).				
	a) Type - W1	Sft.	24		
	b) Type - V1	Sft.	4		
UPVC Door, windows and ventilators					
03-13C	Providing and fixing UPVC door partial glazing of the following type of approved quality, including lock, handles, all other fixing accessories, hardware's etc. complete in all respects as shown on the drawings/details and/or as directed by the Engineer.				
	a) Type D1	Sft.	44		
WATER PROOFING AND BUILT-UP ROOFING					
Ref. Sec.No. 6411					
03-14C	Providing and laying water proofing treatment over roof slab complete in all respects as shown on the drawings/details, specifications and/or as directed by the Engineer.	Sft.	189		
03-15C	Two coats of emulsified bitumen cold applied to all structural concrete surfaces in contact with earth of approved manufacturer's, complete in all respects and/or as directed by the Engineer.	Sft.	1366		
CEMENT PLASTER					
Ref. Sec.No. 6521					
03-16C	1/2 inch thick 1:6 cement sand plaster to specified interior surfaces etc. complete in all respects as shown on the drawings and specifications and/or as directed by the Engineer.				
	a) Ceiling	Sft.	184		
	b) Internal walls	Sft.	641		
03-17C	3/4 inch thick 1:4 cement sand plaster to specified exterior surfaces, groove in plaster as specified etc. complete in all respects as shown on the drawings and/ or as directed by the Engineer.	Sft.	4200		



GATE HOUSE - 3

BILL OF QUANTITIES

Item No.	Description	Unit	Qty	Rate (Rs.)	Amount (Rs.)
FLOOR AND WALL FINISHES					
Ref. Sec.No. 6531, 6600					
03-18C	4" thick Class-D cement concrete (1:3:6) in sub-floor using sulphate resistance cement (SRC) complete in all respects and/or as directed by the Engineer.	Sft.	189		
03-19C	Providing and laying full body Porcelain tile flooring (premium quality) in approved color/shade and texture Setting tile in cement slurry, filling the joint with matching grout, Class - C cement concrete base, washing, cleaning and curing etc. Complete in all respects as shown on the drawings/details and/or as directed by the Engineer.				
	a) 24"X24" on Room	Sft.	142		
	b) 12"X24" on Toilet	Sft.	43		
03-20C	Providing and laying porcelain tile skirting and dado (premium quality) in approved color/shade and texture (matched with flooring), setting tile in cement slurry, filling the joint with matching grout, rough base cement sand plaster (1:5), washing, cleaning and curing etc. complete in all respect as shown on the drawing/details and/or as directed by the Engineer.				
	a) 24"X4" Skirting	Sft.	23		
	b) 24"X12" (Up to 7'-0") Dado	Sft.	208		
03-21C	Pre-polished Verona Marble (premium quality) on floor/landing, tread, riser & skirting of the following of approved color, quality, size including bull nosing, grinding, polishing & buffing, making groove filled with rubber sealant, washing, cleaning, curing & cement concrete base/mortar (1:3) etc. complete in all respects as shown on the drawings/details and/or as directed by the Engineer.				
	a) On Steps (3'X12"X3/4" Thick one Piece)	Sft.	13		
	b) Riser (3'X6"X3/4" Thick one Piece)	Sft.	9		
PAINTING					
Ref. Sec.No. 6700					
03-22C	Providing and applying painting (Nippon/ICI or approved equivalent) on the following surfaces including surface preparation & priming coat etc. as per manufacturer's recommendation complete in all respects and/or as directed by the Engineer. (sample approved prior to execution of the works).				
	a) 3 Coats of distemper on Ceiling.	Sft.	184		
	b) 3 Coats of emulsion paint on Wall	Sft.	641		
03-23C	Providing and applying 3 coats of weather resistant paint (Nippon/ICI or approved equivalent) to exterior surfaces including surface preparation & priming coat etc. as per manufacturer's recommendation complete in all respects and/or as directed by the Engineer. (sample approved prior to execution of the works).	Sft.	4280		



GATE HOUSE - 3

BILL OF QUANTITIES

Item No.	Description	Unit	Qty	Rate (Rs.)	Amount (Rs.)
MISCELLANEOUS					
03-24C	Providing and fixing precast fair face rain water spouts of approved quality with cement sand mortar (1:2) etc. complete in all respect as shown on the drawing and or as directed by the Engineer.	No.	2		
03-25C	Providing, and laying pavers comprising of compaction, preparation of subgrade, 8" thick sub-base, 6" thick base, 2" thick sand cushion and 80mm thick pavers of approved quality complete in all respect as shown on the drawings/details and or as directed by the Engineer.	Sq.	702		
03-26C	Providing and laying pre-cast fair faced Kerb block size 914x204x150mm of approved quality by Envirocrete, including setting, jointing, pointing in cement sand mortar (1:4), earth works, lean concrete (class "E"), haunching concrete (class "D") etc. complete in all respects as shown on drawings/detail and/or as directed by the Engineer.	Rt.	320		
STRUCTURAL STEEL WORKS					
03-27C	Design, supplying, fabricating, installation & fixing structural steel members (Grade-A36) including connection plates, nut & bolts, anchors, embedded parts, all other fixing accessories, hardwares, two (02) coats of epoxy paint system of approved quality, colour, sand blasting, surface preparation and cleaning etc. complete in all respects and/or as directed by the Engineer. <i>Note: Shop drawings required for the work including all kinds of fabrication, field erection, installation, placement and layout drawings shall be furnished by the Contractor for approval of the Architect / Engineer.</i>	Kg.	15000		

Total Cost of (Civil Works) Rs. _____
Carried Over to Summary _____



**PAKISTAN ENGINEERING COUNCIL
ESTABLISHMENT OF PEC ENGINEERING COMPLEX
AT DHA CITY KARACHI PHASE-1
CONSTRUCTION OF GATE HOUSE - 1, 2 & 3**

GATE HOUSE - 1, 2 & 3

BILL OF QUANTITIES

Item No.	Description	Unit	Qty	Rate (Rs.)	Amount (Rs.)
P. PLUMBING WORKS					
01-1P	Gate house - 01, Toilet Plumbing Works comprising eastern style W.C, pedestal type Wash basin (approved quality/make), water supply & sewerage lines, basin mixer, electric water geyser (9 Gallons Capacity), bib cocks, stop cocks, connection pipes, locking glass mirror, soap dish, piping network & connection of water supply & sewerage system, potable fibre glass water tank (capacity: 200 gallons of approved quality/make) with CC pad, soakage pit and all other fixing accessories & hardwares etc. complete in all respects and/or as directed by the Architect / Engineer.	Job	1		
01-2P	Gate house - 02 and 03, Kitchen and Toilet Plumbing Works comprising eastern style W.C, pedestal type Wash basin (approved quality/make), , kitchen sink single bowl, water supply & sewerage lines, basin & sink mixers, electric water geyser (9 Gallons Capacity), bib cocks, stop cocks, connection pipes, locking glass mirror, soap dish, piping network & connection of water supply & sewerage system, potable fibre glass water tank (capacity: 200 gallons of approved quality/make) with CC pad, soakage pit and all other fixing accessories & hardwares etc. complete in all respects and/or as directed by the Architect / Engineer.	Job	2		

Total Cost of (Plumbing Works) Rs. _____

Carried Over to Summary _____



**PAKISTAN ENGINEERING COUNCIL
ESTABLISHMENT OF PEC ENGINEERING COMPLEX
AT DHA CITY KARACHI PHASE-1**

GATE HOUSE-1 - ELECTRICAL WORKS

BILL OF QUANTITIES

Item No.	Description	Unit	Qty	Rate (Rs.)	Amount (Rs.)
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EA ELECTRICAL WORKS

Ref Spec Sec: 8001, Approved List of Manufacturer's in Vol-I

The entire electrical installation/work shall be carried out by licensed Contractor, authorised to undertake such work under the provisions of the Electricity Act 1910 and The Electricity Rules 1937 as adopted and modified upto date by the Government of Pakistan. The work includes supply, installation, testing, commissioning of the following Electrical work items (unless specifically stated otherwise). The specifications section 8001 and recommended list of manufacturer applicable to all BoQ items. The work includes all material, labour, tools, plant, storage, transportation, accessories, related civil works required for proper completion of each item. The Contractor is bound to provide submittals for the Engineer's approval with relevant standards, data sheets, catalog, brochures, manuals, shop drawings etc. Note: in case of any discrepancy found between BoQ, specifications and drawings, then BoQ/specifications will govern.

LT DISTRIBUTION BOARDS

Ref Spec Sec: 8133, 8212, 8240

01-1EA Following 16 SWG MS sheet, recessed or surface mounted on wall or floor LT Distribution Boards (as per single line diagram shown on drawings) including electrical & mechanical components, electrolytic tinned copper busbars, control wiring, related civil works and all accessories, complete in all respect. Make as per approved list in Vol-I.

a) EDB-GH-01 (Recessed Type)

Job. 1



GATE HOUSE-1 - ELECTRICAL WORKS

BILL OF QUANTITIES

Item No.	Description	Unit	Qty	Rate (Rs.)	Amount (Rs.)
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LIGHT FIXTURES

Ref. Specs Sec. 8150, 8212, 8240

01-2EA	Following LED light fixtures (Flicker Free) installed on surface or wall or floor or false ceiling or columns with lamps, holders, ballasts, starters, ignitors, capacitors, drivers as applicable, including mounting accessories, complete in all respect. The contractor shall be responsible for compatibility of light fixtures with false ceiling as proposed in architectural design. The light fixtures & components shall be certified by international accredited laboratory and complete test certificates and associated reports shall be submitted for approval. Make as per approved list in Vol-I.				
	a) Type - BL1	no.	17		
	LED Decorative Post Top type Bollard light fixture, die-cast aluminium housing, 800 lumens, 09 watt or less, 3000K color temperature, CRI Index 80, built-in LED output driver, complete IP65 ingress protection 2 to 3 ft height, IP-65, including mounting brackets, built-in LED driver, civil works & foundation, complete in all respect.				
	b) Type - DL1	no.	5		
	Surface mounted LED downlight fixture 725 mm or less dia, die cast aluminum housing, heat sink, 2000 lumens output, 20 watt, 4000K color temp, CRI index 80, LED driver (pf 0.9), IP20 ingress protection, life time 50,000 hours				
	c) Type - FL1	no.	4		
	LED flood light fixture (asymmetrical/symmetrical) with die-cast aluminium powder coated housing, electroplated aluminium reflector, 5000 lumens light output, 50W or better system wattage, 60 to 100 degree beam angle, 4000K color temperature, CRI Index 80, built-in LED output driver, IP65 ingress protection, IK07 impact protection, 4kV surge protector.				
	d) Type - BT1	no.	1		
	Surface / Suspended LED Batten fixture (600 mm length) 1000 lumens light output, 10 W or better system wattage, 4000K color temperature, CRI Index 80, LED output driver (PF 0.9), IP20 ingress protection				
	e) Type - SP1	no.	32		
	Surface mounted Outdoor LED adjustable spot light fixture 100 mm or less dia, 800 lumens light output, 10 W or less, 24/36 deg beam, 3000K, CRI 80, LED output driver (PF 0.9), IP65				
	f) Type -ST1	Rft	600		
	Recessed LED Outdoor Linear Light seamless with aluminium profile, 20mm width 20 mm depth, LED strip light with driver (Osram, Philips or approved equivalent), Good Quality UV Resistant Polycarbonate Diffuser, 3000K, including all accessories, complete in all respect. The light fixture have complete IP65 protection including components.				



GATE HOUSE-1 - ELECTRICAL WORKS

BILL OF QUANTITIES

Item No.	Description	Unit	Qty	Rate (Rs.)	Amount (Rs.)
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EMERGENCY LIGHTING FIXTURE

Ref. Specs Sec. 8150, 8212, 8240

- 01-3EA Following LED light fixtures (Flicker Free) installed on surface or wall or floor or false ceiling or columns with lamps, holders, ballasts, starters, ignitors, capacitors, drivers, battery backup unit as applicable, including mounting accessories, complete in all respect. The contractor shall be responsible for compatibility of light fixtures with false ceiling as proposed in architectural design. The light fixtures & components shall be certified by international accredited laboratory and complete test certificates and associated reports shall be submitted for approval. Make as per approved list in Vol-I.

a) Type – EB2

no. 2

Wall mounted, non-maintained type double head emergency light fixture, 6.5 W, with ni-cd battery backup unit for 3 hours standby operation, over charge & discharge protection, 3 no. indication light for power, charging & fault, test button, IP65 ingress protection, TUV or UL certified

LT CABLES

Ref. Specs Sec. 8212, 8240

- 01-4EA Following sizes, 600/1000 V, Single core or multi core, copper conductor, PVC insulated, armoured / unarmoured, PVC Sheathed cable pulled in already installed surface mounted conduits or concealed conduits or cable tray or concrete ducts or underground in already excavated trenches or in already laid PVC pipes including tags, ties, lugs, termination kits, colour sleeves, cable glands, bushes etc., all related accessories, complete in all respect. Make as per approved list in Vol-I.

a) 4 core, 16 mm², Cu/PVC/PVC

Rft 200

b) 4 core, 10 mm², Cu/PVC/PVC

Rft 200

c) 4 core, 06 mm², Cu/PVC/PVC

Rft 200

d) 3 core, 06 mm², Cu/PVC/PVC

Rft 200

WIRING

Refer Spec Sec: 8212, 8220, 8230, 8240, 8290

- 01-5EA Wiring of light circuits from distribution board (DB) to point/switch including wiring between switches on the same circuit with 3 no. (1 x 2.5 mm² as phase, neutral & CPC) single core Copper conductor PVC cable complete with appropriate size concealed (minimum 1" dia) / surface mounted PVC conduit and all accessories etc. complete in all respects. Make as per approved list in Vol-I.

no. 6



GATE HOUSE-1 - ELECTRICAL WORKS

BILL OF QUANTITIES

Item No.	Description	Unit	Qty	Rate (Rs.)	Amount (Rs.)
01-6EA	Wiring from light/exhaust fan point to switch with 3 no. (1 x 1.5 mm ² as phase, neutral & CPC) single core copper conductor PVC cable complete with appropriate size concealed (minimum 1" dia) / surface mounted PVC conduit, ceiling rose, 10A light control gang switch, sheet steel back box, 3 core flexible cable and all accessories etc. complete in all respects. Make as per approved list in Vol-I.	no.	10		
01-7EA	Same as above item 6EA but wiring from point to point.	no.	15		
01-8EA	Wiring of 250V socket outlets with following size single core, copper conductor PVC cables complete with appropriate size concealed (minimum 1" dia)/surface mounted PVC conduit and all accessories, etc. complete in all respects. Make as per approved list in Vol-I.				
	a) From Distribution Board (DB) to outlet with 3 no. (1 x 4.0 mm ² as phase, neutral & CPC)	no.	6		
	b) From outlet to outlet with (1 x 2.5 mm ² as phase, neutral & CPC)	no.	10		
	c) From outlet to outlet three feet bop with (1 x 2.5 mm ² as phase, neutral & CPC)	no.	10		
01-9EA	Wiring from distribution board to load break switch / circuit breaker box / socket outlet with 3 no. (1 x 6 mm ² as phase, neutral & CPC) single core copper conductor PVC cable, complete with appropriate size concealed (minimum 1" dia) / surface mounted PVC conduit and all accessories, etc. complete in all respects. Make as per approved list in Vol-I.	no.	1		
01-10EA	Wiring from distribution board to load break switch / circuit breaker box / socket outlet with 5 no. (1 x 6 mm ² as phase, neutral & CPC) single core copper conductor PVC cable, complete with appropriate size concealed (minimum 1" dia) / surface mounted PVC conduit and all accessories, etc. complete in all respects. Make as per approved list in Vol-I.	no.	1		

WIRING ACCESSORIES

Ref. Specs Sec. 8220

01-11EA	Following types of socket outlets including all accessories, complete in all respect. Make as per approved list in Vol-I.				
	a) Ceiling rose (A1 superior quality)	no.	50		
	b) 10-A light control gang switch (Rocker Type) - decorative high end series	no.	20		
	c) Concealed sheet steel back box with earth point for switches and fan dimmer (3 inch by 3 inch)	no.	10		
	d) 13 A, 250 V, 3 pin universal type, switched socket outlet (SIMPLEX)	no.	5		

GATE HOUSE-1 - ELECTRICAL WORKS

BILL OF QUANTITIES

Item No.	Description	Unit	Qty	Rate (Rs.)	Amount (Rs.)
e)	13 A, 250 V, 3 pin universal type, switched socket outlet (DUPLEX)	no.	2		
f)	15 A, 250 V, 3 pin, switch socket	no.	1		
g)	20 A, 03 pole, 250 V, double pole, with neon indication light / 16 Amps Safety Breaker	no.	1		
h)	20 A, 02 pole, 250 V, load break switch with rotatory on/off handle with back box, IP65 ingress protection	no.	1		
i)	20 A, 03 pole, 400 V, load break switch with rotatory on/off handle with back box, IP65 ingress protection	no.	1		
j)	32 A, 02 pole, 250 V, load break switch with rotatory on/off handle with back box, IP65 ingress protection	no.	1		
k)	32 A, 03 pole, 400 V, load break switch with rotatory on/off handle with back box, IP65 ingress protection	no.	1		

CONDUITS & PIPES

Ref. Specs Sec. 8230

01-12EA	UPVC class-'D' conduit with bends, including laying excavation, backfilling, sand bedding, compaction, all accessories, complete in all respect of following sizes:				
	a) 4 " dia (Class D)	Rt.	500		
	b) 2 " dia (Class D)	Rt.	500		
	c) 1-1/2 " dia (Class D)	Rt.	300		
01-13EA	RCC Man Hole of size 900 mm (L) x 900 mm (W) x 900 mm (varies as per site condition) (D) with heavy duty cast iron cover of size 24" dia with double groove, including G.I cable support channels, excavation, backfilling, compaction, lean concrete (Class-E), plastering & water proofing of structure, steel shuttering and form work, water stopper, steel reinforcement, sulphate resistant concrete cement (Class-B), galvanized mild steel ladder rungs etc., all accessories, complete in all respect. Note: The contractor shall prepare shop drawings including structural drawings for approval. Material as per approved list in Vol-I.	Job.	4		

EARTHING

Ref. Specs Sec. 8212, 8240

01-14EA	20 mm dia, 3 meter long solid copper rod type earth electrode including clamp with nuts and bolts, R.C.C. inspection chamber with medium duty C.I cover, excavation, backfilling, and all accessories, etc., as shown on the drawings, complete in all respects. Make as per approved list in Vol-I.	no.	3		
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GATE HOUSE-1 - ELECTRICAL WORKS

BILL OF QUANTITIES

Item No.	Description	Unit	Qty	Rate (Rs.)	Amount (Rs.)
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01-15EA Following sizes of single core PVC insulated copper conductor cable as earth continuity conductor (ECC) installed on surface or on already installed pipes / conduits / trenches / cable tray etc., including tags, ties, lugs, termination kits, colour sleeves, cable glands, bushes etc., all related accessories, complete in all respect. Make as per approved list in Vol-I.

a) 16 mm ²	Rft	200
b) 10 mm ²	Rft	200
c) 06 mm ²	Rft	200

01-16EA Following sizes of tinned copper earth connecting point, including continuous mounting base all accessories, complete in all respect. Make as per approved list in Vol-I.

a) 6 ways (300 mm x 50mm x 6mm)	no.	3
b) 12 ways (300 mm x 50mm x 6mm)	no.	3

MISCELLANEOUS ITEMS

Ref. Specs Sec. B290

01-17EA Providing & installing 142 Cm (56") sweep Ceiling Fan with blades, canopy, standard length of down rod including connection with 40/.0076" flexible wire complete as required. (without regulator) Pak, Royal, GFC, Younas, Millat. + Providing & fixing 3'x4'x5" size 1/8" thick recessed type fan clamp box with 5/8" dia MS bar fan clamp fixed in roof at casting time as required.

no. 2

01-18EA Following sizes of exhaust fan with blades, motor etc. fixed in wall hole, heavy gauge metallic shutter suitable for exhaust fan fitted on the wall hole, making hole in the wall for and fixing of holefast, duly plastered and making good the damaged area as required / specified including all accessories, complete in all respect. Make as per approved list in Vol-I.

a) 10" Dia	no.	1
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Total Cost of Electrical Works Rs. _____

Carried over to summary _____



**PAKISTAN ENGINEERING COUNCIL
ESTABLISHMENT OF PEC ENGINEERING COMPLEX
AT DHA CITY KARACHI PHASE-1**

GATE HOUSE-2 - ELECTRICAL WORKS

BILL OF QUANTITIES

Item No.	Description	Unit	Qty	Rate (Rs.)	Amount (Rs.)
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EA ELECTRICAL WORKS

Ref Spec Sec: 8001, Approved List of Manufacturer's in Vol-I

The entire electrical installation/work shall be carried out by licensed Contractor, authorised to undertake such work under the provisions of the Electricity Act 1910 and The Electricity Rules 1937 as adopted and modified upto date by the Government of Pakistan. The work includes supply, installation, testing, commissioning of the following Electrical work items (unless specifically stated otherwise). The specifications section 8001 and recommended list of manufacturer applicable to all BoQ items. The work includes all material, labour, tools, plant, storage, transportation, accessories, related civil works required for proper completion of each item. The Contractor is bound to provide submittals for the Engineer's approval with relevant standards, data sheets, catalog, brochures, manuals, shop drawings etc. Note: in case of any discrepancy found between BoQ, specifications and drawings, then BoQ/specifications will govern.

LT DISTRIBUTION BOARDS

Ref Spec Sec: 8133, 8212, 8240

02-1EA Following 16 SWG MS sheet, recessed or surface mounted on wall or floor LT Distribution Boards (as per single line diagram shown on drawings) including electrical & mechanical components, electrolytic tinned copper busbars, control wiring, related civil works and all accessories, complete in all respect. Make as per approved list in Vol-I.

a) EDB-GH-02 (Recessed Type) Job. 1



GATE HOUSE-2 - ELECTRICAL WORKS

BILL OF QUANTITIES

Item No.	Description	Unit	Qty	Rate (Rs.)	Amount (Rs.)
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LIGHT FIXTURES

Ref. Specs Sec. 8150, 8212, 8240

02-2EA Following LED light fixtures (Flicker Free) installed on surface or wall or floor or false ceiling or columns with lamps, holders, ballasts, starters, ignitors, capacitors, drivers as applicable, including mounting accessories, complete in all respect. The contractor shall be responsible for compatibility of light fixtures with false ceiling as proposed in architectural design. The light fixtures & components shall be certified by international accredited laboratory and complete test certificates and associated reports shall be submitted for approval. Make as per approved list in Vol-I.

a) Type - BL1	LED Decorative Post Top type Bollard light fixture, die cast aluminium housing, 800 lumens, 09 watt or less, 3000K color temperature, CRI Index 80, built-in LED output driver, complete IP65 ingress protection 2 to 3 ft height, IP-65, including mounting brackets, built-in LED driver, civil works & foundation, complete in all respect.	no.	14		
b) Type - DL1	Surface mounted LED downlight fixture 225 mm or less dia, die cast aluminum housing, heat sink, 2000 lumens output, 20 watt, 4000K color temp, CRI index 80, LED driver (pf 0.9), IP20 ingress protection, life time 50,000 hours	no.	5		
c) Type - FL1	LED flood light fixture (asymmetrical/symmetrical) with die-cast aluminium powder coated housing, electroplated aluminium reflector, 5000 lumens light output, 50W or better system wattage, 60 to 100 degree beam angle, 4000K color temperature, CRI Index 80, built-in LED output driver, IP65 ingress protection, IK07 impact protection, 4kV surge protector.	no.	4		
d) Type - BT1	Surface / Suspended LED Batten fixture (600 mm length) 1000 lumens light output, 10 W or better system wattage, 4000K color temperature, CRI Index 80, LED output driver (PF 0.9), IP20 ingress protection	no.	1		
e) Type -SP1	Surface mounted Outdoor LED adjustable spot light fixture 100 mm or less dia, 800 lumens light output, 10 W or less, 24/36 deg beam, 3000K, CRI 80, LED output driver (PF 0.9), IP66	no.	24		
f) Type -ST1	Recessed LED Outdoor Linear Light seamless with aluminium profile, 20mm width 20 mm depth, LED strip light with driver (Osram, Philips or approved equivalent), Good Quality UV Resistant Polycarbonate Diffuser, 3000K, including all accessories, complete in all respect. The light fixture have complete IP65 protection including components.	Rft	200		



GATE HOUSE-2 - ELECTRICAL WORKS

BILL OF QUANTITIES

Item No.	Description	Unit	Qty	Rate (Rs.)	Amount (Rs.)
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EMERGENCY LIGHTING FIXTURE

Ref. Specs Sec. 8150, 8212, 8240

- 02-3EA Following LED light fixtures (Flicker Free) installed on surface or wall or floor or false ceiling or columns with lamps, holders, ballasts, starters, ignitors, capacitors, drivers, battery backup unit as applicable, including mounting accessories, complete in all respect. The contractor shall be responsible for compatibility of light fixtures with false ceiling as proposed in architectural design. The light fixtures & components shall be certified by international accredited laboratory and complete test certificates and associated reports shall be submitted for approval. Make as per approved list in Vol-I.

a) Type – EB2

no. 2

Wall mounted, non-maintained type double head emergency light fixture, 6.5 W, with ni-cd battery backup unit for 3 hours standby operation, over charge & discharge protection, 3 no. indication light for power, charging & fault, test button, IP65 ingress protection, TUV or UL certified

LT CABLES

Ref. Specs Sec. 8212, 8240

- 02-4EA Following sizes, 600/1000 V, Single core or multi core, copper conductor, PVC insulated, armoured / unarmoured, PVC Sheathed cable pulled in already installed surface mounted conduits or concealed conduits or cable tray or concrete ducts or underground in already excavated trenches or in already laid PVC pipes including tags, ties, lugs, termination kits, colour sleeves, cable glands, bushes etc., all related accessories, complete in all respect. Make as per approved list in Vol-I.

a) 4 core, 16 mm², Cu/PVC/PVC

Rft. 200

b) 4 core, 10 mm², Cu/PVC/PVC

Rft. 200

c) 4 core, 06 mm², Cu/PVC/PVC

Rft. 200

d) 3 core, 06 mm², Cu/PVC/PVC

Rft. 200

WIRING

Refer Spec Sec: 8212, 8220, 8230, 8240, 8290

- 02-5EA Wiring of light circuits from distribution board (DB) to point/switch including wiring between switches on the same circuit with 3 no. (1 x 2.5 mm² as phase, neutral & CPC) single core Copper conductor PVC cable complete with appropriate size concealed (minimum 1" dia) / surface mounted PVC conduit and all accessories etc. complete in all respects. Make as per approved list in Vol-I.

no. 6



GATE HOUSE-2 - ELECTRICAL WORKS

BILL OF QUANTITIES

Item No.	Description	Unit	Qty	Rate (Rs.)	Amount (Rs.)
02-6EA	Wiring from light/exhaust fan point to switch with 3 no. (1 x no. 1.5 mm ² as phase, neutral & CPC) single core copper conductor PVC cable complete with appropriate size concealed (minimum 1" dia) / surface mounted PVC conduit, ceiling rose, 10A light control gang switch, sheet steel back box, 3 core flexible cable and all accessories etc. complete in all respects. Make as per approved list in Vol-I.	no.	10		
02-7EA	Same as above item 6EA but wiring from point to point.	no.	15		
02-8EA	Wiring of 250V socket outlets with following size single core, copper conductor PVC cables complete with appropriate size concealed (minimum 1" dia)/surface mounted PVC conduit and all accessories, etc. complete in all respects. Make as per approved list in Vol-I.				
	a) From Distribution Board (DB) to outlet with 3 no. (1 x 4.0 mm ² as phase, neutral & CPC)	no.	6		
	b) From outlet to outlet with (1 x 2.5 mm ² as phase, neutral & CPC)	no.	10		
	c) From outlet to outlet three feet loop with (1 x 2.5 mm ² as phase, neutral & CPC)	no.	10		
02-9EA	Wiring from distribution board to load break switch / circuit breaker box / socket outlet with 3 no. (1 x 6 mm ² as phase, neutral & CPC) single core copper conductor PVC cable, complete with appropriate size concealed (minimum 1" dia) / surface mounted PVC conduit and all accessories, etc. complete in all respects. Make as per approved list in Vol-I.	no.	1		
02-10EA	Wiring from distribution board to load break switch / circuit breaker box / socket outlet with 5 no. (1 x 6 mm ² as phase, neutral & CPC) single core copper conductor PVC cable, complete with appropriate size concealed (minimum 1" dia) / surface mounted PVC conduit and all accessories, etc. complete in all respects. Make as per approved list in Vol-I.	no.	1		

WIRING ACCESSORIES

Ref. Specs Sec. 6220

02-11EA	Following types of socket outlets including all accessories, complete in all respect. Make as per approved list in Vol-I.				
	a) Ceiling rose (A1 superior quality)	no.	50		
	b) 10 A light control gang switch (Rocker Type) - decorative high end series	no.	20		
	c) Concealed sheet steel back box with earth point for switches and fan dimmer (3 inch by 3 inch)	no.	10		
	d) 13 A, 250 V, 3 pin universal type, switched socket outlet (SIMPLEX)	no.	4		



GATE HOUSE-2 - ELECTRICAL WORKS

BILL OF QUANTITIES

Item No.	Description	Unit	Qty	Rate (Rs.)	Amount (Rs.)
e)	13 A, 250 V, 3 pin universal type, switched socket outlet (DUPLEX)	no.	2		
f)	15 A, 250 V, 3 pin, switch socket	no.	1		
g)	20 A, 03 pole, 250 V, double pole, with neon indication light / 16 Amps Safety Breaker	no.	1		
h)	20 A, 02 pole, 250 V, load break switch with rotatory on/off handle with back box, IP65 ingress protection	no.	1		
i)	20 A, 03 pole, 400 V, load break switch with rotatory on/off handle with back box, IP65 ingress protection	no.	1		
j)	32 A, 02 pole, 250 V, load break switch with rotatory on/off handle with back box, IP65 ingress protection	no.	1		
k)	32 A, 03 pole, 400 V, load break switch with rotatory on/off handle with back box, IP65 ingress protection	no.	1		

CONDUITS & PIPES

Ref. Specs Sec. 8230

02-12EA	UPVC class-'D' conduit with bends, including laying excavation, backfilling, sand bedding, compaction, all accessories, complete in all respect of following sizes				
a)	4" dia (Class D)	Rft	500		
b)	2" dia (Class D)	Rft	500		
c)	1-1/2" dia (Class D)	Rft	300		

02-13EA	RCC Man Hole of size 900 mm (L) x 900 mm (W) x 900 mm (varies as per site condition) (D) with heavy duty cast iron cover of size 24" dia with double groove, including G.I cable support channels, excavation, backfilling, compaction, lean concrete (Class-E), plastering & water proofing of structure, steel shuttering and form work, water stopper, steel reinforcement, sulphate resistant concrete cement (Class-B), galvanized mild steel ladder rungs etc., all accessories, complete in all respect. Note: The contractor shall prepare shop drawings including structural drawings for approval. Material as per approved list in Vol-I.	Job.	4		
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EARTHING

Ref. Specs Sec. 8212, 8240

02-14EA	20 mm dia, 3 meter long solid copper rod type earth electrode including clamp with nuts and bolts, R.C.C. inspection chamber with medium duty C.I cover, excavation, backfilling, and all accessories, etc., as shown on the drawings, complete in all respects. Make as per approved list in Vol-I.	no.	3		
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GATE HOUSE-2 - ELECTRICAL WORKS

BILL OF QUANTITIES

Item No.	Description	Unit	Qty	Rate (Rs.)	Amount (Rs.)
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02-15EA Following sizes of single core PVC insulated copper conductor cable as earth continuity conductor (ECC) installed on surface or on already installed pipes / conduits / trenches / cable tray etc., including tags, ties, lugs, termination kits, colour sleeves, cable glands, bushes etc., all related accessories, complete in all respect. Make as per approved list in Vol-I.

a) 16 mm ²	Rft	200
b) 10 mm ²	Rft	200
c) 06 mm ²	Rft	200

02-16EA Following sizes of tinned copper earth connecting point, including continuous mounting base all accessories, complete in all respect. Make as per approved list in Vol-I.

a) 6 ways (300 mm x 50mm x 6mm)	no.	3
b) 12 ways (300 mm x 50mm x 6mm)	no.	3

MISCELLANEOUS ITEMS

Ref. Specs Sec. 8290

02-17EA Providing & installing 142 Cm (56") sweep Ceiling Fan with blades, canopy, standard length of down rod including connection with 40/0076" flexible wire complete as required. (without regulator) Pak, Royal, GFC, Younas, Millat. + Providing & fixing 3"x4"x5" size 1/8" thick recessed type fan clamp box with 5/8" dia MS bar fan clamp fixed in roof at casting time as required.

no. 1

02-18EA Following sizes of exhaust fan with blades, motor etc. fixed in wall hole, heavy gauge metallic shutter suitable for exhaust fan fitted on the wall hole, making hole in the wall for and fixing of holefast, duly plastered and making good the damaged area as required / specified including all accessories, complete in all respect. Make as per approved list in Vol-I.

a) 10" Dia	no.	2
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Total Cost of Electrical Works Rs. _____

Carried over to summary _____



**PAKISTAN ENGINEERING COUNCIL
ESTABLISHMENT OF PEC ENGINEERING COMPLEX
AT DHA CITY KARACHI PHASE-1**

GATE HOUSE-3 - ELECTRICAL WORKS

BILL OF QUANTITIES

Item No.	Description	Unit	Qty	Rate (Rs.)	Amount (Rs.)
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EA ELECTRICAL WORKS

Ref Spec Sec: B001, Approved List of Manufacturer's in Vol-I

The entire electrical installation/work shall be carried out by licensed Contractor, authorised to undertake such work under the provisions of the Electricity Act 1910 and The Electricity Rules 1937 as adopted and modified upto date by the Government of Pakistan. The work includes supply, installation, testing, commissioning of the following Electrical work items (unless specifically stated otherwise). The specifications section 8001 and recommended list of manufacturer applicable to all BoQ items. The work includes all material, labour, tools, plant, storage, transportation, accessories, related civil works required for proper completion of each item. The Contractor is bound to provide submittals for the Engineer's approval with relevant standards, data sheets, catalog, brochures, manuals, shop drawings etc. Note: in case of any discrepancy found between BoQ, specifications and drawings, then BoQ/specifications will govern.

LT DISTRIBUTION BOARDS

Ref Spec Sec: 8133, 8212, 8240

03-1EA Following 16 SWG MS sheet, recessed or surface mounted on wall or floor LT Distribution Boards (as per single line diagram shown on drawings) including electrical & mechanical components, electrolytic tinned copper busbars, control wiring, related civil works and all accessories, complete in all respect. Make as per approved list in Vol-I.

a) EDB-GH-03 (Recessed Type)

Job. 1



GATE HOUSE-3 - ELECTRICAL WORKS

BILL OF QUANTITIES

Item No.	Description	Unit	Qty	Rate (Rs.)	Amount (Rs.)
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LIGHT FIXTURES

Ref. Specs Sec. 8150, 8212, 8240

03-2EA	Following LED light fixtures (Flicker Free) installed on surface or wall or floor or false ceiling or columns with lamps, holders, ballasts, starters, ignitors, capacitors, drivers as applicable, including mounting accessories, complete in all respect. The contractor shall be responsible for compatibility of light fixtures with false ceiling as proposed in architectural design. The light fixtures & components shall be certified by international accredited laboratory and complete test certificates and associated reports shall be submitted for approval. Make as per approved list in Vol-I.				
	a) Type – BL1 LED Decorative Post Top type Bollard light fixture, die cast aluminium housing, 800 lumens, 09 watt or less, 3000K color temperature, CRI Index 80, built-in LED output driver, complete IP65 ingress protection 2 to 3 ft height, IP-65, including mounting brackets, built-in LED driver, civil works & foundation, complete in all respect.	no.	14		
	b) Type – DL1 Surface mounted LED downlight fixture 225 mm or less dia, die cast aluminum housing, heat sink, 2000 lumens output, 20 watt, 4000K color temp, CRI index 80, LED driver (pf 0.9), IP20 ingress protection, life time 50,000 hours	no.	5		
	c) Type – FL1 LED flood light fixture (asymmetrical/symmetrical) with die-cast aluminium powder coated housing, electroplated aluminium reflector, 5000 lumens light output, 50W or better system wattage, 60 to 100 degree beam angle, 4000K color temperature, CRI Index 80, built-in LED output driver, IP65 ingress protection, IK07 impact protection, 4kV surge protector	no.	4		
	d) Type – BT1 Surface / Suspended LED Batten fixture (600 mm length) 1000 lumens light output, 10 W or better system wattage, 4000K color temperature, CRI Index 80, LED output driver (PF 0.9), IP20 ingress protection	no.	1		
	e) Type –SP1 Surface mounted Outdoor LED adjustable spot light fixture 100 mm or less dia, 800 lumens light output, 10 W or less, 24/36 deg beam, 3000K, CRI 80, LED output driver (PF 0.9), IP66	no.	24		
	f) Type –ST1 Recessed LED Outdoor Linear Light seamless with aluminium profile, 20mm width 20 mm depth, LED strip light with driver (Osram, Philips or approved equivalent), Good Quality UV Resistant Polycarbonate Diffuser, 3000K, including all accessories, complete in all respect. The light fixture have complete IP65 protection including components.	Rft	200		



GATE HOUSE-3 - ELECTRICAL WORKS

BILL OF QUANTITIES

Item No.	Description	Unit	Qty	Rate (Rs.)	Amount (Rs.)
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EMERGENCY LIGHTING FIXTURE

Ref. Specs Sec. 8150, 8212, 8240

03-3EA Following LED light fixtures (Flicker Free) installed on surface or wall or floor or false ceiling or columns with lamps, holders, ballasts, starters, ignitors, capacitors, drivers, battery backup unit as applicable, including mounting accessories, complete in all respect. The contractor shall be responsible for compatibility of light fixtures with false ceiling as proposed in architectural design. The light fixtures & components shall be certified by international accredited laboratory and complete test certificates and associated reports shall be submitted for approval. Make as per approved list in Vol-I.

a) Type – EB2

no. 2

Wall mounted, non-maintained type double head emergency light fixture, 6.5 W, with ni-cd battery backup unit for 3 hours standby operation, over charge & discharge protection, 3 no. indication light for power, charging & fault, test button, IP65 ingress protection, TUV or UL certified

LT CABLES

Ref. Specs Sec. 8212, 8240

03-4EA Following sizes, 600/1000 V, Single core or multi core, copper conductor, PVC insulated, armoured / unarmoured, PVC Sheathed cable pulled in already installed surface mounted conduits or concealed conduits or cable tray or concrete ducts or underground in already excavated trenches or in already laid PVC pipes including tags, ties, lugs, termination kits, colour sleeves, cable glands, bushes etc., all related accessories, complete in all respect. Make as per approved list in Vol-I.

a) 4 core, 16 mm², Cu/PVC/PVC

Rft 200

b) 4 core, 10 mm², Cu/PVC/PVC

Rft 200

c) 4 core, 06 mm², Cu/PVC/PVC

Rft 200

d) 3 core, 06 mm², Cu/PVC/PVC

Rft 200

WIRING

Refer Spec Sec: 8212, 8220, 8230, 8240, 8290

03-5EA Wiring of light circuits from distribution board (DB) to point/switch including wiring between switches on the same circuit with 3 no. (1 x 2.5 mm² as phase, neutral & CPC) single core Copper conductor PVC cable complete with appropriate size concealed (minimum 1" dia) / surface mounted PVC conduit and all accessories etc. complete in all respects. Make as per approved list in Vol-I.



GATE HOUSE-3 - ELECTRICAL WORKS

BILL OF QUANTITIES

Item No.	Description	Unit	Qty	Rate (Rs.)	Amount (Rs.)
03-6EA	Wiring from light/exhaust fan point to switch with 3 no. (1 x 1.5 mm ² as phase, neutral & CPC) single core copper conductor PVC cable complete with appropriate size concealed (minimum 1" dia) / surface mounted PVC conduit, ceiling rose, 10A light control gang switch, sheet steel back box, 3 core flexible cable and all accessories etc. complete in all respects. Make as per approved list in Vol-I.	no.	10		
03-7EA	Same as above item 6EA but wiring from point to point.	no.	15		
03-8EA	Wiring of 250V socket outlets with following size single core, copper conductor PVC cables complete with appropriate size concealed (minimum 1" dia)/surface mounted PVC conduit and all accessories, etc. complete in all respects. Make as per approved list in Vol-I.				
	a) From Distribution Board (DB) to outlet with 3 no. (1 x 4.0 mm ² as phase, neutral & CPC)	no.	6		
	b) From outlet to outlet with (1 x 2.5 mm ² as phase, neutral & CPC)	no.	10		
	c) From outlet to outlet three feet loop with (1 x 2.5 mm ² as phase, neutral & CPC)	no.	10		
03-9EA	Wiring from distribution board to load break switch / circuit breaker box / socket outlet with 3 no. (1 x 6 mm ² as phase, neutral & CPC) single core copper conductor PVC cable, complete with appropriate size concealed (minimum 1" dia) / surface mounted PVC conduit and all accessories, etc. complete in all respects. Make as per approved list in Vol-I.	no.	1		
03-10EA	Wiring from distribution board to load break switch / circuit breaker box / socket outlet with 5 no. (1 x 6 mm ² as phase, neutral & CPC) single core copper conductor PVC cable, complete with appropriate size concealed (minimum 1" dia) / surface mounted PVC conduit and all accessories, etc. complete in all respects. Make as per approved list in Vol-I.	no.	1		

WIRING ACCESSORIES

Ref. Specs Sec. 8220

03-11EA	Following types of socket outlets including all accessories, complete in all respect. Make as per approved list in Vol-I.				
	a) Ceiling rose (A1 superior quality)	no.	50		
	b) 10 A light control gang switch (Rocker Type) - decorative high end series	no.	20		
	c) Concealed sheet steel back box with earth point for switches and fan dimmer (3 inch by 3 inch)	no.	10		
	d) 13 A, 250 V, 3 pin universal type, switched socket outlet (SIMPLEX)	no.	4		



GATE HOUSE-3 - ELECTRICAL WORKS

BILL OF QUANTITIES

Item No.	Description	Unit	Qty	Rate (Rs.)	Amount (Rs.)
e)	13 A, 250 V, 3 pin universal type, switched socket outlet (DUPLEX)	no.	2		
f)	15 A, 250 V, 3 pin, switch socket	no.	1		
g)	20 A, 03 pole, 250 V, double pole, with neon indication light / 16 Amps Safety Breaker	no.	1		
h)	20 A, 02 pole, 250 V, load break switch with rotatory on/off handle with back box, IP65 ingress protection	no.	1		
i)	20 A, 03 pole, 400 V, load break switch with rotatory on/off handle with back box, IP65 ingress protection	no.	1		
j)	32 A, 02 pole, 250 V, load break switch with rotatory on/off handle with back box, IP65 ingress protection	no.	1		
k)	32 A, 03 pole, 400 V, load break switch with rotatory on/off handle with back box, IP65 ingress protection	no.	1		

CONDUITS & PIPES

Ref. Specs Sec. 8230

03-12BA	UPVC class-D' conduit with bends, including laying excavation, backfilling, sand bedding, compaction, all accessories, complete in all respect of following sizes				
a)	1" dia (Class D)	Rft	500		
b)	2" dia (Class D)	Rft	500		
c)	1-1/2" dia (Class D)	Rft	300		

03-13EA	RCC Man Hole of size 900 mm (L) x 900 mm (W) x 900 mm (varies as per site condition) (D) with heavy duty cast iron cover of size 24" dia with double groove, including G.I cable support channels, excavation, backfilling, compaction, lean concrete (Class-E), plastering & water proofing of structure, steel shuttering and form work, water stopper, steel reinforcement, sulphate resistant concrete cement (Class-B), galvanized mild steel ladder rungs etc., all accessories, complete in all respect. Note: The contractor shall prepare shop drawings including structural drawings for approval. Material as per approved list in Vol-I.	Job.	4		
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EARTHING

Ref. Specs Sec. 8212, 8240

03-14EA	20 mm dia, 3 meter long solid copper rod type earth electrode including damp with nuts and bolts, R.C.C. inspection chamber with medium duty C.I cover, excavation, backfilling, and all accessories, etc., as shown on the drawings, complete in all respects. Make as per approved list in Vol-I.	no.	3		
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GATE HOUSE-3 - ELECTRICAL WORKS

BILL OF QUANTITIES

Item No.	Description	Unit	Qty	Rate (Rs.)	Amount (Rs.)
03-15EA	Following sizes of single core PVC insulated copper conductor cable as earth continuity conductor (ECC) installed on surface or on already installed pipes / conduits / trenches / cable tray etc., including tags, ties, lugs, termination kits, colour sleeves, cable glands, bushes etc., all related accessories, complete in all respect. Make as per approved list in Vol-I.				
	a) 16 mm ²	Rft	200		
	b) 10 mm ²	Rft	200		
	c) 06 mm ²	Rft	200		
03-16EA	Following sizes of tinned copper earth connecting point, including continuous mounting base all accessories, complete in all respect. Make as per approved list in Vol-I.				
	a) 6 ways (300 mm x 50mm x 6mm)	no.	3		
	b) 12 ways (300 mm x 50mm x 6mm)	no.	3		

MISCELLANEOUS ITEMS

Ref. Specs Sec. 8290

03-17EA	Providing & installing 142 Cm (56") sweep Ceiling Fan with blades, canopy, standard length of down rod including connection with 40/0076" flexible wire complete as required. (without regulator) Pak, Royal, GFC, Younas, Millat. + Providing & fixing 3"x4"x5" size 1/8" thick recessed type fan damp box with 5/8" dia MS bar fan clamp fixed in roof at casting time as required.	no.	1		
03-18EA	Following sizes of exhaust fan with blades, motor etc. fixed in wall hole, heavy gauge metallic shutter suitable for exhaust fan fitted on the wall hole, making hole in the wall for and fixing of holefast, duly plastered and making good the damaged area as required / specified including all accessories, complete in all respect. Make as per approved list in Vol-I.				
	a) 10" Dia	no.	2		

Total Cost of Electrical Works Rs. _____

Carried over to summary _____



**PAKISTAN ENGINEERING COUNCIL
ESTABLISHMENT OF PEC ENGINEERING COMPLEX
AT DHA CITY KARACHI PHASE-1**

GATE HOUSE-1

BILL OF QUANTITIES

Item No.	Description	Unit	Qty	Rate (Rs.)	Amount (Rs.)
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**TA TELECOMMUNICATION WORKS
(CABLING, PASSIVE EQUIPMENTS & RELATED ITEMS)**

Ref Spec Sec: 8002, Approved List of Manufacturer's in Vol-1

The entire electrical installation/work shall be carried out by licensed Contractor, authorised to undertake such work under the provisions of the Electricity Act 1910 and The Electricity Rules 1937 as adopted and modified upto date by the Government of Pakistan. The work includes supply, installation, testing, commissioning of the following Electrical work items (unless specifically stated otherwise). The specifications section 8001 and recommended list of manufacturer applicable to all BoQ items. The work includes all material, labour, tools, plant, storage, transportation, accessories, related civil works required for proper completion of each item. The Contractor is bound to provide submittals for the Engineer's approval with relevant standards, data sheets, catalog, brochures, manuals, shop drawings etc. Note: in case of any discrepancy found between BoQ, specifications and drawings, then BoQ/specifications will govern.

VOICE CABLING

01-1TA Following sizes of 16 SWG powder coated Telephone Distribution Frame with IDC connectors, channels including all components & accessories, complete in all respect. Make as per approved list in Vol-1

a) 10 Pair Distribution Box no. 1

01-2TA One gang, one port CAT-6 UTP RJ-45 shutter faceplate with keystone jack mounted on already installed recessed / surface mounted back box or floor box plate including all mounting accessories. Make as per approved list in Vol-1 no. 2

01-3TA 24 port CAT-6 UTP LSZH 10 Giga Speed modular loaded (RJ45) jack patch panels compatible with 19" rack installed in floor/wall mounted cabinet including built-in rear cable management with all mounting accessories. Make as per approved list in Vol-1 no. 1

01-4TA 19" Rack mounted front cable management with all installation & mounting accessories, complete in all respect. Make as per approved list in Vol-1 no. 1



GATE HOUSE-1

BILL OF QUANTITIES

Item No.	Description	Unit	Qty	Rate (Rs.)	Amount (Rs.)
01-5TA	Wiring from voice outlet point to relevant building or floor distributor rack with CAT-6 UTP LSZH cable in already installed conduit or cable tray or cable trunking including all accessories complete in all respect. Make as per approved list in Vol-I	Point	2		
DATA CABLING					
01-6TA	One gang, one port CAT-6A UTP LSZH RJ-45 shutter faceplate with keystone jack mounted on already installed recessed / surface mounted back box or floor box plate including all mounting accessories. Make as per approved list in Vol-I	no.	4		
01-7TA	24 port CAT-6A UTP LSZH 10 Giga Speed modular loaded (RJ45) jack patch panels compatible with 19" rack installed in floor/wall mounted cabinet including built-in rear cable management with all mounting accessories. Make as per approved list in Vol-I	no.	1		
01-8TA	19" Rack mounted front cable management with all installation & mounting accessories, complete in all respect. Make as per approved list in Vol-I	no.	1		
01-9TA	Wiring from data outlet point to relevant building or floor distributor rack with CAT-6A UTP LSZH cable in already installed conduit or cable tray or cable trunking including all accessories complete in all respect. Make as per approved list in Vol-I	Point	4		
01-10TA	Following type CAT-6A UTP LSZH 10 Giga Speed patch cord with RJ45 connector at both ends, including all accessories, complete in all respect. Make as per approved list in Vol-I				
	a) 1 meter (3 ft.) long	no.	6		
	b) 2 meter (6 ft.) long	no.	6		
	c) 3 meter (10 ft.) long	no.	6		
	d) RJ45 to Fax Conversion Kit (upto 10ft length)	no.	6		



Item No.	Description	Unit	Qty	Rate (Rs.)	Amount (Rs.)
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DATA RACK

- 01-11TA 18U 19" (600 mm x 600 mm) wall mounted rack double section with perforated lockable front single door, side panels & roof panel, including hoops, perforated panels, side management, two number cable trays, 2/4 fans tray, power distribution Units (POU) with C-19 and C-13 sockets, brackets, tray, including all mounting and installation accessories complete in all respect. (2 years warranty) Make as per approved list in Vol-I. Job 1
- 01-12TA Power cabling for data rack single or three phase (as required) including industrial socket in already installed conduit or cable tray (as per site condition) from relevant connection point upto rack including all mounting and installation accessories complete in all respect. Make A-1 quality brand as approved. Job 1

CCTV SYSTEM

- 01-13TA 4'(W)x4'(L)x3'(D) Recessed sheet steel back box with cover plate for camera installation including all components & accessories, complete in all respect. Make A-1 quality brand as approved. no. 6
- 01-14TA 4'(W)x4'(L)x3'(D) Recessed sheet steel back box with cover plate for camera installation including all components & accessories, complete in all respect (Future Provision). Make A-1 quality brand as approved. no. 4
- 01-15TA 24 port CAT-6A UTP LSZH 10 Giga Speed modular loaded (RJ45) jack patch panels compatible with 19" rack installed in floor/wall mounted cabinet including built-in rear cable management with all mounting accessories. Make as per approved list in Vol-I. no. 1
- 01-16TA 19" Rack mounted front cable management with all installation & mounting accessories, complete in all respect. Make as per approved list in Vol-I. no. 1
- 01-17TA Wiring from CCTV point to relevant building or floor distributor rack with CAT-6A UTP LSZH cable laid in already installed conduit or cable tray or cable trunking including all accessories complete in all respect. Make as per approved list in Vol-I. no. 6

FLUKE AND OTDR TESTING

- 01-18TA Fluke Testing and Commissioning of all above network related items, termination and connectivity at both ends, including tagging/labeling and submission of detailed report with updated cable route drawings. Job 1

Total Cost of Telecommunication Works for Cabling, Passive Equipments & Related Items

Rs.

Carried over to summary



**PAKISTAN ENGINEERING COUNCIL
ESTABLISHMENT OF PEC ENGINEERING COMPLEX
AT DHA CITY KARACHI PHASE-1**

GATE HOUSE-1

BILL OF QUANTITIES

Item No.	Description	Unit	Qty	Rate (Rs.)	Amount (Rs.)
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**TB TELECOMMUNICATION WORKS
(CCTV & ACTIVE EQUIPMENT)**

Ref Spec Sec: 8001, Approved List of Manufacturer's in Vol-I

The entire electrical installation/work shall be carried out by licensed Contractor, authorised to undertake such work under the provisions of the Electricity Act 1910 and The Electricity Rules 1937 as adopted and modified upto date by the Government of Pakistan. The work includes supply, installation, testing, commissioning of the following Electrical work items (unless specifically stated otherwise). The specifications section 8001 and recommended list of manufacturer applicable to all BoQ items. The work includes all material, labour, tools, plant, storage, transportation, accessories, related civil works required for proper completion of each item. The Contractor is bound to provide submittals for the Engineer's approval with relevant standards, data sheets, catalog, brochures, manuals, shop drawings etc. Note: in case of any discrepancy found between BoQ, specifications and drawings, then BoQ/specifications will govern.

NETWORK ACCESS SWITCH

01-1TB	Supply of channelized + smart support Network Access Switch L2 managed, quality of service (QoS) functionality, Zero-Touch provisioning 24 port GE, 4x10G SFP, 1xRJ45 console Port, 6 feet console cable, redundant power supply, cooling fans, 19" rack mount bracket, 3 Years warranty	no.	1		
01-2TB	SFP optical transceiver module Make as per approved list in Vol-I	no.	2		

CCTV - IP CAMERAS

01-3TB	IP Dome / Bullet type colour fixed camera having 4 megapixel resolution, 1/3 inch sensor with varifocal lens, IR and day/night functions, power over ethernet (PoE), H.264/265 compression including all installation and mounting accessories. Make as per approved list in Vol-I	no.	6		
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GATE HOUSE-1

BILL OF QUANTITIES

Item No.	Description	Unit	Qty	Rate (Rs.)	Amount (Rs.)
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CCTV - NETWORK POE ACCESS SWITCHES

01-4TB	Supply of channelized + smart support (3 years warranty) layer-2 managed ethernet access switch having 24 x 10/100/1000 Mbps BASE-T POE+ ports (AC 370 W & DC 740 W) auto sensing ports and 4 x 100/1000BASE X SFP combo ports and 4 x 1G/10G BASE X SFP plus ports, AC/DC including, console cable, power supply units and all essential interconnecting cabling with installation and rack mounting accessories, complete in all respect. Make as per approved list in Vol-I	no.	1		
01-5TB	SFP optical transceiver module Make as per approved list in Vol-I	no.	4		

CCTV - NETWORK VIDEO RECORDERS (NVR'S)

01-6TB	Network Video Recording (08 channel) support H.264/265 compression including 30 days hard disk storage with connecting ports (RJ-45) for integration with Integrated BMS, including all components & accessories, complete in all respect. Make as per approved list in Vol-I	Job.	1		
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CCTV - MISC WORKS

01-7TB	Interfacing of CCTV system with Fire Alarm, Public Address, Access Control and Integrated Building Management System.	Job.	1		
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Total Cost of Telecommunication Works for Active Equipment & Related Items Rs.

Carried over to summary



**PAKISTAN ENGINEERING COUNCIL
ESTABLISHMENT OF PEC ENGINEERING COMPLEX
AT DHA CITY KARACHI PHASE-1**

GATE HOUSE-2

BILL OF QUANTITIES

Item No.	Description	Unit	Qty	Rate (Rs.)	Amount (Rs.)
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**TA TELECOMMUNICATION WORKS
(CABLING, PASSIVE EQUIPMENTS & RELATED ITEMS)**

Ref Spec Sec: 8002, Approved List of Manufacturer's in Vol-I

The entire electrical installation/work shall be carried out by licensed Contractor, authorised to undertake such work under the provisions of the Electricity Act 1910 and The Electricity Rules 1937 as adopted and modified upto date by the Government of Pakistan. The work includes supply, installation, testing, commissioning of the following Electrical work items (unless specifically stated otherwise). The specifications section 8001 and recommended list of manufacturer applicable to all BoQ items. The work includes all material, labour, tools, plant, storage, transportation, accessories, related civil works required for proper completion of each item. The Contractor is bound to provide submittals for the Engineer's approval with relevant standards, data sheets, catalog, brochures, manuals, shop drawings etc. Note: in case of any discrepancy found between BoQ, specifications and drawings, then BoQ/specifications will govern.

VOICE CABLING

02-1TA	Following sizes of 16 SWG powder coated Telephone Distribution Frame with IDC connectors, channels including all components & accessories, complete in all respect. Make as per approved list in Vol-I				
	a) 10 Pair Distribution Box	no.	1		
02-2TA	One gang, one port CAT-6 UTP RJ-45 shutter faceplate with keystone jack mounted on already installed recessed / surface mounted back box or floor box plate including all mounting accessories. Make as per approved list in Vol-I	no.	2		
02-3TA	24 port CAT-6 UTP LSZH 10 Gigs Speed modular loaded (RJ45) jack patch panels compatible with 19" rack installed in floor/wall mounted cabinet including built-in rear cable management with all mounting accessories. Make as per approved list in Vol-I	no.	1		
02-4TA	19" Rack mounted front cable management with all installation & mounting accessories, complete in all respect. Make as per approved list in Vol-I	no.	1		



GATE HOUSE-2

BILL OF QUANTITIES

Item No.	Description	Unit	Qty	Rate (Rs.)	Amount (Rs.)
02-5TA	Wiring from voice outlet point to relevant building or floor distributor rack with CAT-6 UTP LSZH cable in already installed conduit or cable tray or cable trunking including all accessories complete in all respect. Make as per approved list in Vol-I	Point	2		
DATA CABLING					
02-6TA	One gang, one port CAT-6A UTP LSZH RJ-45 shutter faceplate with keystone jack mounted on already installed recessed / surface mounted back box or floor box plate including all mounting accessories. Make as per approved list in Vol-I	no.	2		
02-7TA	24 port CAT-6A UTP LSZH 10 Giga Speed modular loaded (RJ45) jack patch panels compatible with 19" rack installed in floor/wall mounted cabinet including built-in rear cable management with all mounting accessories. Make as per approved list in Vol-I	no.	1		
02-8TA	19" Rack mounted front cable management with all installation & mounting accessories, complete in all respect. Make as per approved list in Vol-I	no.	1		
02-9TA	Wiring from data outlet point to relevant building or floor distributor rack with CAT-6A UTP LSZH cable in already installed conduit or cable tray or cable trunking including all accessories complete in all respect. Make as per approved list in Vol-I	Point	2		
02-10TA	Following type CAT-6A UTP LSZH 10 Giga Speed patch cord with RJ45 connector at both ends, including all accessories, complete in all respect. Make as per approved list in Vol-I				
	a) 1 meter (3 ft.) long	no.	4		
	b) 2 meter (6 ft.) long	no.	4		
	c) 3 meter (10 ft.) long	no.	4		
	d) RJ45 to Fax Conversion Kit (upto 10ft length)	no.	4		



GATE HOUSE-2

BILL OF QUANTITIES

Item No.	Description	Unit	Qty	Rate (Rs.)	Amount (Rs.)
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DATA RACK

- 02-11TA 18U 19" (600 mm x 600 mm) wall mounted rack double section with perforated lockable front single door, side panels & roof panel, including hoops, perforated panels, side management, two number cable trays, 2/4 fans tray, power distribution Units (PDU) with C-19 and C-13 sockets, brackets, tray, including all mounting and installation accessories complete in all respect. (2 years warranty) Make as per approved list in Vol-I. Job 1
- 02-12TA Power cabling for data rack single or three phase (as required) including industrial socket in already installed conduit or cable tray (as per site condition) from relevant connection point upto rack including all mounting and installation accessories complete in all respect. Make A-1 quality brand as approved. Job. 1

CCTV SYSTEM

- 02-13TA 4"(W)x4"(L)x3"(D) Recessed sheet steel back box with cover plate for camera installation including all components & accessories, complete in all respect. Make A-1 quality brand as approved. no. 6
- 02-14TA 4"(W)x4"(L)x3"(D) Recessed sheet steel back box with cover plate for camera installation including all components & accessories, complete in all respect (Future Provision). Make A-1 quality brand as approved. no. 4
- 02-15TA 24 port CAT-6A UTP LSZH 10 Giga Speed modular loaded (RJ45) jack patch panels compatible with 19" rack installed in floor/wall mounted cabinet including built-in rear cable management with all mounting accessories. Make as per approved list in Vol-I. no. 1
- 02-15TA 19" Rack mounted front cable management with all installation & mounting accessories, complete in all respect. Make as per approved list in Vol-I. no. 1
- 02-17TA Wiring from CCTV point to relevant building or floor distributor rack with CAT-6A UTP LSZH cable laid in already installed conduit or cable tray or cable trunking including all accessories complete in all respect. Make as per approved list in Vol-I. no. 6

FLUKE AND OTDR TESTING

- 02-18TA Fluke Testing and Commissioning of all above network related items, termination and connectivity at both ends, including tagging/labeling and submission of detailed report with updated cable route drawings. Job. 1

Total Cost of Telecommunication Works for Cabling, Passive Equipments & Related Items

Rs.

Carried over to summary



**PAKISTAN ENGINEERING COUNCIL
ESTABLISHMENT OF PEC ENGINEERING COMPLEX
AT DHA CITY KARACHI PHASE-1**

GATE HOUSE-2

BILL OF QUANTITIES

Item No.	Description	Unit	Qty	Rate (Rs.)	Amount (Rs.)
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**TB TELECOMMUNICATION WORKS
(CCTV & ACTIVE EQUIPMENT)**

Ref Spec Sec: 8001, Approved List of Manufacturer's in Vol-1

The entire electrical installation/work shall be carried out by licensed Contractor, authorised to undertake such work under the provisions of the Electricity Act 1910 and The Electricity Rules 1937 as adopted and modified upto date by the Government of Pakistan. The work includes supply, installation, testing, commissioning of the following Electrical work items (unless specifically stated otherwise). The specifications section 8001 and recommended list of manufacturer applicable to all BoQ items. The work includes all material, labour, tools, plant, storage, transportation, accessories, related civil works required for proper completion of each item. The Contractor is bound to provide submittals for the Engineer's approval with relevant standards, data sheets, catalog, brochures, manuals, shop drawings etc. Note: In case of any discrepancy found between BoQ, specifications and drawings, then BoQ/specifications will govern.

NETWORK ACCESS SWITCH

02-1TB	Supply of channelized + smart support Network Access Switch L2 managed, quality of service (QoS) functionality, Zero-Touch provisioning 24 port GE, 4x10G SFP, 1xRJ45 console Port, 6 feet console cable, redundant power supply, cooling fans, 19" rack mount bracket, 3 Years warranty	no.	1		
02-2TB	SFP optical transceiver module Make as per approved list in Vol-1	no.	2		

CCTV - IP CAMERAS

02-3TB	IP Dome / Bullet type colour fixed camera having 4 megapixel resolution, 1/3 inch sensor with varifocal lens, IR and day/night functions, power over ethernet (PoE), H.264/265 compression including all installation and mounting accessories. Make as per approved list in Vol-1	no.	6		
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Item No.	Description	Unit	Qty	Rate (Rs.)	Amount (Rs.)
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CCTV - NETWORK POE ACCESS SWITCHES

02-5TB	Supply of channelized + smart support (3 years warranty) layer-2 managed ethernet access switch having 24 x 10/100/1000 Mbps BASE-T POE+ ports (AC 370 W & DC 740 W) auto sensing ports and 4 x 100/1000BASE X SFP combo ports and 4 x 10/10G BASE X SFP plus ports, AC/DC including, console cable, power supply units and all essential interconnecting cabling with installation and rack mounting accessories, complete in all respect. Make as per approved list in Vol-I	no.	1		
02-6TB	SFP optical transceiver module Make as per approved list in Vol-I	no.	4		

CCTV - NETWORK VIDEO RECORDERS (NVR'S)

02-7TB	Network Video Recording (08 channel) support H.264/265 compression including 30 days hard disk storage with connecting ports (RJ-45) for integration with Integrated BMS, including all components & accessories, complete in all respect. Make as per approved list in Vol-I	Job.	1		
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CCTV - MISC WORKS

02-8TB	Interfacing of CCTV system with Fire Alarm, Public Address, Access Control and Integrated Building Management System.	Job.	1		
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Total Cost of Telecommunication Works for Active Equipment & Related Items Rs. _____

Carried over to summary _____



**PAKISTAN ENGINEERING COUNCIL
ESTABLISHMENT OF PEC ENGINEERING COMPLEX
AT DHA CITY KARACHI PHASE-1**

GATE HOUSE-3

BILL OF QUANTITIES

Item No.	Description	Unit	Qty	Rate (Rs.)	Amount (Rs.)
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**TA TELECOMMUNICATION WORKS
(CABLING, PASSIVE EQUIPMENTS & RELATED ITEMS)**

Ref Spec Sec: 8002, Approved List of Manufacturer's in Vol-I

The entire electrical installation/work shall be carried out by licensed Contractor, authorised to undertake such work under the provisions of the Electricity Act 1910 and The Electricity Rules 1937 as adopted and modified upto date by the Government of Pakistan. The work includes supply, installation, testing, commissioning of the following Electrical work items (unless specifically stated otherwise). The specifications section 8001 and recommended list of manufacturer applicable to all BoQ items. The work includes all material, labour, tools, plant, storage, transportation, accessories, related civil works required for proper completion of each item. The Contractor is bound to provide submittals for the Engineer's approval with relevant standards, data sheets, catalog, brochures, manuals, shop drawings etc. Note: in case of any discrepancy found between BoQ, specifications and drawings, then BoQ/specifications will govern.

VOICE CABLING

03-1TA	Following sizes of 16 SWG powder coated Telephone Distribution Frame with IDC connectors, channels including all components & accessories, complete in all respect. Make as per approved list in Vol-I				
	a) 10 Pair Distribution Box	no.	1		
03-2TA	One gang, one port CAT-6 UTP RJ-45 shutter faceplate with keystone jack mounted on already installed recessed / surface mounted back box or floor box plate including all mounting accessories. Make as per approved list in Vol-I	no.	2		
03-3TA	24 port CAT-6 UTP LS2H 10 Giga Speed modular loaded (RJ45) jack patch panels compatible with 19" rack installed in floor/wall mounted cabinet including built-in rear cable management with all mounting accessories. Make as per approved list in Vol-I	no.	1		
03-4TA	19" Rack mounted front cable management with all installation & mounting accessories, complete in all respect. Make as per approved list in Vol-I	no.	1		



GATE HOUSE-3

BILL OF QUANTITIES

Item No.	Description	Unit	Qty	Rate (Rs.)	Amount (Rs.)
03-5TA	Wiring from voice outlet point to relevant building or floor distributor rack with CAT-6 UTP LSZH cable in already installed conduit or cable tray or cable trunking including all accessories complete in all respect. Make as per approved list in Vol-I	Point	2		
<u>DATA CABLING</u>					
03-6TA	One gang, one port CAT-6A UTP LSZH RJ-45 shutter faceplate with keystone jack mounted on already installed recessed / surface mounted back box or floor box plate including all mounting accessories. Make as per approved list in Vol-I.	no.	2		
03-7TA	24 port CAT-6A UTP LSZH 10 Giga Speed modular loaded (RJ45) jack patch panels compatible with 19" rack installed in floor/wall mounted cabinet including built-in rear cable management with all mounting accessories. Make as per approved list in Vol-I	no.	1		
03-8TA	19" Rack mounted front cable management with all installation & mounting accessories, complete in all respect. Make as per approved list in Vol-I	no.	1		
03-9TA	Wiring from data outlet point to relevant building or floor distributor rack with CAT-6A UTP LSZH cable in already installed conduit or cable tray or cable trunking including all accessories complete in all respect. Make as per approved list in Vol-I	Point	2		
03-10TA	Following type CAT-6A UTP LSZH 10 Giga Speed patch cord with RJ45 connector at both ends, including all accessories, complete in all respect. Make as per approved list in Vol-I				
	a) 1 meter (3 ft.) long	no.	4		
	b) 2 meter (6 ft.) long	no.	4		
	c) 3 meter (10 ft.) long	no.	4		
	d) RJ45 to Fax Conversion Kit (upto 10ft length)	no.	4		



GATE HOUSE-3

BILL OF QUANTITIES

Item No.	Description	Unit	Qty	Rate (Rs.)	Amount (Rs.)
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DATA RACK

03-11TA	18U 19" (600 mm x 600 mm) wall mounted rack double section with perforated lockable front single door, side panels & roof panel, including hoops, perforated panels, side management, two number cable trays, 2/4 fans tray, power distribution units (PDU) with C-19 and C-13 sockets, brackets, tray, including all mounting and installation accessories complete in all respect. (2 years warranty) Make as per approved list in Vol-I.	Job	1		
03-12TA	Power cabling for data rack single or three phase (as required) including industrial socket in already installed conduit or cable tray (as per site condition) from relevant connection point upto rack including all mounting and installation accessories complete in all respect. Make A-1 quality brand as approved.	Job.	1		

CCTV SYSTEM

03-13TA	4"(W)x4"(L)x3"(D) Recessed sheet steel back box with cover plate for camera installation including all components & accessories, complete in all respect. Make A-1 quality brand as approved.	no.	6		
03-14TA	4"(W)x4"(L)x3"(D) Recessed sheet steel back box with cover plate for camera installation including all components & accessories, complete in all respect (Future Provision). Make A-1 quality brand as approved.	no.	4		
03-15TA	24 port CAT-6A UTP LS2H 10 Giga Speed modular loaded (RJ45) jack patch panels compatible with 19" rack installed in floor/wall mounted cabinet including built-in rear cable management with all mounting accessories. Make as per approved list in Vol-I	no.	1		
03-16TA	19" Rack mounted front cable management with all installation & mounting accessories, complete in all respect. Make as per approved list in Vol-I	no.	1		
03-17TA	Wiring from CCTV point to relevant building or floor distributor rack with CAT-6A UTP LS2H cable laid in already installed conduit or cable tray or cable trunking including all accessories complete in all respect. Make as per approved list in Vol-I	no.	6		
03-18TA	FLUKE AND OTDR TESTING Fluke Testing and Commissioning of all above network related items, termination and connectivity at both ends, including tagging/labeling and submission of detailed report with updated cable route drawings.	Job.	1		



Total Cost of Telecommunication Works for Cabling, Passive Equipments & Related Items

Rs.

Carried over to summary

**PAKISTAN ENGINEERING COUNCIL
ESTABLISHMENT OF PEC ENGINEERING COMPLEX
AT DHA CITY KARACHI PHASE-1**

GATE HOUSE-3

BILL OF QUANTITIES

Item No.	Description	Unit	Qty.	Unit Rate (Rs.)	Amount (Rs.)
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**TB TELECOMMUNICATION WORKS
(CCTV & ACTIVE EQUIPMENT)**

Ref Spec Sec: 8001, Approved List of Manufacturer's in Vol-I

The entire electrical installation/work shall be carried out by licensed Contractor, authorised to undertake such work under the provisions of the Electricity Act, 1910 and The Electricity Rules 1937 as adopted and modified upto date by the Government of Pakistan. The work includes supply, installation, testing, commissioning of the following Electrical work items (unless specifically stated otherwise). The specifications section 8001 and recommended list of manufacturer applicable to all BoQ items. The work includes all material, labour, tools, plant, storage, transportation, accessories, related civil works required for proper completion of each item. The Contractor is bound to provide submittals for the Engineer's approval with relevant standards, data sheets, catalog, brochures, manuals, shop drawings etc. Note: In case of any discrepancy found between BoQ, specifications and drawings, then BoQ/specifications will govern.

NETWORK ACCESS SWITCH

03-1TB	Supply of channelized + smart support Network Access Switch L2 managed, quality of service (QoS) functionality, Zero-Touch provisioning 24 port GE, 4x10G SFP, 1xRJ45 console Port, 6 feet console cable, redundant power supply, cooling fans, 19" rack mount bracket, 3 Years warranty	no.	1		
03-2TB	SFP optical transceiver module Make as per approved list in Vol-I	no.	2		

CCTV - IP CAMERAS

03-3TB	IP Dome / Bullet type colour fixed camera having 4 megapixel resolution, 1/3 inch sensor with varifocal lens, IR and day/night functions, power over ethernet (PoE), H.264/265 compression including all installation and mounting accessories. Make as per approved list in Vol-I	no.	6		
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GATE HOUSE-3

BILL OF QUANTITIES

Item No	Description	Unit	Qty.	Unit Rate (Rs.)	Amount (Rs.)
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CCTV - NETWORK POE ACCESS SWITCHES

- 03-4TB Supply of channelized + smart support (3 years warranty) layer-2 managed ethernet access switch having 24 x 10/100/1000 Mbps BASE-T POE+ ports (AC 370 W & DC 740 W) auto sensing ports and 4 x 100/1000BASE X SFP combo ports and 4 x 1G/10G BASE X SFP plus ports, AC/DC including, console cable, power supply units and all essential interconnecting cabling with installation and rack mounting accessories, complete in all respect. Make as per approved list in Vol-I no. 1
- 03-5TB SFP optical transceiver module Make as per approved list in Vol-I no. 4

CCTV - NETWORK VIDEO RECORDERS (NVR'S)

- 03-6TB Network Video Recording (08 channel) support H.264/265 compression including 30 days hard disk storage with connecting ports (RJ-45) for integration with Integrated BMS, including all components & accessories, complete in all respect. Make as per approved list in Vol-I Job. 1

CCTV - MISC WORKS

- 03-7TB Interfacing of CCTV system with Fire Alarm, Public Address, Access Control and Integrated Building Management System. Job. 1

Total Cost of Telecommunication Works for Active Equipment & Related Items Rs.

Carried over to summary



**NATIONAL ENGINEERING SERVICES PAKISTAN (PVT.) LTD.
ARCHITECTURE & PLANNING DIVISION**

LIST OF APPROVED MANUFACTURERS/BRANDS OF MATERIALS/EQUIPMENT

Civil & Architectural Items

Sr. No.	Materials	Manufactures
1.	Crushed Stone Aggregate	Source as approval by the Engineer
2.	Reinforcement Steel	(i) Sheikho steel (i) A1 steel, Karachi (iii) Amreli, (iv) Magna Steel (v) Faizan Steel or approved equivalent
3.	Sand	Source as approved by the Engineer
4.	Cement	(i) Pakland (ii) Falcon, (iii) Power (iv) Lucky, (v) D.G. Cement or approved equivalent
5.	Porcelain Tiles	Local (i) Master Tiles, ii) Shabbir Tiles or equivalent
6.	Ceramic Tiles	Local (i) Master Tiles, ii) Shabbir Tiles or approved equivalent
7.	Paints & Varnish	(i) ICI (ii) Berger, (iii) Jotun, (iv) Kansai, (v) Brighto, (vi) Nippon or approved equivalent
8.	Aluminum profile Windows / Ventilator	(i) Al Fatah (ii) ALCOOP (iii) Chawla Aluminum (iv) Prime Aluminum or approved equivalent
9.	Hardware Stays, Hinges, Handles & Door Locks	(i) JB Saeed (ii) Yale (iii) Bosch (iv) DTC or approved equivalent
10.	Concrete Floor Tiles/Pavers/Curbstone	(i) Tuff Pavers (ii) Izhar (iii) Envicrete (iv) Magna Crete (v) Hub Crete or approved equivalent
11.	Concrete Blocks	As approved by the Engineer
12.	MDF	(i) Pakistan Chipboard (ii) Al-Noor (iii) Palex or approved equivalent
13.	Lamination Boards/ Veneer Boards	(i) Formite, (ii) Al-Noor or approved equivalent
14.	Formica	(i) Formite (Tuff), (ii) Al-Noor or approved equivalent
15.	Glass, Tinted glass / Double Glasses Tempered/ Reflective/ Wired Glasses Mirror Glass	(i) Gunj Glass, (ii) Ghani Glass (iii) Pakistan Safety Glass or approved equivalent
16.	False Ceiling & Suspension System	Source as approved by Engineer.
17.	Board Gypsum False Ceiling including Suspension System	(i) Boral, (ii) DFB, (iii) Elephant make or approved equivalent
18.	Marble / Granite	Source as approved by Engineer.
19.	Termite Proofing For Soil For Wood	(i) Fiprokill (ii) Biflex (ii) Mersage or approved equivalent (i) Bio Wood, (ii) Power Max (iii) Solignum (iv) Biflies or approved equivalent
20.	Construction Chemicals	(i) Aquafin Pakistan (ii) FDSPAK, (iii) SIKA or approved equivalent
21.	Wooden Flooring	(i) Source as approved by Engineer
22.	Furniture	(i) Source as approved by Engineer
23.	Steel Lockers	(i) BCL (ii) H.M. Hayat sons approved equivalent



LIST OF APPROVED MANUFACTURERS/BRANDS OF MATERIALS/EQUIPMENT

1. Brand Name approved this list of manufactures/suppliers of different materials/equipment with brand names has been provided in order to establish a standard level of performance and do not necessarily indicate a preference for a particular manufacture or material.
2. List of Manufacturer recommended and as approved the names of manufacturer recommended given below are indicate the level of quality and performance of such material/equipment is the sole opinion of the Architect/Engineer are atleast equal to better than the material offered by the recommended manufacture listed under:

Plumbing Items

Sr. No.	Materials	Manufactures
1.	GI Pipe	IIL, Jamal
2.	Valves all types	Kitz, Econosto, Haterselly
3.	Stainless Steel Sink	Atlas, Super Asa, Master
4.	CI Pipe, Fittings, Gratings & manhole covers	Alpine, Teepu
5.	uPVC Pipe (ASTM D 1785)	AGM, Pak Arab
6.	Seamless Black steel Pipes	Huffaz or approved equivalent.
7.	Portable fire extinguishers, Fire Hose Cabinet, Fire Hydrant	NEFFCO, SAFECO, SRI
8.	Concrete Pipe & Fittings	Pakistan Pipe, Sindh pipe
9.	Sanitary Fixtures	Porta, Rocca, Approved Equivalent (Imported)
10.	Sanitary Fittings	Master, Sonex
11.	Pumps	KS8, Grundfos
12.	Geysers	Singer, Nas-gas
13.	PPR Pipe	Vesbo, Rak Therm, IIL
14.	Water cooler	Mecco, Atlas
15.	Pipe insulation	Afico, Afico
16.	Electric water heater	Atlas, Nasgas
17.	uPVC Pipe (BS 3505)	AGM, Pak Arab, Dadex



**APPENDIX – A TO BILL OF QUANTITIES
ELECTRICAL & TELECOM EQUIPMENT MANUFACTURERS
ON WHICH THE BID IS BASED**

*(To be filled in and signed by the Bidder)

1. Qualifications of Manufacturers of Equipment and Material

The local and imported equipment offered by the Bidders shall be of reputed manufacturers who have at least 10 (ten) years of proven experience in the manufacturing of such equipment / material, and have all testing facilities for testing of equipment strictly in accordance with the laid down standards and specifications.

2. Brand Names

Equipment and materials specified with a Brand Name have been named in order to establish a standard of performance and do not necessarily indicate a preference for a particular manufacturer or material.

3. List of Manufacturers Recommended and as Offered

The Material / Equipment required in the Bid should be selected from the following recommended / approved manufacturer's. The Bidder shall procure the required materials and equipment's for this project from the following recommended / approved manufacturers or their authorized dealers / agents. The Bidder shall also provide a valid letter of authorization to establish authenticity for one year from the date of procurement. The dealers or agents shall have minimum last 5 years of continuous authorization for complete support, warranties, guarantees etc., and documentary evidence shall be provided for the engineer's review and approval along with substantial yearly sales and maintenance contract details.

The names of manufacturers given below are to indicate the level of quality and performance anticipated by the Engineer / Employer. Other makes, under the head of approved equivalent, may also be accepted provided the quality and performance of such equipment in the sole opinion of the Engineer are at least equal to or better than the equipment offered by the recommended / approved manufacturer listed hereunder. The contractor shall mentioned the reason for deviations

The Engineer has the right to reject any of the alternate manufacturer proposed by the bidder / contractor other than listed manufacturer, without assigning any reason thereof.

Just mentioning the name of manufacturer / supplier in this Appendix does not mean that the material, equipment, devices etc. which are to be supplied, installed, and tested under the Contract should be considered "Approved". Instead, comprehensive and proper material submittals meeting all the criteria are required to be submitted by the Bidder / Contractor, after the award of Contract, for Engineer's review and approval.

During post Contract award material submittals stage, if it is noted that any of the brand / manufacturer's name of equipment / material filled by the Bidder in the offered / proposed list does not meet the specification requirements or it is not equal to or better than the brand of equipment / material stated in the recommended / approved manufacturer list, the material submittal from that manufacturer shall be REJECTED & Bidder / Contractor shall be asked to supply the equipment / material from the recommended / approved manufacturers list.



Bidder's Seal and Signature

S #	EQUIPMENT / MATERIAL.	RECOMMENDED / APPROVED MANUFACTURER	OFFERED / PROPOSED MANUFACTURER (*)	COUNTRY OF ORIGIN (?)	COUNTRY OF MANUFACTURING (?)
1.	H.T Switchboards (with Vacuum Circuit Breaker/ Triple Pole Earthing Switch from the same make) Type-tested in accordance with the latest editions of IEC-62271)	<ul style="list-style-type: none"> • PAK ELECTRIC LIMITED (PEL) • HUSSAIN & CO. 			
2.	Indoor Power Transformers (Oil Type)	<ul style="list-style-type: none"> • PAK ELECTRIC LIMITED (PEL) • SIEMENS 			
3.	Diesel Generator Set in weather and sound proof canopy. (Complete Build Unit)	<ul style="list-style-type: none"> • CATERPILLAR (USA) • CUMMINS (CPG SET) (EU) • REHLKO (USA) • MITSUBISHI (JAPAN) • TEKSAN (CUMMINS/PERKINS/STANFORD/ LEROY SOMER) (TURKEY) • AKSA (CUMMINS/PERKINS/STANFORD/ LEROY SOMER) (TURKEY) 			
4.	Main L.T. Switch Board/ Motor Control Centre(MCC)/LT out door Distribution board, Feeder Pillar (FP) verifiable through Reference Design as per latest editions of IEC 61439)	<ul style="list-style-type: none"> • HUSSAIN AND CO. • HRA SWITCHGEAR 			



Bidder's Seal and Signature

S #	EQUIPMENT / MATERIAL.	RECOMMENDED / APPROVED MANUFACTURER	OFFERED / PROPOSED MANUFACTURER (*)	COUNTRY OF ORIGIN (*)	COUNTRY OF MANUFACTURING (*)
5.	L.T. Switch Boards / Manual Transfer Switch (MTS) /ATS Automatic Transfer Switch L.T. Distribution boards	<ul style="list-style-type: none"> • HUSSAIN AND CO. • HRA SWITCHGEAR 			
5.	Isolated Power Supply Panel	<ul style="list-style-type: none"> • HUSSAIN AND CO. • HRA SWITCHGEAR 			
6.	Circuit breakers in weather proof enclosure	<ul style="list-style-type: none"> • HUSSAIN AND CO. • HRA SWITCHGEAR 			
7.	Vacuum Circuit Breakers (V.C.B)	<ul style="list-style-type: none"> • SCHNEIDER • ABB • SIEMENS 			
8.	Air Circuit Breakers (ACB) / Molded Case Circuit Breakers. (M.C.C.B.) / Miniature Circuit Breakers. (M.C.B.)	<ul style="list-style-type: none"> • SIEMENS • SCHNEIDER ELECTRIC • ABB 			
9.	Air Break Magnetic Contactors	<ul style="list-style-type: none"> • SIEMENS • SCHNEIDER • ABB 			
10.	Voltmeter / Ammeter	<ul style="list-style-type: none"> • REVALCO • SIFAM TINSLEY • SACI • LUMEL 			
11.	C.T.(Current Transformer)	<ul style="list-style-type: none"> • REVALCO • FICO • CIRCUTOR • METELX 			
12.	P.T.(Potential Transformer)	<ul style="list-style-type: none"> • REVALCO • FICO • CIRCUTOR • METELX 			
13.	Auto-Off-Manual Selector Switches. / A.S.S. /	<ul style="list-style-type: none"> • BRETER • KRAUS & 			



Bidder's Seal and Signature

S #	EQUIPMENT / MATERIAL.	RECOMMENDED / APPROVED MANUFACTURER	OFFERED / PROPOSED MANUFACTURER (*)	COUNTRY OF ORIGIN (*)	COUNTRY OF MANUFACTURING (*)
	V.S.S	NAIMER • BREMAS • LUMEL			
14.	Protection Relays (Self – Powered)	• SIEMENS • SCHNEIDER ELECTRIC • ABB			
15.	Control Relays	• ZAHRA • FINDER • EMIRAL			
16.	H.R.C. (High Rupturing Capacity) Fuses.	• DF ELECTRIC • KALEPORSELEN • ETI			
17.	Indication Lights. / ON. / OFF. Push Buttons. / Lockable Mushroom Switches.	• SCHNEIDER ELECTRIC • MARUYASU • LOVATO • FUJI			
18.	Bus Bar Trunking System / Bus Tie Duct (KEMA KUR or ASTA Diamond certified since last 10 years)	• SCHNEIDER ELECTRIC			
19.	LED for Indoor / Outdoor Illumination light (Professional / Project Series)	• SIGNIFY • (Formerly PHILIPS) • EAE • NVC LIGHTING • LEDVANCE • OPPLA • ST ENGINEERING • COARTS • ELECTRI CORE			
20.	Capacitor Trip Unit.	• ELASS			
21.	Emergency Exit Signs	• CEAG (EATON) • TEKNOWARE • EPOWERTECH			
22.	Power Factor Controller	• NOKIAN • LOVATO • CIRCUTOR • SHIZUKI			



Bidder's Seal and Signature

S #	EQUIPMENT / MATERIAL	RECOMMENDED / APPROVED MANUFACTURER	OFFERED / PROPOSED MANUFACTURER (*)	COUNTRY OF ORIGIN (*)	COUNTRY OF MANUFACTURING (*)
23.	H.T Cables	<ul style="list-style-type: none"> • PAKISTAN CABLES • FAST CABLES • NEWAGE CABLES 			
24.	Single & Multi Core L.T. Cables	<ul style="list-style-type: none"> • PAKISTAN CABLES • FAST CABLES • NEWAGE CABLES 			
25.	H.T. Termination Kits	<ul style="list-style-type: none"> • RAYCHEM • 3M 			
26.	Light Control Switches. / Fan Dimmers. / Socket Outlets / Spur outlets	<ul style="list-style-type: none"> • SCHNEIDER ELECTRIC • MK • ORANGE ELECTRIC • PHILIPS • LEGRAND 			
27.	Pull box/ Back Boxes / Fan Hook	<ul style="list-style-type: none"> • HUSSAIN & CO • ORANGE 			
28.	PVC Conduits & Accessories / uPVC Pipes & accessories	<ul style="list-style-type: none"> • DADEX • JEDDAH POLYMER 			
29.	Medium duty G.I. Conduits & Accessories	<ul style="list-style-type: none"> • INTERNATIONAL INDUSTRIES LIMITED • STEELEX 			
30.	Earthing System	<ul style="list-style-type: none"> • FURSE • WALLIS • DEHN 			
31.	HT/LT Surge Arrestors	<ul style="list-style-type: none"> • SCHNEIDER ELECTRIC • ABB • SIEMENS • DEHN 			
32.	Lightning Protection System	<ul style="list-style-type: none"> • FURSE • DEHN • WALLIS 			



Bidder's Seal and Signature

S #	EQUIPMENT / MATERIAL.	RECOMMENDED / APPROVED MANUFACTURER	OFFERED / PROPOSED MANUFACTURER (*)	COUNTRY OF ORIGIN (*)	COUNTRY OF MANUFACTURING (*)
33.	Ceiling Fans/ Wall Bracket Fans/ Exhaust Fans	<ul style="list-style-type: none"> • PAK FANS • ROYAL FANS • MILLAT FANS • GFC 			
34.	Propeller Exhaust Fan with impoled Motor	<ul style="list-style-type: none"> • AEROTECH PAKISTAN • SASA • SHAN INDUSTRIES 			
35.	Connectors	<ul style="list-style-type: none"> • PHOENIX CONTACT • MOLEX • AMPHENOL • BJB 			
36.	Automatic Time Switches	<ul style="list-style-type: none"> • PANASONIC • FUJI 			
37.	Photo Cell / Day Light Switches.	<ul style="list-style-type: none"> • PANASONIC • SCHNEIDER ELECTRIC 			
37.	Uninterruptable Power Supply (UPS)	<ul style="list-style-type: none"> • APC • EATON 			
38.	Energy Meters (Utility Type)	<ul style="list-style-type: none"> • PEL • SYED BHAI'S 			
39.	Cable Tray	<ul style="list-style-type: none"> • ASHRAF FEBRICATION AND ENGINEERING 			
40.	ISO-12944, Corrosivity Category Medium Durability Paint	<ul style="list-style-type: none"> • JOTUN • AKZONOBEL • SPICO 			
41.	Ethernet Switches	<ul style="list-style-type: none"> • HUAWEI • CISCO 			
42.	Computers	<ul style="list-style-type: none"> • DELL • HP • LENOVO 			
43.	PABX	<ul style="list-style-type: none"> • ALCATEL • HUAWEI 			
44.	Structured Cabling Network	<ul style="list-style-type: none"> • CORNING • SCHNEIDER ELECTRIC 			



Bidder's Seal and Signature

S #	EQUIPMENT / MATERIAL.	RECOMMENDED / APPROVED MANUFACTURER	OFFERED / PROPOSED MANUFACTURER (*)	COUNTRY OF ORIGIN (*)	COUNTRY OF MANUFACTURING (*)
		• VIVANCO			
45	Firewall	• FORTINET			
46	Wireless Controller / Wireless Access Point	• HUAWEI • CISCO			
47	Intelligent Addressable Fire Alarm System (UL/FM/Vce Certified)	• ESSER • BOSCH SECURITY			
48	Fire Resistance Cable	• PRYSMIAN • CAVICEL • RAMCRO			
49	Closed Circuit Television (CCTV) System.	• HIK VISION (PRO/AI SERIES)			
50	Public Address System.	• TOA • BOSCH			
51	Speaker Cable	• PRYSMIAN • CAVICEL • BELDEN • RAMCRO			
52	Microphone Cable	• PROCEL • CANARE			
53	Passive CATV System	• WISI			
54	Co-axial Cable	• WISI			
55	Access Control System	• HIK VISION (PRO/AI SERIES)			
56	Nurse Call System	• ZKR • ALCAD • C-TECH			
57	Data Rack	• APC • EATON • VIVANCO			



Bidder's Seal and Signature

CONSTRUCTION SCHEDULE

Pursuant to Sub-Clause 8.3 of the General Conditions, the whole of the Works, and each Section (if any), shall be completed within the Time for Completion for the Works or Section (as the case may be) stated as hereunder and mentioned in Contract Data:

Description of Works and Milestones	Time for Completion
Whole Works	Six (06) Calendar Months

[The Bidder shall provide, the Construction Schedule in the bar chart (CPM, PERT or any other to be specified herein) showing the sequence of work items and the period of time during which he proposes to complete each work item in such a manner that his proposed programme for completion of the whole of the Works and Sections of the Works may meet Employer's completion targets in days noted above and counted from the Commencement Date (Attach sheets as required for the specified form of Construction Schedule)]



METHOD OF PERFORMING THE WORK

[The Bidder is required to submit a narrative outlining the method of performing the Work. The narrative should indicate in detail and include but not be limited to:

1. **Organization Chart:**

Shall indicate head office and field office personnel involved in management and supervision, engineering, equipment maintenance and purchasing.

2. **Mobilization:**

In Pakistan, the type of facilities including personnel accommodation, office accommodation, provision for maintenance and for storage, communications, security and other services to be used.

3. **Method of executing the Works:**

The procedures for installation of equipment and machinery and transportation of equipment and materials to the site.]



LIST OF MAJOR EQUIPMENT

[The Bidder will provide on Sheet E-2 of this Schedule a list of all major equipment and related items, under separate heading for items owned, to be purchased or to be arranged on lease by him to carry out the Works. The information shall include make, type, capacity, and anticipated period of utilization for all equipment.

The Bidder shall provide adequate information to demonstrate clearly that it has the capability to meet the requirements for the key equipment listed in Sheet E-3.]



LIST OF MAJOR EQUIPMENT

Owned, Purchased or Leased

Owned Purchased or Leased	Description of Unit (Make, Model, Year)	Capacity HP Rating	Condition	Present Location or Source	Date of Delivery at Site	Period of Work on Project
1	2	3	4	5	6	7
a. Owned						
b. To be Purchased						
c. To be arranged on Lease						



LIST OF MAJOR EQUIPMENT**Equipment details**

Item of equipment		
Equipment information	Name of manufacturer	Model and power rating
	Capacity	Year of manufacture
Current status	Current location	
	Details of current commitments	
Source	Indicate source of the equipment <input type="checkbox"/> Owned <input type="checkbox"/> Rented <input type="checkbox"/> Leased <input type="checkbox"/> Specially manufactured	
The following information shall not be applicable for equipment owned by the Bidder		
Owner	Name of owner	
	Address of owner	
	Telephone	Contact name and title
	Fax	Telex
Agreements	Details of rental / lease / manufacture agreements specific to the project	

[This Table shall be used for each item of Equipment separately]



**ORGANIZATION CHART
FOR THE
SUPERVISORY STAFF AND LABOUR**



LIST OF SUBCONTRACTORS

I/ We intend to subcontract the following parts of the Work to subcontractors. In my/ our opinion, the subcontractors named hereunder are reliable and competent to perform that part of the work for which each is listed.

Enclosed are documentation outlining experience of subcontractors, the curriculum vitae and experience of their key personnel who will be assigned to the Contract, equipment to be supplied by them, size, location and type of contracts carried out in the past.

Part of Works* (Give Details)	Subcontractor * (With Complete Address)
1	2

**Employer's prior written approval is mandatory*



ESTIMATED PROGRESS PAYMENTS

Bidder's estimate of the value of work which would be executed by him during each of the periods stated below, based on his Programme of the Works and the Rates in the Bill of Quantities, expressed in thousands of PKR:

Month	Amounts (1,000 PKR)
1	2
1 st	
2 nd	
3 rd	
4 th	
5 th	
6 th	
Bid Price	



CONSTRUCTION CAMP AND HOUSING FACILITIES

[The Bidder in accordance with Clause 6 of the Conditions of Contract shall provide description of his construction camp's facilities and staff housing requirements.

The Bidder shall list or explain his plans for providing these facilities for the service of the Contract as follows:

1. *Site Preparation (clearing, land preparation, etc.).*
2. *Provision of Services.*
 - a) *Electrical power (expected power load, etc.).*
 - b) *Water (required amount and system proposed).*
 - c) *Sanitation (sewage disposal system, etc.)*
3. *Construction of Facilities*
 - a) *Contractor's Office, Workshop and Work Areas (areas required and proposed layout, type of construction of buildings, etc.).*
 - b) *Warehouses and Storage Areas (area required, type of construction and layout).*
 - c) *Housing and Staff Facilities (Plans for housing for proposed staff, layout, type of construction, etc.).*
4. *Construction Equipment Assembly and Preparation (detailed plans for carrying out this activity).*
5. *Other Items Proposed (Security services, etc.)*

Note:

The Contractor shall be responsible for pumps, electrical power, water and electrical distribution systems, and sewerage system including all fittings, pipes and other items necessary for servicing the Contractor's construction camp.



J-1
Schedule-J to Bid

INTEGRITY PACT
DECLARATION OF FEES, COMMISSION AND BROKERAGE, ETC.
PAYABLE BY THE BIDDERS/CONTRACTORS OF GOODS, SERVICES & WORKS IN
CONTRACTS WORTH PAK. RS. 10.00 MILLION OR MORE

Contract No. _____ Dated _____
Contract Value: _____
Contract Title: _____

..... [Name of Bidder/Contractor] hereby declares that it has not obtained or induced the procurement of any contract, right, interest, privilege or other obligation or benefit from Government of Pakistan (GoP) or any administrative subdivision or agency thereof or any other entity owned or controlled by GoP through any corrupt business practice.

Without limiting the generality of the foregoing, [Name of Bidder/ Contractor] represents and warrants that it has fully declared the brokerage, commission, fees etc. paid or payable to anyone and not given or agreed to give and shall not give or agree to give to anyone within or outside Pakistan either directly or indirectly through any natural or juridical person, including its affiliate, agent, associate, broker, consultant, director, promoter, shareholder, sponsor or subsidiary, any commission, gratification, bribe, finder's fee or kickback, whether described as consultation fee or otherwise, with the object of obtaining or inducing the procurement of a contract, right, interest, privilege or other obligation or benefit in whatsoever form from GoP, except that which has been expressly declared pursuant hereto.

[Name of Bidder/Contractor] certifies that it has made and will make full disclosure of all agreements and arrangements with all persons in respect of or related to the transaction with GoP and has not taken any action or will not take any action to circumvent the above declaration, representation or warranty.

[Name of Bidder/Contractor] accepts full responsibility and strict liability for making any false declaration, not making full disclosure, misrepresenting facts or taking any action likely to defeat the purpose of this declaration, representation and warranty. It agrees that any contract, right, interest, privilege or other obligation or benefit obtained or procured as aforesaid shall, without prejudice to any other rights and remedies available to GoP under any law, contract or other instrument, be voidable at the option of GoP.

Notwithstanding any rights and remedies exercised by GoP in this regard, [name of Bidder/Contractor] agrees to indemnify GoP for any loss or damage incurred by it on account of its corrupt business practices and further pay compensation to GoP in an amount equivalent to ten times the sum of any commission, gratification, bribe, finder's fee or kickback given by [name of Bidder/Contractor] as aforesaid for the purpose of obtaining or inducing the procurement of any contract, right, interest, privilege or other obligation or benefit in whatsoever form from GoP.

Name of Employer:
Signature:

[Seal]

Name of Bidder/Contractor:
Signature:

[Seal]



STANDARD FORMS



BS-1

FORM OF BID SECURITY

Security Executed on _____

(Date)

Expiry on _____

(Date)

Name of Surety with Address: _____

Name of Principal (Bidder) with Address _____

Penal Sum of Security PKR _____ (Pak Rupees _____)

Bid Reference No. _____

KNOW ALL MEN BY THESE PRESENTS, that in pursuance of the terms of the Bid and at the request of the said Principal (Bidder) we, the Surety above named, are held and firmly bound unto

(hereinafter called the 'Employer') in the sum stated above for the payment of which sum well and truly to be made, we bind ourselves, our heirs, executors, administrators and successors, jointly and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION IS SUCH, that whereas the Bidder has submitted the accompanying Bid dated _____ for _____
(Particulars of Bid) to the said Employer; and

- (1) WHEREAS, the Employer has required as a condition for considering said Bid that the Bidder furnishes a Bid Security in the above said sum to the Employer, conditioned as under: that the Bid Security shall remain in force for a period fourteen (14) days beyond the Bid Validity date i.e., upto _____.
- (2) that the Bid Securities of the Bidders except the lowest three will be returned by the Employer within twenty eight (28) days from the opening of Bids, provided a Bidder request for the return of its Bid Security, or on the expiry of original validity of Bid Security or as extended, whichever is earlier;
- (3) that the Bid Security of the lowest three Bidders comprising the successful Bidder will be returned when the successful Bidder has furnished the required Performance Security; and
- (4) that in the event of failure of the successful Bidder to furnish the required Performance Security, the entire said sum be paid immediately to the said Employer pursuant to IB.16 and IB.35 of the Instructions to Bidders for the successful Bidder's failure to perform.

NOW THEREFORE, if the successful Bidder shall, within the period specified therefor, on the prescribed form presented to him for signature enter into a formal Contract with the said Employer in accordance with his Bid as accepted and furnish within twenty eight (28) days of his being requested to do so, a Performance Security with good and sufficient surety, as may be required, upon the form prescribed by the said Employer for the faithful performance and proper fulfilment of the said Contract or in the event of non-withdrawal of the said Bid within the time specified for its validity then this obligation shall be void and of no effect, but otherwise to remain in full force and effect.



BS-2

PROVIDED THAT the Surety shall forthwith pay the Employer the said sum upon first written demand of the Employer (without cavil or argument) and without requiring the Employer to prove or to show grounds or reasons for such demand, notice of which shall be sent by the Employer by registered post duly addressed to the Surety at its address given above.

PROVIDED ALSO THAT the Employer shall decide, whether the Principal (Bidder) has duly performed his obligations to sign the Contract Agreement and to furnish the requisite Performance Security within the time stated above, or has defaulted in fulfilling said requirements and the Surety shall pay without objection the said sum upon demand from the Employer forthwith and without any reference to the Principal (Bidder) or any other person.

IN WITNESS WHEREOF, the above bounden Surety has executed the instrument under its seal on the date indicated above, the name and seal of the Surety being hereto affixed and these presents duly signed by its undersigned representative pursuant to authority of its governing body.

SURETY
(Schedule Bank/Insurance Company)

WITNESS:

Signature _____

1. _____

Name _____

Corporate Secretary (Seal)

Title _____

Corporate Guarantor (Seal)

2. _____

Name, Title & Address



PS-1

FORM OF PERFORMANCE SECURITY

Guarantee No. _____

Executed on _____

Expiry date _____

[Letter by the Guarantor to the Employer]

Name of Guarantor with address: _____

Name of Principal (Contractor) with address: _____

Penal Sum of Security (*express in words and figures*) _____

Letter of Acceptance No. _____ Dated _____

KNOW ALL MEN BY THESE PRESENTS, that in pursuance of the terms of the Bidding Documents and above said Letter of Acceptance (hereinafter called the Documents) and at the request of the said Principal we, the Guarantor above named, are held and firmly bound unto the _____ (hereinafter called the Employer) in the penal sum of the amount stated above for the payment of which sum well and truly to be made to the said Employer, we bind ourselves, our heirs, executors, administrators and successors, jointly and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION IS SUCH, that whereas the Principal has accepted the Employer's above said Letter of Acceptance for _____

_____ (*Name of Contract*) for the _____

_____ (*Name of Project*).



NOW THEREFORE, if the Principal (Contractor) shall well and truly perform and fulfill all the undertakings, covenants, terms and conditions of the said Documents during the original terms of the said Documents and any extensions thereof that may be granted by the Employer, with or without notice to the Guarantor, which notice is, hereby, waived and shall also well and truly perform and fulfill all the undertakings, covenants terms and conditions of the Contract and of any and all modifications of said Documents that may hereafter be made, notice of which modifications to the Guarantor being hereby waived, then, this obligation to be void; otherwise to remain in full force and virtue till all requirements of Clause 11, Defects After Taking Over, of Conditions of Contract are fulfilled.

Our total liability under this Guarantee is limited to the sum stated above and it is a condition of any liability attaching to us under this Guarantee that the claim for payment in writing shall be received by us within the validity period of this Guarantee, failing which we shall be discharged of our liability, if any, under this Guarantee.

We, _____ (the Guarantor), waiving all objections and defense under the Contract, do hereby irrevocably and independently guarantee to pay to the Employer without delay upon the Employer's first written demand without cavil or arguments

PS-2

and without requiring the Employer to prove or to show grounds or reasons for such demand any sum or sums up to the amount stated above, against the Employer's written declaration that the Principal has refused or failed to perform the obligations under the Contract which payment will be effected by the Guarantor to Employer's designated Bank & Account Number.

PROVIDED ALSO THAT the Employer shall decide, whether the Principal (Contractor) has duly performed his obligations under the Contract or has defaulted in fulfilling said obligations and the Guarantor shall pay without objection any sum or sums up to the amount stated above upon first written demand from the Employer forthwith and without any reference to the Principal or any other person.

IN WITNESS WHEREOF, the above-bounden Guarantor has executed this Instrument under its seal on the date indicated above, the name and corporate seal of the Guarantor being hereto affixed and these presents duly signed by its undersigned representative, pursuant to authority of its governing body.

Guarantor
(Schedule Bank/ Insurance Company)

Signature _____

Name _____

Title _____
Corporate Guarantor (Seal)

WITNESS:

1. _____

Corporate Secretary (Seal)

2. _____

Name, Title & Address



LOA-1

Letter of Acceptance

[Letterhead paper of the Employer]

NAME OF CONTRACT: _____

CONTRACT NUMBER: _____

TO: _____

Date: _____

Your Reference: _____

Our Reference: _____

We thank you for your Bid dated _____ for the execution and completion of the Works comprising the above-named Contract and remedying of defects therein, all in conformity with the terms and conditions contained in the Contract.

We have pleasure in accepting your Bid for the Accepted Contract Amount of:

_____ [currency and amount in figures]

_____ [currency and amount in words]

In consideration of you properly and truly performing the Contract, we agree to pay you the Accepted Contract Amount or such other sums to which you may become entitled under the terms of the Contract, at such times and as prescribed by the Contract.

We acknowledge that this Letter of Acceptance creates a binding Contract between us, and we undertake to fulfil all our obligations and duties in accordance with the terms of this Contract.

Signature: _____

Signed by: _____

For and on behalf of: _____

Date: _____



FORM OF CONTRACT AGREEMENT

THIS CONTRACT AGREEMENT (hereinafter called the "Agreement") made on the _____ day of _____ (month) 20____ between _____ (hereinafter called the "Employer") of the one part and _____ (hereinafter called the "Contractor") of the other part.

WHEREAS the Employer is desirous that certain Works, viz., _____ should be executed by the Contractor and has accepted a Bid by the Contractor for the execution and completion of such Works and the remedying of any defects therein.

NOW this Agreement witnessed as follows:

1. In this Agreement words and expressions shall have the same meanings as are respectively assigned to them in the Conditions of Contract hereinafter referred to.
2. The following documents, in the order of priority, after incorporating addenda, if any, except those parts relating to Instructions to Bidders shall be deemed to form and be read and construed as part of this Agreement:
 - a) This Contract Agreement;
 - b) The Letter of Acceptance;
 - c) The Letter of Bid;
 - d) The Particular Conditions Part A - Contract Data;
 - e) The Particular Conditions Part B - Special Provisions;
 - f) The General Conditions;
 - g) The Specifications Part A - Specific Provisions;
 - h) The Specifications Part B - Technical Provisions;
 - i) The Drawings;
 - j) The Completed Schedules to Bid including Schedule of Prices;
 - k) *[Employer to insert any other documents forming part of the Contract]*



The addenda/corrigenda, if any, (Excluding part relating to Instructions to Bidders along with Bidding Data) shall be deemed to have been incorporated at the appropriate places in the "Documents forming the Contract".

3. In consideration of the payments to be made by the Employer to the Contractor as hereinafter mentioned, the Contractor hereby covenants with the Employer to execute and complete the Works and remedy defects therein in conformity and in all respects with the provisions of the Contract.
4. The Employer hereby covenants to pay the Contractor, in consideration of the execution and completion of the Works as per provisions of the Contract, the Contract Price or such other sum as may become payable under the provisions of the Contract at the times and in the manner prescribed by the Contract.

IN WITNESS WHEREOF the parties hereto have caused this Agreement to be executed on the day, month and year first before written in accordance with their respective laws.

Signature of Contactor

Signature of Employer

(Seal)

(Seal)

Signed, Sealed and Delivered in the presence of:

Witness

Witness

(Name, Title and Address)

(Name, Title and Address)



MG-1

FORM OF MOBILIZATION ADVANCE GUARANTEE/ BOND**(Bank Guarantee only)**

Guarantee No. _____ Date _____

WHEREAS _____ (hereinafter called the 'Employer')

has entered into a Contract for _____

(Particulars of Contract)

with _____ (hereinafter called the "Contractor").

AND WHEREAS, the Employer has agreed to advance to the Contractor, at the Contractor's request, an amount of Pak Rupees _____ (PKR _____) which amount shall be advanced to the Contractor as per provisions of the Contract.

AND WHEREAS, the Employer has asked the Contractor to furnish Guarantee to secure the mobilization advance for the performance of his obligations under the said Contract.

AND WHEREAS, _____

(hereinafter called the "Guarantor") at the request of the Contractor and in consideration of the Employer agreeing to make the above advance to the Contractor, has agreed to furnish the said Guarantee.

NOW, THEREFORE, the Guarantor hereby guarantees that the Contractor shall use the advance for the purpose of above mentioned Contract and if he fails and commits default in fulfilment of any of his obligations for which the advance payment is made, the Guarantor shall be liable to the Employer for payment not exceeding the aforementioned amount.

Notice in writing of any default, on the part of the Contractor, of which the Employer at his discretion of making decision, shall be given by the Employer to the Guarantor, and on such first written demand, payment shall be made by the Guarantor of all sums then due under this Guarantee without any reference to the Contractor and without any objection.

This Guarantee shall remain in force until the advance is fully adjusted against payments from the Interim Payment Certificates of the Contractor or until _____ whichever is earlier. *(Date)*

The Guarantor's liability under this Guarantee shall not in any case exceed the sum of PKR _____ (Pak Rupees _____)



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This Guarantee shall remain valid up to the aforesaid date and shall be null and void after the aforesaid date or earlier if the advance made to the Contractor is fully adjusted against payments from Interim Payment Certificates of the Contractor provided that the Guarantor agrees that the aforesaid period of validity shall be deemed to be extended if on the abovementioned date the advance payment is not fully adjusted.

WITNESS:

1. _____

Corporate Secretary (Seal)

2. _____

Name, Title & Address

Guarantor
(Scheduled Bank/ Insurance Company)

Signature _____

Name _____

Title _____
Corporate Guarantor (Seal)



CONDITIONS OF CONTRACT



CONDITIONS OF CONTRACT

The Conditions of Contract comprise two parts:

- (a) General Conditions
- (b) Particular Conditions

General Conditions

These Conditions are the "General Conditions" which form part of the "FIDIC Conditions of Contract for Construction for Building and Engineering Works Designed by the Employer Second Edition (2017 Red book, Reprinted 2022 with amendments)" published by:

International Federation of Consulting Engineers
(Fédération Internationale des Ingénieurs – Conseils) – (FIDIC)
World Trade Center II - Geneva Airport
P. O. Box 311
CH-1215 Geneva 15
Switzerland
Email: fidic@fidic.org, fidic.pub@fidic.org
Website: <https://fidic.org/bookshop>

The successful Bidder after award of Works shall have to provide two (02) copies of above said "General Conditions" for incorporation in the Contract.



Particular Conditions

The Particular Conditions (PC) complement the General Conditions (GC) to specify dates, contractual requirements, and special circumstances related to the Works. The PC consists of two parts, Part A - Contract Data and Part B - Special Provisions. The provisions to be found in the Special Provisions (Particular Conditions - Part B) take precedence over the equivalent provisions found under the same Sub-Clause number(s) in the General Conditions, and the provisions of the Contract Data (Particular Conditions - Part A) take precedence over the Special Provisions (Particular Conditions - Part B).

Part A - Contract Data

Sub-Clause	Data to be Given	Data
1.1.27	Defects Notification Period (DNP):	<i>12 Calendar Months</i>
1.1.31	Employer's name and address:	<i>Pakistan Engineering Council (PEC), Attaturk Avenue (East) G-5/2, P.O. Box: 1296, Islamabad PABX: 051 9206974, 051 9219500, 0519219036, 0519219037, 051 9219038</i>
1.1.35	Engineer's name and address:	<i>To be communicated later</i>
1.1.73	Sections:	<i>None</i>
1.1.84	Time for Completion:	<i>Whole Works - Six (06) Calendar Months</i>
1.3(a)(ii)	agreed methods of electronic transmission:	<i>None</i>
1.3(d)	address of Employer for communications:	<i>The Project Director, Pakistan Engineering Council (PEC), Attaturk Avenue (East) G-5/2, P.O. Box: 1296, Islamabad PABX: 051 9206974, 051 9219500, 0519219036, 0519219037, 051 9219038</i>
	address of Engineer for communications:	<i>To be communicated later</i>
	address of Contractor for communications:	<i>[Insert Contractor's address at the time of signing of the Contract]</i>
1.4	Contract shall be governed by the law of:	<i>Islamic Republic of Pakistan</i>
	ruling language:	<i>English</i>
	language for communications:	<i>English</i>



Sub-Clause	Data to be Given	Data
1.8	number of additional paper copies of Contractor's Documents:	<i>06 copies, the charges for copies shall be borne by the Contractor</i>
2.1	after receiving the Letter of Acceptance, the Contractor shall be given right of access to all or part of the Site within:	<i>No later than 03 days of the Commencement Date.</i>
2.4	Employer's financial arrangements	<i>PEC's own funds</i>
3.2 (e)(ii)	Engineer's Duties and Authority	<i>Variation resulting in an increase of the Accepted Contract Amount in excess of one percent (1%) subject to accumulative Variations not exceeding five percent (5%) of the Accepted Contract Amount</i>
4.2	Performance Security (as percentage of the Accepted Contract Amount in Currencies) percent: currency:	<i>Ten percent (10%) Pak Rs</i>
4.2.1	List of Insurance Companies	<i>List of Insurance Companies: Any Insurance Company A(+) or AA Rated by PACRA/VIS</i>
4.7.2	period for notification of errors in the items of reference	<i>Twenty Eight (28) days</i>
4.19	period of payment for temporary utilities	<i>Not Applicable 2nd paragraph is deleted in its entirety</i>
4.20	number of additional paper copies of progress reports	<i>three(03)</i>
5.1(a)	maximum allowable accumulated value of work subcontracted (as a percentage of the Accepted Contract Amount)	<i>30% subject to Employer's approval</i>



Sub-Clause	Data to be Given	Data
5.1(b)	parts of the Works for which subcontracting is not permitted	<i>None</i>
6.5	Normal working hours on the Site	<i>Eight (08) hours per day</i>
8.3	number of additional paper copies of programmes	<i>three(03)</i>
8.8 & 14.15(b)	Delay Damages payable for each day of delay	<i>0.166% per day of the Accepted Contract Amount for delay in completion of whole of the Works</i>
8.8	maximum amount of Delay Damages	<i>Ten percent (10%) of the Accepted Contract Amount</i>
8.14	Applicability of Incentives for Early Completion	<i>Not applicable</i>
12.3	Percentage profit	<i>Ten percent (10%)</i>
13.4.(b)(ii)	percentage rate to be applied to Provisional Sums for overhead charges and profit	<i>Twenty Five percent (25%) (10% Profit + 7% Overheads + 8% Income tax)</i>
14.2	Total Advance Payment	<i>Fifteen percent (15%) of the Accepted Contract Amount excluding Provisional Sums payable if any in the currencies and proportions in which the Accepted Contract Amount is payable.</i>
14.2.1	List of Insurance Companies	<i>Any Insurance Company A(+) or AA Rated by PACRA/VIS</i>
14.2.3	percentage deductions for the repayment of the Advance Payment	<i>Deduction shall be made at the amortization rate of 25 % of the value of the Works executed of each IPC as provided in paragraph (i) of Sub-Clause GCC 14.3, starting from 2nd IPC provided that the advance payment shall be completely repaid prior to the time when 90% of the Accepted Contract Amount less Provisional Sums has been certified for payment. It may be more than 25% in the last instalment to ensure full repayment.</i>
14.3	period of payment	<i>one month</i>
14.3(b)	number of additional paper copies of Statements	<i>six (06)</i>
14.3 (iii)	percentage of retention	<i>Five percent (5%)</i>



Sub-Clause	Data to be Given	Data
14.3 (iii)	limit of Retention Money (as a percentage of the Contract Price)	<i>Five percent (5%)</i>
14.5(b)(i)	Plant and Materials for payment when shipped	<i>Not Applicable</i>
14.5(c)(i)	Plant and Materials for payment when delivered to the Site	<i>Not Applicable</i>
14.7b(i)	period for the Employer to make interim payments to the Contractor under Sub-Clause 14.6 [Interim Payment]	28 days
14.7b(ii)	period for the Employer to make interim payments to the Contractor under Sub-Clause 14.13 (Final Payment)	56 days
14.7(c)	period for the Employer to make final payment to the Contractor	56 days
14.8	financing charges for delayed payment	<i>Not Applicable</i>
14.11.1(b)	number of additional paper copies of draft Final Statements	<i>six (06)</i>
14.15	currencies of payment of Contract Price	<i>Pak Rs.</i>
14.15(a)(i)	Proportions or amounts of Local and Foreign currencies	<i>Not Applicable</i>
14.15(c)	currencies and proportions for payment of Delay Damages	<i>Pak Rs.</i>
14.15(f)	rates of exchange	<i>Not Applicable</i>
17.2(d)	forces of nature, the risks of which are allocated to the Contractor	<i>Nil</i>
19.1	Periods for submission of insurance: a) evidence of insurance relevant policies	<i>Not later than the Commencement Date</i> <i>Within twenty eight (28) day from the Commencement Date</i>



Sub-Clause	Data to be Given	Data
19.1	permitted deductible limits: i) insurance required for the Works ii) insurance required for Goods iii) insurance required for liability for breach of professional duty iv) insurance required against liability for fitness for purpose (if any is required) v) insurance required for injury to persons and damage to property vi) insurance required for injury to employees vii) other insurances required by Laws and by local practice	i) <i>Ten percent (10%) of loss amount on each & every loss</i> ii) <i>Nil</i> iii) <i>Nil</i> iv) <i>Nil</i> v) <i>Nil</i> vi) <i>Nil</i> vii) <i>Nil</i>
19.2.1(b)	additional amount to be insured (as a percentage of the replacement value)	<i>15% of the replacement value (Accepted Contract Amount)</i>
19.2.2	extent of insurance required for Goods amount of insurance required for Goods	<i>from Ex-Works (i.e., works, factory, warehouse, etc) to delivery at the Site</i> <i>Full replacement value</i>
19.2.3(a)	amount of insurance required for liability for breach of professional duty	<i>Full replacement value of the Works to be designed by the Contractor</i>
19.2.3(b)	insurance required against liability for fitness for purpose	<i>Yes</i>
19.2.3	period of insurance required for liability for breach of professional duty	<i>Until the date of issuance of Performance Certificate</i>
19.2.4	amount of insurance required for injury to persons and damage to property	<i>Injury to person and Fatal case: in accordance with Workmen Compensation Act</i> <i>Damage to Property: Rs. 1.0 million</i> <i>[without limit to the number of incidents]</i>
19.2.6	other insurances required by Laws and by local practice	<i>All insurances as applicable, to the extent of execution of the project, under Federal and Provincial laws of Islamic Republic of Pakistan</i>
21.6	Rules of Arbitration	PEC Rules of Conciliation and Arbitration or Pakistan Arbitration Act of 1940, if the former is inactive. The place of Arbitration shall be in the Employer's country: <i>Islamabad, Pakistan</i>



Summary of Sections of the Works

Section Name/Description of parts of the Works that will be designated a Section for the purposes of the Contract (Sub-Clause 1.1.7.3)	Value: Percentage* of Accepted Contract Amount (Sub-Clause 14.9)	Time for Completion (Sub-Clause 1.1.84)	Delay Damages (Sub-Clause 8.8)
A			
B			
C			

* These percentages shall also be applied to each half of the Retention Money under Sub-Clause 14.9.

Section Name/Description (Sub-Clause 1.1.7.3)	Time for Completion (Sub-Clause 1.1.84)	Incentives for Early Completion (Sub-Clause 8.14)
A		
B		
C		



Particular Conditions

Part B - Special Provisions

- 1.1 Definitions** 1.1.76 "Specification"
Following is added at the end:
"and consists of two parts i.e.,
i) "Part A - Specific Provisions", and
ii) "Part B - Technical Provisions"."
- 1.2 Interpretation** "and" is deleted from the end of sub-paragraph (i) and added at the end of sub-paragraph (j).
Sub-paragraph (k) is added:
"(k) The word "tender" is synonymous with "bid" the word tenderer with "bidder", the words "tender documents" with "bidding documents" and "Schedule of Prices" with "Bill of Quantities", as applicable."
- 1.5 Priority of Documents** The documents listed at (a) through (k) of this Sub-Clause are deleted and substituted with the following:
(a) the Contract Agreement;
(b) the Letter of Acceptance;
(c) the Letter of Bid;
(d) the Particular Conditions Part A - Contract Data;
(e) the Particular Conditions Part B - Special Provisions;
(f) the General Conditions;
(g) the Specification Part A - Specific Provisions;
(h) the Specification Part B - Technical Provisions;
(i) the Drawings;
(j) the completed Schedules to Bid including Bill of Quantities;
(k) any other documents forming part of the Contract.
The addenda/corrigenda, if any, shall be deemed to have been incorporated at the appropriate places in the documents forming the Contract.
- 1.6 Contract Agreement** In the last line of the 1st paragraph the text "shall be borne by the Employer" is substituted by "shall be borne by the Contractor".
- 3.1 The Engineer** In sub-paragraph (a) the text "as defined in the Pakistan Engineering Council Act, 1975 (Act No. V of 1976)" are added after the words "professional engineer".
- 3.2 Engineer's Duties and Authority** The Engineer shall obtain the consent in writing of the Employer before taking action under the following Sub-Clauses of these Conditions:
(a) Consenting to the subcontracting of any part of the Works



- under Sub-Clause 5.1 [Subcontractors]
- (b) Any action under Sub-Clauses 8.9 [Employer's Suspension] and 8.12 [Prolonged Suspension]
 - (c) Issuance of "Taking Over Certificate" under Sub-Clause 10.1 [Taking Over the Works and Sections].
 - (d) Issuing the "Performance Certificate" under Sub-Clause 11.9 [Performance Certificate].
 - (e) Sub-Clause 13.1 [Right to Vary]: instructing a Variation, except;
 - (i) in an emergency situation as determined by the Engineer, or
 - (ii) if such a Variation would increase the Accepted Contract Amount by less than the percentage specified in the Contract Data.
 - (f) Sub-Clause 13.3 [Variation Procedure]: approving a proposal for Variation submitted by the Contractor in accordance with Sub-Clause 13.3.2 [Variation by Request for Proposal] or 13.2 [Value Engineering].
 - (g) Certifying release of second half of the Retention Money under Sub-Clause 14.9 [Release of Retention Money].
 - (h) Issuing Final Payment Certificate under Sub-Clause 14.13 [Issue of FPC].

Any such requirement shall not be applied to any action by the Engineer under Sub-Clause 3.7 [Agreement or Determination], as stated in Sub-Clause 3.2 [Engineer's Duties and Authority] of the General Conditions.

Notwithstanding the obligation, as set out above, to obtain approval, if, in the opinion of the Engineer, an emergency occurs affecting the safety of life or of the Works or of adjoining property, he may, without relieving the Contractor of any of his duties and responsibility under the Contract, instruct the Contractor to execute all such work or to do all such things as may, in the opinion of the Engineer, be necessary to abate or reduce the risk. The Contractor shall forthwith comply, despite the absence of approval of the Employer, with any such instruction of the Engineer. The Engineer shall determine an addition to the Contract Price, in respect of such instruction, in accordance with Clause 13 and shall notify the Contractor accordingly, with a copy to the Employer.

Following is added after the words "the Employer's consent is required" in 4th paragraph:

"stating that the Employer's consent has been obtained for that specified authority"



4.2 Performance Security**4.2.1 Contractor's Obligations**

The entity issuing the Performance Security and its form shall be as under:

The irrevocable Performance Security shall be, at the option of the Contractor, issued in the prescribed form included in the Bidding Documents, by (a) a Scheduled Bank in Pakistan AAA rated by PACRA or (b) a foreign bank duly counter-guaranteed by a Scheduled Bank in Pakistan or (c) an Insurance Company A(+) rated by PACRA/VIS:

In case of Joint Venture, the Performance Security shall be in the name of the Joint Venture or in the name of Lead/either firm of the JV or in ratio of shares of the individual JV partners.

4.3 Contractor's Representative

In second paragraph the text "professional engineer as defined in the Pakistan Engineering Council Act, 1975 (Act No. V of 1976) (having temporary licence in case of foreign engineer under Section 12 of the Pakistan Engineering Council Act, 1975 (Act No. V of 1976)" are added after the words "qualified, experienced".

In the 3rd paragraph the words "28 days" are substituted by "14 days". In 2nd line of 4th paragraph the text "or appoint a replacement" is substituted by "except appointment of a suitable temporary replacement is deployed at the Site"

4.4 Contractor's Documents**4.4.2 As-Built Records**

First paragraph is deleted and the text in the last paragraph is substituted with the following:

"The Contractor shall furnish to the Engineer 6 copies, one reproducible and one electronic copy (provided the Engineer has made available to the Contractor editable form of the Drawings) of all Drawings amended to conform to the Works asbuilt. In case the Engineer does not make available to the Contractor editable form of the Drawings, the Contractor shall furnish to the Engineer as-built data for incorporation in the Drawings. Upon receipt of PDF versions of the as-built drawings prepared by the Engineer, the Contractor shall furnish to the Engineer 6 copies and one reproducible of these Drawings.

The price of such Drawings shall be deemed to be included in the Contract Price."



Following Sub-Clause is added:

4.4.4 Shop Drawings

The Contractor shall submit to the Engineer for review 3 copies of all shop and erection drawings applicable to this Contract as per provision of relevant Sub-Clause of the Contract.

Review and approval by the Engineer shall not exceed 21 days and be construed as a complete check but will indicate only that the general method of construction and detailing is satisfactory and the Engineer's review or approval shall not relieve the Contractor of any of his responsibilities under the Contract.

4.8 Health and Safety Obligations

The following text is added at the end of this Sub-Clause:

In the event of work being carried out outside the normal working hours and in the event of work being carried out at night, the Contractor shall at his own cost, provide and maintain such good and sufficient light as will enable the work to proceed satisfactorily and without danger. The approaches to the Site and the Works where the night work is being carried out shall be sufficiently lighted. All arrangement adopted for such lighting shall be to the satisfaction of the Engineer.

4.20 Progress Reports

At the end of sub-paragraph (g) the word "and" is deleted and at the end of sub-paragraph (h) the full stop (.) is replaced with ";", and the following new sub-paragraphs are added as:

- (i) planned programme for the execution of the Works for next 56 days to enable the Engineer to determine its programme of inspection and testing;
- (j) monthly summary of daily job record indicating weather conditions, deployment of Contractor's Equipment, labour employment, local material procurement and material import, if any; and
- (k) salient contractual and project information.

5.1 Subcontractors

Add the following text at the end of paragraph (ii):

"under Schedule to Bid"

The following is added at the end of the last paragraph of Sub-Clause 5.1:

"All subcontracts relating to the Works shall include provisions which entitle the Employer to require the subcontract to be assigned to the Employer under sub-paragraph (a) of Sub-Clause 15.2.3 [After Termination]."

The Contractor shall give reasonable opportunity to contractors from Islamic Republic of Pakistan for subcontracts for the Works, and endeavour to employ such contractors as Subcontractors."



5.2 Nominated Subcontractors

5.2.2 Objection to Nomination

In sub-paragraph (c), "and" is deleted from the end of (i);

“.” at the end of (ii) is replaced with: “, and”.

The following is then added as (iii):

“(iii) be paid only if and when the Contractor has received from the Employer payments for sums due under the Subcontract referred to under Sub-Clause 5.2.3 [*Payment to nominated Subcontractors*].”

6.1 Engagement of Staff and Labour

The following paragraph is added at the end of the Sub-Clause:

“The Contractor shall, to the extent practicable and reasonable, employ staff (not less than 50%) and labour (not less than 85%) with appropriate qualifications and experience from sources within the Islamic Republic of Pakistan.”

6.7 Health and Safety of Personnel

The existing text is substituted with the following:

“In order to provide for the safety, health and welfare of persons, and for prevention of damage of any kind, all operations for the purposes of or in connection with the Contract shall be carried out in compliance with the Safety Requirements of the Government of Pakistan with such modifications thereto as the Engineer may authorize or direct and the Contractor shall take or cause to be taken such further measures and comply with such further requirements as the Engineer may determine to be reasonably necessary for such purpose. The Contractor shall also provide all other medical services and appoint a health and safety officer at Site if stated in the Specifications. In case of any fatality or serious accident, the Contractor shall, in addition, notify the Engineer immediately by the quickest available means.”

6.8 Contractor's Superintendence

Insert at the end of sub-paragraph (a) of this Sub-Clause:

“or, if not, the Contractor shall make competent interpreters available during all working hours, in a number sufficient for those persons to properly perform their superintendence duties”

The following text is added at the end of this Sub-Clause:

“The Contractor's authorized representative and his other engineers working at site shall possess valid registration with the Pakistan Engineering Council.

The Contractor's authorized representative at Site shall be authorized to exercise adequate administrative and financial powers on behalf of the Contractor so as to achieve completion of the Works as per the Contract.”



6.12 Key Personnel

The following is inserted at the end of the last paragraph:

“If any of the Key Personnel are not fluent in this language, the Contractor shall make competent interpreters available during all working hours in a number deemed sufficient by the Engineer.”

The following Sub-Clauses 6.13 to 6.26 are added at the end of Sub-Clause 6.12:

6.13 Foreign Personnel

The Contractor may bring in to the Country any foreign personnel who are necessary for the execution of the Works to the extent allowed by the applicable Laws. The Contractor shall ensure that these personnel are provided with the required

residence visas and work permits. The Employer will, if requested by the Contractor, use all reasonable endeavours in a timely and expeditious manner to assist the Contractor in obtaining any local, state, national, or government permission required for bringing in the Contractor's personnel.

The Contractor shall be responsible for the return of these personnel to the place where they were recruited or to their domicile. In the event of the death in the Country of any of these personnel or members of their families, the Contractor shall similarly be responsible for making the appropriate arrangements for their return or burial.

- 6.14 Supply of Foodstuffs** The Contractor shall arrange for the provision of a sufficient supply of suitable food as may be stated in the Specification at reasonable prices for the Contractor's Personnel for the purposes of or in connection with the Contract.
- 6.15 Supply of Water** The Contractor shall, having regard to local conditions, provide on the Site an adequate supply of drinking and other water for the use of the Contractor's Personnel.
- 6.16 Measures against Insect and Pest Nuisance** The Contractor shall at all times take the necessary precautions to protect the Contractor's Personnel employed on the Site from insect and pest nuisance, and to reduce the danger to their health. The Contractor shall comply with all the regulations of the local health authorities, including use of appropriate insecticide.
- 6.17 Alcoholic Liquor or Drugs** The Contractor shall not, otherwise than in accordance with the Laws of the Country, import, sell, give, barter or otherwise dispose of any alcoholic liquor or drugs, or permit or allow importation, sale, gift, barter or disposal thereto by Contractor's Personnel.
- 6.18 Arms and Ammunition** The Contractor shall not give, barter, or otherwise dispose of, to any person, any arms or ammunition of any kind, or allow Contractor's Personnel to do so.
- 6.19 Festivals and Religious Customs** The Contractor shall respect the Country's recognized festivals, days of rest and religious or other customs.
- 6.20 Funeral Arrangements** The Contractor shall be responsible, to the extent required by local regulations, for making any funeral arrangements for any of its local employees who may die while engaged upon the Works.
- 6.21 Forced Labour** The Contractor, including its Subcontractors, shall not employ or engage forced labour which 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 labour, such as indentured labour, bonded labour or similar labour-contracting arrangements.
- 6.22 Child Labour** The Contractor, including its Subcontractors, shall not employ or engage child labour in accordance with relevant law(s) in force in Islamic Republic of Pakistan.



- 6.23 Employment Records of Workers** The Contractor shall keep complete and accurate records of the employment of labour at the Site. The records shall include the names, ages, genders, hours worked and wages paid to all workers. These records shall be summarized on a monthly basis and submitted to the Engineer. These records shall be included in the details to be submitted by the Contractor under Sub-Clause 6.10 [*Contractor's Records*].
- 6.24 Workers' Organizations** The Contractor shall comply with the relevant labour laws of Pakistan which recognize workers' rights to form and to join workers' organizations/Trade Union of their choosing and to bargain collectively without interference.
- 6.25 Non-Discrimination and Equal Opportunity** The Contractor shall not make decisions relating to the employment or treatment of Contractor's Personnel on the basis of personal characteristics unrelated to inherent job requirements. The Contractor shall base the employment of Contractor's Personnel on the principle of equal opportunity and fair treatment, and shall not discriminate with respect to any aspects of the employment relationship, including recruitment and hiring, compensation (including wages and benefits), working conditions and terms of employment, access to training, job assignment, promotion, termination of employment or retirement, and disciplinary practices.
- Special measures of protection or assistance to remedy past discrimination or selection for a particular job based on the inherent requirements of the job shall not be deemed discrimination. The Contractor shall provide protection and assistance as necessary to ensure non-discrimination and equal opportunity, including for specific groups such as women, persons with disabilities, migrant workers and children (of working age in accordance with Sub-Clause 6.22).
- 6.26 Epidemics** In the event of any out-break of illness of epidemic nature, the Contractor shall comply with and carry out such regulations, orders and requirements as may be made by the Government or the local medical or sanitary authorities for the purpose of overcoming the same.
- 7.7 Ownership of Plant and Materials** The following is added before the first paragraph:
"Except as otherwise provided in the Contract,"
The following is added at the end of the Sub-Clause:
"No Plant and/or Materials that is the property of the Employer shall be removed from the Site. If it becomes necessary to:
- (i) remove any item of such Plant from the Site for the purposes of repair, the Contractor shall give a Notice, with reasons, to the Engineer requesting consent to remove the defective or damaged item off the Site. This Notice shall clearly identify the item of defective or damaged Plant, and shall give details of: the defect or damage to be repaired; the place to which defective or damaged item of Plant is to be taken for repair; the transportation to be used (and insurance cover for such transportation); the proposed



inspections and testing off the Site; and the planned duration required before the repaired item of Plant shall be returned to the Site. The Contractor shall also provide any further details that the Employer may reasonably require; or

- (ii) replace any item(s) of such Plant and/or Materials, the Contractor shall give a Notice, with reasons, to the Engineer clearly identifying the item(s) of Plant and/or Materials to be replaced, and giving details of the due date of delivery to the Site of the replacement item(s).

Where any item of Plant and/or Materials has become the property of the Employer under this Sub-Clause before it has been delivered to the Site, the Contractor shall ensure that such an item is not moved except for its delivery to the Site.

The Contractor shall indemnify and hold the Employer harmless against and from the consequences of any defect in title or encumbrance or charge (except any reasonable restriction arising from the intellectual property rights of the manufacturer or producer) on any item of Plant and/or Materials that has become the property of the Employer under this Sub-Clause."

The following Sub-Clause 7.9 is added after Sub Clause 7.8:

- | | |
|--|--|
| 7.9 Use of Pakistani Materials and Services | The Contractor shall, so far as may be consistent with the Contract, make the maximum use of materials, supplies, plant and equipment indigenous to or produced or fabricated in Pakistan and services available in Pakistan provided such materials, supplies, plant, equipment and services shall be of required standard. |
| 8.1 Commencement of Works | The following is added before the first paragraph:
"After signing of the Contract Agreement by both Parties," and thereafter the word "The" is replaced with the word "the". |
| 8.5 Extension of Time for Completion | The following is added after paragraph (c):
"for last five years". |

The following Sub-Clause 8.14 is added after Sub-Clause 8.13:

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| 8.14 Incentives for Early Completion | Not applicable |
|---|----------------|



NOT APPLICABLE

The following Sub-Clause 11.12 is added after Sub-Clause 11.11:

- 11.12 Supervisory Assistance during DNP** If provided under the Schedule of Prices, the Contractor shall provide supervisory assistance to the Employer during the DNP for the Works. Such supervisory assistance shall be as described in the Specification for the purpose of supporting the Employer's operation and maintenance of the Plant for the period specified in the Schedule of Prices after the Date of Completion.
- 12.2 Method of Measurement** The following paragraph is added at the end of the Sub-Clause:
"Summary of measured quantity for payment shall be delineated item-wise under four heads namely; "Schedule of Prices Quantity", "Quantity Executed To-date", "Quantity Certified Previously" and "Net Quantity Executed under this Certificate".
- 12.3 Valuation of the Works** The following text is added at the end of fifth paragraph of the Sub-Clause: "Sum of overhead charges, taxes and profit for sub-paragraph (a) shall be Twenty Five percent (25%)". If the similar nature or type of works not found in BOQ then MES Schedule of Rates 2024 with applicable premium (latest available) shall be adopted. If no such rates found in MES Schedule of Rates, then NHA Schedule of Rates (Karachi region) shall be adopted. In case no similar rates available in both MES & NHA Schedule of rates then the procedure specified herein shall be adopted.
- 13.4 Provisional Sums** The following paragraph is inserted as the penultimate paragraph:
"The Provisional Sums shall be used to cover the Employer's share fees and expenses in accordance with Clause 21. No prior instruction of the Engineer shall be required with respect to the work. The Contractor shall submit the invoices and satisfactory evidence of having paid the amount of such invoices as part of the substantiation of those Statements submitted under Sub-Clause 14.3.
- 13.6 Adjustments for Changes in Laws** The following paragraphs are added at the end of the Sub- Clause:
"Notwithstanding the foregoing, the Contractor shall not be entitled to an extension of time if the relevant delay has already been taken into account in the determination of a previous extension of time and such Cost shall not be separately paid if the same shall already have been taken into account in the indexing of any inputs to the Table of Adjustment Data in accordance with the provisions of Sub-Clause 13.7 [*Adjustments for Changes in Cost*]."
- 13.7 Adjustments for Changes in Cost** This clause has been deleted in its entirety



NOT APPLICABLE

(a) Other Changes in Cost

To the extent that full compensation for any rise or fall in costs to the Contractor is not covered by the provisions of this or other Clauses in the Contract, the unit rates and prices included in the Contract shall be deemed to include amounts to cover the contingency of such other rise or fall of costs.

(b) Adjustment Formula

The adjustment to the monthly statements in respect of changes in cost shall be determined from the following formula:-

$$P_n = A + b \frac{L_n}{L_a} + c \frac{M_n}{M_0} + d \frac{E_n}{E_0} + \dots$$

Where:

P_n is a price adjustment factor to be applied to the amount for the payment of the work carried out in the subject month, determined in accordance with Paragraph 14.3(i), where any variations and daywork are not otherwise subject to adjustment.

A is a constant, specified in the Schedule-A to Bid, representing the non-adjustable portion in contractual payments.

L_n , M_n , E_n are the current cost indices or reference prices of the cost elements for month "n", determined pursuant to Sub-Clause 13.7, applicable to each cost element, and

(c) Sources of Indices and Weightages

Sources of indices shall be those listed in Schedule-A to Bid.

(d) Base, Current, and Provisional Indices

The base cost indices or prices shall be those prevailing on the day 28 days prior to the latest date for submission of bids. Current indices or prices shall be those prevailing on the day 28 days prior to the last day of the period to which a particular monthly statement is related. If at any time the current indices are not available, provisional indices as determined by the Engineer will be used, subject to subsequent correction of the amounts paid to the Contractor when the current indices become available.

(e) Adjustment after Completion

If the Contractor fails to complete the Works within the Time for Completion prescribed under Clause 1.1.34 of Contract Data, adjustment of prices thereafter until the date of completion of the Works shall be made using either the indices or prices relating to the prescribed time for completion, or the current indices or prices, whichever is more favourable to the Employer, provided that if an extension of time is granted pursuant to Clause 8.5, the above provision shall apply only to adjustments made after the expiry of such extension of time.

(f) Weightages

The weightages for each of the factors of cost given in the Schedule-A to Bid shall be adjusted if, in the opinion of the Engineer, they have been rendered unreasonable, unbalanced, or inapplicable as a result of varied or additional work executed or instructed under Clause 13. Such adjustment(s) shall have to be agreed in the variation order.



14.2 Advance Payment**14.2.1 Advance Payment Guarantee**

The entity issuing the Advance Payment Guarantee and its form shall be as under:

The Advance Payment Guarantee shall be in the form of Guarantee issued by (a) a Scheduled Bank in Pakistan AAA rated by PACRA or (b) a foreign bank duly counter-guaranteed by a Scheduled Bank in Pakistan or (c) an Insurance Company listed in the Contract Data Pakistan and rated A(+) or AA by PACRA/VIS.

14.6 Issue of IPC**14.6.1 The IPC**

In the first line of the 1st paragraph the words "28 days" are substituted by "56 days".

14.7 Payment

The words "or through crossed cheque in favour of the Contractor" are added at the end of the Sub-Clause.

14.8 Delayed Payment

This clause is deleted in its entirety.



- 15.2 Termination for Contractor's Default**
- 15.2.1 Notice
Following text is added at the end of sub-paragraph (h) of this Sub-Clause:
"For the purposes of this Contract, corrupt and fraudulent practices have been defined in Public Procurement Rules 2004."
- 15.4 Payment after Termination**
The following text is added at the end of this Sub-Clause:
"The Employer shall be entitled to sell any of the Contractor's Equipment, Temporary Works and unused materials and apply the proceeds of sale towards payment of any debt due from the Contractor to the Employer under this Clause including any outstanding payments to the Subcontractors."
- 16.2 Termination by Contractor**
- 16.2.1 Notice
The sub-paragraph (j) is deleted in its entirety.
At the end of sub-paragraph (i) ";" is replaced with "," and at the end of sub-paragraph (h) ";" is replaced with "; or".
In sub-paragraph (f) "84 days" are replaced with "180 days" and text "for reasons not attributable to the Contractor" is added at the end.
- 16.3 Contractor's Obligations After Termination**
Sub-paragraph (c) is deleted and replaced with:
"(c) deliver to the Engineer all Employer-Supplied Materials and/or Employer's Equipment made available to the Contractor in accordance with Sub-Clause 2.6 [*Employer-Supplied Materials and Employer's Equipment*]; and
(d) remove all other Goods from the Site, except as necessary for safety, and leave the Site."
- 17.1 Responsibility for Care of the Works**
After the two instances of "Goods" in the last paragraph, the words "Employer-Supplied Materials and/or Employer's Equipment" are added.



The following Sub-Clause 17.7 is added after Sub-Clause 17.6:

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| 17.7 Use of Employer's Accommodation/Facilities | <p>The Contractor shall take full responsibility for the care of the items of the Employer's facilities and/or accommodation, if any, as detailed in the Specification, from the date of use and/or occupation by the Contractor until the date on which such use and/or occupation is re-vested in the Employer.</p> <p>If any loss or damage happens to any of the above items during a time while the Contractor is responsible for its care, arising from any cause other than a cause for which the Employer is responsible or liable, the Contractor shall promptly rectify the loss or damage at the Contractor's risk and cost.</p> |
| 18.1 Exceptional Events | <p>The words "or disorder" are replaced with "disorder or sabotage" in sub-paragraph (c) of the Clause.</p> |
| 18.4 Consequences of an Exceptional Event | <p>The following is added at the end of sub-paragraph (b) after deleting the " .":</p> <p>" , including the costs of rectifying or replacing the Works and/or Goods damaged or destroyed by Exceptional Events, to the extent they are not indemnified through the insurance policy referred to in Sub-Clause 19.2 [<i>Insurance to be provided by the Contractor</i>]."</p> <p>In sub-paragraph (c), the words "and necessarily" are added after the words "was reasonably".</p> |
| 18.5 Optional Termination | <p>Following text is added at the end of first paragraph:</p> |
| 19.1 General Requirements | <p>"The Contractor shall immediately after the date of the Letter of Acceptance submit the draft of insurance policies for the Employer's consent."</p> <p>Following text is added at the end of third paragraph:</p> <p>"The Contractor shall, within the respective periods stated in the Contract Data submit to the Engineer and the Employer a) evidence that the insurances described in this Clause have been effected, and b) copies of policies of the insurances described in Sub-Clauses 19.2.1, 19.2.4 and 19.2.5."</p> |
| 19.2 Insurance to be provided by the Contractor | <p><u>19.2.5 Injury to employees</u></p> <p>The words "sickness, disease" are deleted in the third line of first paragraph.</p> <p>The following Sub-Clause is added after Sub-Clause 19.2.6:</p> <p><u>19.2.7 Insurance Company</u></p> <p>"The Contractor shall be obliged to place all insurances described in this Clause with insurance company A(+) Rated by PACRA/VIS:</p> |



- 21.6 Arbitration** The word "international" is deleted in the sixth line of first paragraph. The text of sub-paragraph (a) is substituted with the following:
- "the Dispute shall be finally settled under the Rules of Arbitration, specified in the Contract Data;"

The following Clauses are added after Clause 21

- 22 Custom Duty** Payment of Customs Duties, if any, shall be the responsibility of the Contractor.
- 23 Taxes** The Contractor, Subcontractors and their employees shall be liable to pay income tax, withholding tax, super tax and other taxes on income arising out of the Contract. The rates and prices as stated in the contract shall be deemed to cover all such taxes.
- 24 Integrity Part** If it is found and established at any stage that the Contractor or any of his Subcontractors, agents or servants have violated or involved in violation of the Integrity Pact signed by the Contractor then the Employer shall be entitled to :
- (a) recover from the Contractor an amount equivalent to ten times the sum of any commission, gratification, bribe, finder's fee or kickback given by the Contractor or any of his Subcontractors, agent or servants;
 - (b) terminate the Contract; and
 - (c) recover from the Contractor any loss or damage to the Employer as a result of such termination or of any other corrupt business practices of the Contractor or any of his Subcontractors, agent or servants.

The termination under sub-paragraph (b) of this Sub-Clause shall proceed in the manner prescribed under Sub-Clause 15.1 to 15.4 and the payment under Sub-Clause 15.4 shall be made after having deducted the amounts due to the Employer under sub-paragraph (a) and (c) of this Sub-Clause.



SPECIFICATIONS
PART A - SPECIAL PROVISIONS
(SEE VOLUME – II)

