



PORT QASIM
THE GATEWAY TO NATIONAL PROSPERITY

PORT QASIM AUTHORITY BIN QASIM KARACHI- 75020

NOTICE INVITING TENDERS

1. **Port Qasim Authority** invites sealed bids from the **Contractors** registered with Pakistan Engineering Council (PEC) in **C-6 Category** or above, valid up until 30th June 2018, with specialization code **CE-09 & CE-10** for the work mentioned hereunder:

S.No.	Name of Work	Ceiling of Contract for year	Earnest Money in shape of pay order in favour of PQA	Bid fee by pay order (non refundable) in favour of PQA	Contract Period	Bid submission & Opening Date
1.	Annual Running Maintenance Contract of PQA water supply & Sewerage System	Rs. 10.00 Million	Rs = 0.20 Million	Rs. 2000/=	Initially 12 Months and extendable for 1 year (12 months)	25-06-2018

2. Bidding documents containing detailed terms and conditions, method of procurement, procedure for submission of bids, bid security, bid validity, opening of bid, evaluation criteria, clarification/rejection of bids, performance guarantee, etc, are available for the interested bidders at the **Office of Director (CM), PQA, Bin Qasim, Karachi**. The documents will be provided upon providing evidence for registration in relevant PEC Category, specialization and upon payment of a non-refundable bid documents price of **Rs. 2000/-** (Rupees Two Thousand Only), in the shape of bank draft/pay order from any scheduled bank in Pakistan in favor of **"Port Qasim Authority"**. Bidding documents can also be downloaded from PQA website.

3. The bids, prepared in accordance with the instructions in the bidding documents, must reach at the **Conference room of PSP Department Administration Building No.01, PQA, Bin Qasim, Karachi**, on or before **1130 hrs on 25-06-2018**, with a bid security equal to a lump sum amount of **Rs. 0.20 Million**, in the form of pay order/bank draft from any scheduled bank of Pakistan in favour of **"Port Qasim Authority"**. Bids will be opened on the **same day at 1200 hrs** at the place of submission given above in presence of PQA In-House Committee and those bidders who wish to attend. This advertisement is also available on Port Qasim Authority's Official Website www.pqa.org.pk, and on PPRA website at www.ppra.org.pk.

4. Partial and incomplete Bids shall not be considered.

5. The PQA reserves the right to accept or reject any or all bids as per PPRA-2004 and no claim shall be entertained in this regard and Authority's decision shall be final and binding upon all parties/firms.


(Sirajuddin Chandio)
Secretary



PORT QASIM

THE GATEWAY TO NATIONAL PROSPERITY

**PORT QASIM AUTHORITY
CIVIL MINTENANCE DEPARTMENT**

**ANNUAL RUNNING MAINTENANCE CONTRACT OF PQA
WATER SUPPLY & SEWERAGE SYSTEM**

**BIDDING AND CONTRACT DOCUMENT
INSTRUCTIONS TO BIDDERS
BIDDING DATA
FORM OF BID & APPENDICES TO BID
CONDITIONS OF CONTRACT
BILL OF QUANTITIES**

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**INSTRUCTIONS
TO
BIDDERS**

INSTRUCTIONS TO BIDDERS

(Note: These Instructions to Bidders along with Bidding Data will not be part of the Contract and will cease to have effect once the contract is signed.)

A. GENERAL

IB.1 Scope of Bid

- 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 summarised in the Bidding Data hereinafter referred to as the “Works”.
- 1.2 The successful bidder will be expected to complete the Works within the time specified in Appendix-A to Bid.

IB.2 Source of Funds

- 2.1 The Employer has applied for/received a loan/credit from the source (s) indicated in the Bidding Data 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 loan/credit will be applied to eligible payments under the Contract for which these Bidding Documents are issued.

IB.3 Eligible Bidders

- 3.1 This Invitation for Bids is open to all bidders meeting the following requirements:
 - a. Duly licensed by the Pakistan Engineering Council (PEC) in the category relevant to the value of the Works.
 - b. Duly prequalified / enlisted with the Employer.

IB.4 One Bid per Bidder

- 4.1 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.16) will be disqualified.

IB.5 Cost of Bidding

- 5.1 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.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. General Conditions of Contract, Part-I (GCC).
 4. Particular Conditions of Contract, Part-II (PCC).
 5. Specifications – Special Provisions.
 6. Specifications - Technical Provisions.
 7. Form of Bid & Appendices to Bid.
 8. Bill of Quantities (Appendix-D to Bid).
 9. Form of Bid Security.
 10. Form of Contract Agreement.
 11. Forms of Performance Security and Mobilization Advance Guarantee/Bond.
 12. 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

- 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 28 days prior to the deadline for submission of bids.

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.

IB.9 Amendment of Bidding Documents

- 9.1 At any time prior to the deadline for submission of bids, the Employer may, for any reason, whether at his own initiative 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 pursuant to Sub-Clause 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 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 Language of Bid

- 10.1 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 an accurate translation of the relevant parts in the bid language, in which case, for purposes of evaluation of the bid, the translation in bid language shall prevail.

IB.11 Documents Accompanying the Bid

- 11.1 Each bidder shall:
 - (a) submit a written power of attorney authorizing the signatory of the bid to act for and on behalf of the bidder;
 - (b) update the information indicated and listed in the Bidding Data and previously submitted with the application for prequalification, and continue to meet the minimum criteria set out in the prequalification documents which as a minimum, would include the following :
 - (i) Evidence of access to financial resources alongwith average annual construction turnover;

- (ii) Financial predictions for the current year and the two following years including the effect of known commitments;
- (iii) Work commitments since prequalification;
- (iv) Current litigation information; and
- (v) Availability of critical equipment.

and

- (c) furnish a technical proposal taking into account the various Appendices to Bid specially the following:

Appendix-E to Bid	Proposed Construction Schedule
Appendix-F to Bid	Method of Performing the Work
Appendix-G to Bid	List of Major Equipment
Appendix-K to Bid	Organization Chart for Supervisory Staff

and other pertinent information such as mobilization programme etc;

- 11.2 Bids submitted by a joint venture of two (2) or more firms shall comply with the following requirements:

- (a) the bid and in case of a successful bid, the Form of Contract Agreement shall be signed 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 Form of Bid and in the Form of Contract Agreement (in case of a successful bid); and
- (e) 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 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 partner without prior written consent of the Employer.

- 11.3 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 1.2 hereof.

- 11.4 Each Bidders shall satisfy himself before bidding as to the correctness and sufficiency of his bid and of the rates and prices entered in the schedule of the prices which rates and prices shall accept in so far as it is otherwise expressly provide in the contract cover all obligation under the contract and all matters and things necessary for proper completion of the work.

IB.12 Bid Prices

- 12.1 Unless stated otherwise in the Bidding Documents, the Contract shall be for the whole of the Works as described in Sub-Clause 1.1 hereof, based on the unit rates and / or prices submitted by the bidder and shall remain fixed during the performance of the contract and not subject to variation on any account.
- 12.2 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.
- 12.3 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 70.2 of the General Conditions of Contract Part-I.
- 12.4 The rates and prices quoted by the bidders are subject to adjustment during the performance of the Contract in accordance with the provisions of Clause 70 of the Conditions of Contract. The bidders shall furnish the prescribed information for the price adjustment formulae in Appendix-C to Bid, and shall submit with their bids such other supporting information as required under the said Clause.

IB.13 Currencies of Bid and Payment

- 13.1 The unit rates and the prices shall be quoted by the bidder entirely in Pak rupees. 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 the same in Appendix-B to Bid. The proportion of the Bid Price (excluding Provisional Sums) needed by him for the payment of such Foreign Currency Requirements either (i) entirely in the currency of the Bidder's home country or, (ii) at the bidder's option, entirely in Pak rupees provided always that a bidder expecting to incur expenditures in a currency or currencies other than those stated in (i) and (ii) above for a portion of the foreign currency requirements, and wishing to be paid accordingly, shall indicate the respective portions in his bid.
- 13.2 The rates of exchange to be used by the bidder for currency conversion shall be the TT&OD Selling Rates published or authorized by the State Bank of Pakistan prevailing on the date 28 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.14 Bid Validity

- 14.1 Bids shall remain valid for the period stipulated in the Bidding Data after the Date of Bid Opening specified in Clause IB.23.
- 14.2 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 shall in no case 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.15 in all respects.

IB.15 Bid Security

- 15.1 Each bidder shall furnish, as part of his bid, a Bid Security in the amount stipulated in the Bidding Data in Pak Rupees or an equivalent amount in a freely convertible currency.
- 15.2 The Bid Security shall be, at the option of the bidder, in the form of pay order or a Bank Guarantee issued by a Scheduled Bank in Pakistan or from a foreign bank duly counter guaranteed by a Scheduled Bank in Pakistan atleast AA rating in favour of the Employer valid for a period 28 days beyond the Bid Validity date.
- 15.3 Any bid not accompanied by an acceptable Bid Security shall be rejected by the Employer as non-responsive.
- 15.4 The bid securities of unsuccessful bidders will be returned on award of the contract to the successful bidders or not later than 28 days after the expiration of the period of Bid Validity which ever is earlier.
- 15.5 The Bid Security of the successful bidder will be returned when the bidder has furnished the required Performance Security and signed the Contract Agreement.
- 15.6 The Bid Security may be forfeited:
 - (a) if the bidder withdraws his bid during the period of bid validity except as provided in Sub-Clause 22.1;
 - (b) if the bidder does not accept the correction of his Bid Price pursuant to Sub-Clause 27.2 hereof; or

- (c) In the case of successful bidder, if he fails within the specified time limit to:
 - (i) furnish the required Performance Security; or
 - (ii) sign the Contract Agreement.

IB.16 Alternate Proposals by Bidder

- 16.1 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 Alternate Proposal(s) containing (a) 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 Form of Bid shall be that which represents complete compliance with the Bidding Documents.
- 16.2 Alternate Proposal(s), if any, of the lowest evaluated responsive bidder only may be considered by the Employer as the basis for the award of Contract to such bidder.

IB.17 Pre-Bid Meeting

- 17.1 The Employer may, on his own motion 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, is as stipulated in the Bidding Data. All prospective bidders or their authorized representatives shall be invited to attend such a pre-bid meeting.
- 17.2 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.
- 17.3 Minutes of the pre-bid meeting, including the text of the questions 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 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.
- 17.4 Absence at the pre-bid meeting will not be a cause for disqualification of a bidder.

IB.18 Format and Signing of Bid

- 18.1 Bidders are particularly directed that the amount entered on the Form of Bid shall be for performing the Contract strictly in accordance with the Bidding Documents.
- 18.2 All appendices to Bid are to be properly completed and signed.
- 18.3 No alteration is to be made in the Form of Bid nor in the Appendices 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 out 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.7 and clearly mark them "ORIGINAL" and "COPY" as appropriate. In the event of discrepancy between them, the original shall prevail.
- 18.5 The original and all copies of the bid shall be typed or written in indelible ink (in the case of copies, Photostats are also acceptable) and shall be signed by a person or persons duly authorized to sign on behalf of the bidder pursuant to Sub- Clause 11.1(a) 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 Form 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 as their file copy.

D. SUBMISSION OF BIDS**IB.19 Sealing and Marking 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 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 name and identification number of the contract as defined 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 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.

IB.20 Deadline for Submission of Bids

- 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 package.
- (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.21 Late Bids

- 21.1 (a) Any bid received by the Employer after the deadline for submission of bids prescribed in Clause IB.20 will be 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 22.1 and 27.2.
- 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 Form of Bid may result in forfeiture of the Bid Security in pursuance to Clause IB.15.

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.
- 23.3 The bidder's name, total Bid Price and price of any Alternate 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.

- 23.4 Employer shall prepare minutes of the bid opening, including the information

disclosed to those present in accordance with the Sub-Clause 23.3.

IB.24 Process to be Confidential

24.1 Information relating to the examination, clarification, evaluation and comparison of bid and recommendations for the award of a contract shall not be disclosed to bidders or any other person not officially concerned with such process before the announcement of bid evaluation report which shall be done at least ten (10) days prior to issue of Letter of Acceptance. 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 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 fifteen (15) days after the announcement of the bid evaluation report; however mere fact of lodging a complaint shall not warrant suspension of the procurement process.

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. The request for clarification and the response shall be in writing but 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.

IB.26 Examination of Bids and Determination of Responsiveness

26.1 Prior to the detailed evaluation of bids, the Employer will determine whether each bid is substantially responsive to the requirements of the Bidding Documents.

26.2 A substantially responsive bid is one which (i) meets the eligibility criteria; (ii) has been properly signed; (iii) is accompanied by the required Bid Security; and (iv) conforms to all the terms, conditions and specifications of the Bidding Documents, without material deviation or reservation. A material deviation or reservation is one (i) which affect in any substantial way the scope, quality or performance of the Works; (ii) which limits in any substantial way, inconsistent with the Bidding Documents, the Employer's rights or the bidder's obligations under the Contract; or (iii) adoption/rectification whereof would affect unfairly the competitive position of other bidders presenting substantially responsive bids.

- 26.3 If a bid is not substantially responsive, it will be rejected by the Employer, and may not subsequently be made responsive by correction or withdrawal of the non-conforming deviation or reservation.

IB.27 Correction of Errors

- 27.1 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; and
 - (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.
- 27.2 The amount stated in the Form 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 15.6(b) hereof.

IB.28 Evaluation and Comparison of Bids

- 28.1 The Employer will evaluate and compare only the Bids determined to be substantially responsive in accordance with Clause IB.26.
- 28.2 In evaluating 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 errors pursuant to Clause IB.27;
 - (b) excluding Provisional Sums and the provision, if any, for contingencies in the Summary Bill of Quantities, but including competitively priced Daywork; and
 - (c) making an appropriate adjustment for any other acceptable variation or deviation.
- 28.3 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 Bid evaluation.

- 28.4 If the Bid of the successful bidder is seriously unbalanced in relation to the Employer's estimate of the cost of work to be performed under the Contract, 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 that the amount of the Performance Security set forth in Clause IB.32 be increased 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.

F. AWARD OF CONTRACT

IB.29 Award

- 29.1 Subject to Clauses IB.30 and IB.34, the Employer will award the Contract to the bidder whose bid has been determined to be substantially responsive to the Bidding Documents and who has offered the lowest evaluated Bid Price, provided that such bidder has been determined to be eligible in accordance with the provisions of Clause IB.3 and qualify pursuant to Sub-Clause IB 29.2.
- 29.2 The Employer, at any stage of the bid evaluation, having credible reasons for or *prima facie* evidence of any defect in supplier's or contractor's capacities, may require the suppliers or contractors to provide information concerning their professional, technical, financial, legal or managerial competence whether already pre-qualified or not:

Provided that such qualification shall only be laid down after recording reasons therefor in writing. They shall form part of the records of that bid evaluation report.

IB.30 Employer's Right to Accept any Bid and to Reject any or all Bids

- 30.1 Notwithstanding Clause IB.29, the Employer reserves the right to accept or reject any Bid, and to annul the bidding process and reject all bids, at any time prior to award of Contract, without thereby incurring any liability to the affected bidders or any obligation except that the grounds for rejection of all bids shall upon request be communicated to any bidder who submitted a bid, without justification of grounds. Rejection of all bids shall be notified to all bidders promptly.

IB.31 Notification of Award

- 31.1 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 “Contract Price”).
- 31.2 No Negotiation with the bidder having evaluated as lowest responsive or any other bidder shall be permitted, however, Employer may have clarification meetings to get clarify any item in the bid evaluation report.
- 31.3 The notification of award and its acceptance by the bidder will constitute the formation of the Contract, binding the Employer and the bidder till signing of the formal Contract Agreement.
- 31.3 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.

IB.32 Performance Security

- 32.1 The successful bidder shall furnish to the Employer a Performance Security in the form and the amount stipulated in the Bidding Data and the Conditions of Contract within a period of 28 days after the receipt of Letter of Acceptance.
- 32.2 Failure of the successful bidder to comply with the requirements of Sub-Clause IB.32.1 or Clauses IB.33 or IB.35 shall constitute sufficient grounds for the annulment of the award and forfeiture of the Bid Security.

IB.33 Signing of Contract Agreement

- 33.1 Within 14 days from the date of furnishing of acceptable Performance Security under the Conditions of Contract, the Employer will send the successful bidder the Contract Agreement in the form provided in the Bidding Documents, incorporating all agreements between the parties.
- 33.2 The formal Agreement between the Employer and the successful bidder shall be executed within 14 days of the receipt of the Contract Agreement by the successful bidder from the Employer.

IB.34 General Performance of the Bidders

The Employer reserves the right to obtain information regarding performance of the bidders on their previously awarded contracts/works. The Employer may in case of consistent poor performance of any Bidder as reported by the employers of the previously awarded contracts, interalia, reject his bid and/or refer the case to the Pakistan Engineering Council (PEC). Upon such reference, PEC in accordance with its rules, procedures and relevant laws of the land take such action as may be deemed appropriate under the circumstances of the case including black listing of such Bidder and debarring him from participation in future bidding for similar works.

IB.35 Integrity Pact

The Bidder shall sign and stamp the Integrity Pact provided at Appendix-L to Bid in the Bidding Documents for all Federal Government procurement contracts exceeding Rupees ten million. Failure to provide such Integrity Pact shall make the bidder non-responsive.

IB.36 Instructions not Part of Contract

Bids shall be prepared and submitted in accordance with these Instructions which are provided to assist bidders in preparing their bids, and do not constitute part of the Bid or the Contract Documents.

BIDDING DATA

Bidding Data

The following specific data for the Works to be bid shall complement, amend, or supplement the provisions in the Instructions to Bidders. Wherever there is a conflict, the provisions herein shall prevail over those in the Instructions to Bidders.

Instructions to Bidders
Clause Reference

1.1(i) Name and address of the Employer:

Director General (Technical)
Port Qasim Authority, Bin Qasim
Karachi.
Phone No. +92-21-99272111-20
Fax No. +92-21-34730107

(ii) Name and address of the “Engineer”.

Notified by PQA at the time of award of work.

1.2 Name of the Project & Scope of the work

The project : **Annual Running Maintenance Contract of PQA Water Supply & Sewerage System**

2.1 Name of the Borrower/Source of Financing/Funding Agency:

The Employer is itself financing the project

2.1 Amount and type of financing: Not Applicable

3.1 Substitute 3.1 by

Eligible Bidders:

- i. Registration with PEC in category C-6 and above valid up to 30th June, 2018.
- ii. Field of specialization CE-09 & CE-10.

3.1 (b) This sub-clause is deleted.

8.1 Time limit for clarification:

Three (03) days prior to dead line for submission of bids.

10.1 Bid language:

English

11.1(c) Furnish Technical Proposal:

The bidder to submit a technical proposal in sufficient detail to demonstrate the adequacy of the bid in meeting requirements for timely completion of the Works.

IB.12 Bid Prices

Substitute 12.2 by “ The bidders shall submit bids in percentage above/ below of each unit rate mentioned in the BOQ applicable to all items and for the purposes of bid evaluation a rupee sum on the basis of the same quoted percentage above / below of the total of unit rates stated in the BOQ.

13.1 Bidders to quote entirely in Pak. rupees.

14.1 Period of Bid Validity:

90 (Ninty) Calender Day from the date of Opening of Bids

15.1 Amount of Bid Security:

Rs.=0.2 Million and valid upto 90 days from the date of opening of bids.

15.2 Substitute 15.2 by, Form of Bid Security: Bid Security in the form of /Bank draft/Pay Order/Deposit at Call from scheduled bank in Pakistan having AA rating of Karachi branch in favour of Port Qasim Authority.

17.1 Venue, time, and date of the pre-Bid meeting:

Upon Bidders Request.

18.4 Number of copies of the Bid to be completed and returned:
one original and one copies

19.2(a) Employer's address for the purpose of Bid submission:

As per Notice Inviting Tenders (NIT)

19.2(b) Name and Number of the Contact:

EA Site Office PQA (Resident Engineers)

Phone No. +92-21-99272111-20

Ext:4113

20.1(a)Deadline for submission of bids:

As per Notice Inviting Tenders (NIT)

IB.28 Evaluation and Comparison of Bids

Added 28.5 as given below:

“The contract shall be awarded for the lowest evaluated bid against the tendered rupees sum on the basis of the quoted percentage above / below of the total of unit rates for the purposes of bid evaluation”.

23.1 Venue, time, and date of Bid opening:

As per Notice Inviting Tender (NIT)

32.1 Standard form and amount of Performance Security acceptable to the Employer:

An amount equal to 10 percent of the Contract Price in the form of pay order/ Bank Guarantee from any schedule bank in Pakistan having AA rating of Karachi branch within 15 days after the receipt of Letter of Acceptance.

**FORM OF BID
AND
APPENDICES TO BID**

FORM OF BID

Bid Reference No. **Annual Running Maintenance Contract of PQA Water Supply & Sewerage System.**

(Name of Contract/Works)

To:

Gentleman,

1. Having examined the Bidding Documents including Instructions to Bidders, Bidding Data, Conditions of Contract. Specifications, Drawings and Bill of Quantities 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 Conditions of Contract. Specifications, Drawings, Bill of Quantities and Addenda for the sum of Rs. _____ (Rupees _____) or such other sum as may be ascertained in accordance with the said conditions.
2. We understand that all the Appendices attached hereto form part of this Bid.
3. As security for due performance of the undertakings and obligations of this Bid, we submit herewith a Bid Security in the amount of Rupees _____ (Rs. _____) drawn in your favour or made payable to you and valid for a period of _____ days beginning from the date Bids are opened.
4. 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 Appendix-A to Bid.
5. We agree to abide by this Bid for the period of _____ days from the date fixed for receiving the same and it shall remain binding upon us and may be accepted at any time before the expiration of that period.
6. 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.
7. We do hereby declare that the Bid is made without any collusion, comparison of figures or arrangement with any other bidder for the Works.

8. We understand that you are not bound to accept the lowest or any Bid you may receive.

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 _____

SPECIAL STIPULATIONS
Clause
Conditions of Contract

1.	Engineer's Authority to issue Variation in emergency	2.1	2% of the Contract Price stated in the Letter of Acceptance.
2.	Amount of Performance Security	10.1	10% of Contract Price stated in the Letter of Acceptance.
3.	Time for Furnishing Programme	14.1	Within 42 days from the date of receipt of Letter of Acceptance.
4.	Minimum amount of Third Party Insurance	23.2	Rs. 3% per occurrence with number of occurrences unlimited.
5.	Time for Commencement	41.1	Within 14 days from the date of receipt of Engineer's Notice to Commence which shall be issued within fourteen (14) days after signing of Contract Agreement.
6.	Time for Completion	43.1, 48.2	365 days from the date of receipt of Engineer's Notice to Commence.
7.	a) Amount of Liquidated Damages	47.1	0.10% for each day of delay in completion of the Works subject to a maximum of 10% of Contract Price stated in the Letter of Acceptance.
8.	Defects Liability Period	49.1	365 days from the effective date of Taking Over Certificate.
9.	Percentage of Retention Money	60.2	5 % of the amount of Interim Payment Certificate.
10.	Earnest Money	60.2	As notified in NIT.
11.	Validity of Bid	BD-2 14.1	90 Days
12.	Time of Payment from delivery of Engineer's Interim Payment Certificate to the Employer.	60.10	30 days (not guarantee)
13.	Approved Insurance Companies		General Insurance company having minimum A rating issued by PACRA /JCR
14.	Extension of Contract Period	44.1	The Contract shall be extended for another period of 365 days at the option of PQA, on the same terms and condition.

FOREIGN CURRENCY REQUIREMENTS

1. The Bidder may indicate here in below his requirements of foreign currency pay with reference to various inputs to the Works.
2. Foreign Currency Requirement as percentage of the Bid Price including taxes Sums _____%.
3. Table of Exchange Rates

Unit of Currency	Equivalent of 1 U.S. Dollar
Australian Dollar	_____
Euro	_____
Japanese Yen	_____
U.S. Dollars	_____
_____	_____
_____	_____
_____	_____

**PRICE ADJUSTMENT UNDER CLAUSE 70
OF CONDITIONS OF CONTRACT**

The source of indices and the weightages or coefficients for use in the adjustment formula under Clause 70 shall be as follows:

(To be filled by the Employer)

Cost Element	Description	Weightage	Applicable Index
1			4
(i)	Fixed Portion	50	
(ii)	Local Labour		Government of Pakistan (GP) Monthly Statistical Bulletin.
(iii)	Cement in bags		" "
(iv)	Reinforcing Steel		" "
(v)	Wholesale Diesel (H)		" "
(vi)	Wholesale Fuel Oil		" "
(vii)	Wholesale Kerosene		" "
(viii)	Wholesale Gasoline		" "
(ix)	Total	1.000	

Notes

- 1) Indices (i) through (vii) are taken from the Government of Pakistan Federal Bureau of Statistics Monthly Statistical Bulletin. The base cost indices or prices shall be those applying 28 days prior to the latest day for submission of bids. Current indices or prices shall be those applying 28 days prior to the last day of the billing period.
- 2) Any fluctuation in the indices or prices of materials other than those given above shall not be subject to adjustment of the Contract Price.
- 3) Fixed portion shown here is for typical road project, Employer to determine the weightage of Fixed Portion considering only those cost elements having cost impact of seven (7) percent or more on his specific project.

(Employers using this price adjustment provisions may add or delete any elements as deemed appropriate to the project.)

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 entered 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 entered 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.
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 priced Bill of Quantities.
7. Provisional sums included and so designated in the Bill of Quantities shall be expended in whole or in part at the direction and discretion of the Engineer in accordance with Sub-Clause 58.2 of Part I, General Conditions of Contract.

BILL OF QUANTITIES

B. Work Items

1. The Bill of Quantities contains the following Bills and Schedule:

Bill No. 1 - Miscellaneous Items

2. Bidders shall price the Bill of Quantities in Pakistani Rupees only.

BD-3

Appendix-D to Bid

BILL OF QUANTITIES

Bill No. 1 Miscellaneous Items

See at page No. 163

Appendix-E to Bid

PROPOSED CONSTRUCTION SCHEDULE

Pursuant to Sub-Clause 43.1 of the General Conditions of Contract, the Work shall be completed on or before the date stated in Appendix-A to Bid. The Bidder shall provide a Construction Schedule in the form of a bar chart (CPM, PERT or any other method to be specified herein) showing the sequence of work items and the period of time he proposes to complete each work item in such a manner as to ensure the completion of the whole of the Works and parts of the Works in the completion targets in days noted below and counted from the date of the Notice to Commence (Attach sheet as required by the Contract Documents to the Schedule):

<u>Description</u>	<u>in</u>	<u>Completion</u>
a	Whole Work	_____ days
b	_____	_____ days
c	_____	_____ days
d	_____	_____ days
e	_____	_____ days

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 indicating 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. The 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 – RELATED ITEMS

[The Bidder will provide on Sheet 2 of this Appendix 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 which shall be in sufficient detail to demonstrate fully that the equipment will meet all requirements of the Specifications.]

Appendix-G to Bid

LIST OF MAJOR EQUIPMENT

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						

Appendix-H to Bid

CONSTRUCTION CAMP AND HOUSING FACILITIES

The Contractor in accordance with Clause 34 of the Conditions of Contract shall provide a description of his construction camp's facilities and staff housing requirements.

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

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

1. Site Preparation (clearing, leveling, etc.)
2. Provision of Services (power, water, sewerage, etc.)
3. Construction of Facilities (Contractor's Office, Workshop and Work Areas (areas required and proposed layout, type of construction of buildings, etc.), Warehouse and Storage Areas (area required, type of construction and layout), 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.).

Appendix-I to Bid

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 the parts 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 Name
Not Applicable	

Appendix-J to Bid

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 Materials, expressed in thousands of Pakistani Rupees:

Quarter/ Year/ Period	Amount (in thousands of Rupees)
1	2
Ist Quarter	
2 nd Quarter	
3 rd Quarter	
4 th Quarter	
5 th Quarter	
6 th Quarter	
7 th Quarter	
8 th Quarter	
9 th Quarter	
10 th Quarter	
Bid Price	

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

Not Applicable

(INTEGRITY PACT)

**DECLARATION OF FEES, COMMISSION AND BROKERAGE ETC.
PAYABLE BY THE SUPPLIERS OF GOODS, SERVICES & WORKS IN
CONTRACTS WORTH RS. 10.00 MILLION OR MORE**

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

..... [name of Supplier] 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 Supplier] 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 Supplier] 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 Supplier] 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 Supplier] 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 Supplier] 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 Buyer:
Signature:
[Seal]

Name of Seller/Supplier:
Signature:
[Seal]

FORMS

**BID SECURITY
PERFORMANCE SECURITY
CONTRACT AGREEMENT
MOBILIZATION ADVANCE GUARANTEE/BOND**

BID SECURITY
(Bank Guarantee)

Security Executed on _____
(Date)

Name of Surety (Bank) with Address: _____
(Scheduled Bank in Pakistan)

Name of Principal (Bidder) with Address _____

Penal Sum of Security Rupees . _____(Rs. _____)

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 Bid No. _____ for _____(Particulars of Bid) to the said Employer; and

WHEREAS, the Employer has required as a condition for considering said Bid that the Bidder furnishes a Bid Security in the above said sum from a Scheduled Bank in Pakistan or from a foreign bank duly counter-guaranteed by a Scheduled Bank in Pakistan, to the Employer, conditioned as under:

- (1) that the Bid Security shall remain in force up to and including the date 28 days after the deadline for validity of bids as stated in the Instructions to Bidders or as it may be extended by the Employer, notice of which extension(s) to the Surety is hereby waived;
- (2) that the Bid Security of unsuccessful Bidders will be returned by the Employer after expiry of its validity or upon signing of the Contract Agreement; and
- (3) that in the event of failure of the successful Bidder to execute the proposed Contract Agreement for such work and furnish the required Performance Security, the entire said sum be paid immediately to the said Employer pursuant to Clause 15.6 of the Instruction 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.

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 be the sole and final judge for deciding 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 (Bank)

WITNESS:

Signature _____

1. _____

Name _____

Title _____

Corporate Secretary (Seal)

Corporate Guarantor (Seal)

2. _____

Name, Title & Address

**FORM OF PERFORMANCE SECURITY
(Bank Guarantee)**

Guarantee No. _____
Executed on _____
Expiry date _____

[Letter by the Guarantor to the Employer]

Name of Guarantor (Bank) with address: _____
(Scheduled Bank in Pakistan)

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 49, Defects Liability, 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 defences 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 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 be the sole and final judge for deciding 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 (Bank)
Witness:	
1. _____	Signature _____
_____	Name _____
Corporate Secretary (Seal)	Title _____
2. _____	
_____	_____
Name, Title & Address	Corporate Guarantor (Seal)

FORM OF CONTRACT AGREEMENT

THIS CONTRACT AGREEMENT (hereinafter called the "Agreement") made on the _____ day of _____ (month) 20____ between _____ (hereafter called the "Employer") of the one part and _____ (hereafter 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 witnesseth 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 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, viz:
 - (a) The Contract Agreement;
 - (b) The Letter of Acceptance;
 - (c) The completed Form of Bid;
 - (d) Special Stipulations (Appendix-A to Bid);
 - (e) The Particular Conditions of Contract – Part II;
 - (f) The General Conditions – Part I;
 - (g) The priced Bill of Quantities (Appendix-D to Bid);
 - (h) The completed Appendices to Bid (B, C, E to L);
 - (i) The Drawings;
 - (j) The Specifications.
 - (k) _____ (any other)
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 the Contactor

Signature of Employer

(Seal)

(Seal)

Signed, Sealed and Delivered in the presence of:

Witness:

Witness:

(Name, Title and Address)

(Name, Title and Address)

MOBILIZATION ADVANCE GUARANTEE/BOND

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 the Contractor the amount of Rupees _____ shall be advanced to the Contractor as per provisions of the Contract.

AND WHEREAS, the Employer has asked the Contractor to furnish a Guarantee for the performance of his obligations under the said contract.

AND WHEREAS, _____ (Schedule Bank in _____) (hereinafter called the Guarantor) has agreed to furnish the said Guarantee for the Contractor in consideration of the Employer agreeing to advance the amount of Rupees _____ to the Contractor as per provisions of the Contract.

NOW KNOW ALL MEN, that the Contractor shall use the advance made to him for the purpose of the contract and if he fails and commits default in fulfilling his obligations under the contract, the advance payment is made, the Guarantor shall be liable to the Employer for the amount not exceeding the aforementioned amount.

Notice of any default, of which the Employer shall be the sole and final judge, on the part of the Contractor 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 Rupees _____ (Rs _____).

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 above mentioned date the advance payment is not fully adjusted.

GUARANTOR

- 1. Signature
- 2. Name
- 3. Title

WITNESS

- 1. _____

Corporate Secretary (Seal)
- 2. _____
(Name Title & Address)

NOT APPLICABLE

Notes on the Conditions of Contract

The Conditions of Contract comprise two parts:

- (a) **Part I - General Conditions of Contract**
- (b) **Part II - Particular Conditions of Contract**

Over the years, a number of “model” General Conditions of Contract have evolved. The one used in these Standard Bidding Documents was prepared by the International Federation of Consulting Engineers (Federation Internationale des Ingenieurs-Conseils, or FIDIC), and is commonly known as the FIDIC Conditions of Contract. (The used version is the fourth edition, 1987, reprinted in 1992 with further amendments).

The FIDIC Conditions of Contract have been prepared for an ad measurement (unit price or unit rate) type of contract, and cannot be used without major modifications for other types of contract, such as lump sum, turnkey, or target cost contracts.

The standard text of the General Conditions of Contract chosen must be retained intact to facilitate its reading and interpretation by bidders and its review by the Client. Any amendments and additions to the General Conditions, specific to the contract in hand, should be introduced in the Particular Conditions of Contract.

The use of standard conditions of contract for all civil Works will ensure comprehensiveness of coverage, better balance of rights or obligations between Employer and Contractor, general acceptability of its provisions, and savings in time and cost for bid preparation and review, leading to more economic prices.

The FIDIC Conditions of Contract are copyrighted and may not be copied, faxed, or reproduced. Without taking any responsibility of its being accurate, Pakistan Engineering Council with prior consent of FIDIC Secretariat, has reproduced herein the FIDIC General Conditions of Contract for reference purpose only which cannot be used by the users for preparing their bidding documents. The bidding document may include a purchased copy, the cost of which can be retrieved as part of the selling price of the bidding document. Alternatively, the FIDIC Conditions of Contract can be referred to in the bidding documents, and the bidders are advised to obtain copies directly from FIDIC.*

* Add the following text if the bidding documents, as issued, do not include a copy:

“Copies of the FIDIC Conditions of Contract can be obtained from:

FIDIC Secretariat

P.O. Box 86

1000 Lausanne 12

Switzerland

e-mail: fidic.pub@fidic.org – FIDIC.org/bookshop]

The “**CONDITIONS OF CONTRACT FOR WORKS OF CIVIL ENGINEERING CONSTRUCTION**” section from page 56-144 has been removed as FIDIC doesn’t allow it to be copied. Download the PDF version of this document from PICC website to view it completely OR Copies of the FIDIC Conditions of Contract can be obtained from:

FIDIC Secretariat

P.O. Box 86

1000 Lausanne 12

Switzerland

e-mail: fidic.pub@fidic.org – FIDIC.org/bookshop]

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PART II - PARTICULAR CONDITIONS OF CONTRACT
(Mandatory Provisions not to be Amended / Substituted except as instructed by PEC)

1.1 Definitions

- (a) (i) The Employer is PORT QASIM AUTHORITY, Bin Qasim , Karachi
The Employer representative is
Director General (Technical)
PQA-Karachi.
- (a) (iv) The Engineer is a Competent person appointed by the Employer, and notified to the Contractor,. Provided always that except in cases of professional misconduct, the outgoing Engineers is to formulate his certifications/recommendations in relation to all outstanding matters, disputes and claims relating to the execution of the Works during his tenure.

The following paragraph is added:

- (a)(v) Engineer Representative will be a person notified by the Engineer after obtaining the approval of the competent Authority .
- (a)(vi) “Bidder or Tenderer” means any person or persons, company, corporation, firm or joint venture submitting a Bid or Tender.

- (b)(v) The following is added at the end of the paragraph:

The word “Tender” is synonymous with “Bid” and the word “Tender Documents” with “Bidding Documents”.

The following paragraph is added:

- (b)(ix) “Programme” means the programme to be submitted by the Contractor in accordance with Sub-Clause 14.1 and any approved revisions thereto.
- (e)(i) The text is deleted and substituted with the following:

“Contract Price” means the sum stated in the Letter of Acceptance as payable to the Contractor for the execution and completion of the Works subject to such additions thereto or deductions therefrom as may be made and remedying of any defects therein in accordance with the provisions of the Contract.

2.1 Engineer's Duties and Authority

With reference to Sub-Clause 2.1(b), the following provisions shall also apply;

The Engineer shall obtain the specific approval of the Employer before carrying out his duties in accordance with the following Clauses:

- (i) Consenting to the sub-letting of any part of the Works under Sub-Clause 4.1 “Subcontracting”.
- (ii) Certifying additional cost determined under Sub-Clause 12.2 “Not Foreseeable Physical Obstructions or Conditions”.
- (iii) Any action under Clause 10 “Performance Security” and Clauses 21,23,24 & 25 “Insurance” of sorts.
- (iv) Any action under Clause 40 “Suspension”.
- (v) Any action under Clause 44 “Extension of Time for Completion”.
- (vi) Any action under Clause 47 “Liquidated Damages for Delay” or Payment of Bonus for Early Completion of Works (PCC Sub-Clause 47.3).
- (vii) Issuance of “Taking Over Certificate” under Clause 48.
- (viii) Issuing a Variation Order under Clause 51,except:
 - a) in an emergency* situation, as stated herebelow, or
 - b) if such variation would increase the Contract Price by less than the amount stated in the Appendix-A to Bid.
- (ix) Fixing rates or prices under Clause 52.
- (x) Extra payment as a result of Contractor’s claims under Clause 53.
- (xi) Release of Retention Money to the Contractor under Sub-Clause 60.3 “Payment of Retention Money”.
- (xii) Issuance of “Final Payment Certificate” under Sub-Clause 60.8.
- (xiii) Issuance of “Defect Liability Certificate” under Sub-Clause 62.1.
- (xiv) Any change in the ratios of Contract currency proportions and payments thereof under Clause 72 “Currency and Rate of Exchange”.

(Note: Employer may further vary according to need of the project)

* (If in the opinion of the Engineer an emergency occurs affecting the safety of life or of the Works or of adjoining property, the Engineer may, without relieving the Contractor of any of his duties and responsibilities 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 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 52 and shall notify the Contractor accordingly, with a copy to the Employer.)

2.2 Engineer's Representative

The following paragraph is added:

The Employer shall ensure that the Engineer's Representative is a professional engineer as defined in the Pakistan Engineering Council Act 1975 (V of 1976)

The following Sub-Clauses 2.7 and 2.8 are added:

2.7 Engineer Not Liable

Approval, reviews and inspection by the Engineer of any part of the Works does not relieve the Contractor from his sole responsibility and liability for the supply of materials, plant and equipment for construction of the Works and their parts in accordance with the Contract and neither the Engineer's authority to act nor any decision made by him in good faith as provided for under the Contract whether to exercise or not to exercise such authority shall give rise to any duty or responsibility of the Engineer to the Contractor, any Subcontractor, any of their representatives or employees or any other person performing any portion of the Works.

2.8 Replacement of the Engineer

“If the Employer intends to replace the Engineer, the Employer shall, not less than 14 days before the intended date of replacement, give notice to the Contractor, of the name, address and relevant experience of the intended replacement Engineer. The Employer shall not replace the Engineer with a person against whom the Contractor raises reasonable objection by notice to the Employer, with supporting particulars.”

5.1 Language(s) and Law

- (a) The Contract Documents, shall be drawn up in the English language.
- (b) The Contract shall be subject to the Laws of Islamic Republic of Pakistan.

5.2 Priority of Contract Documents

The documents listed at (1) to (6) of the Sub-Clause are deleted and substituted with the following:

- (1) The Contract Agreement (if completed);
- (2) The Letter of Acceptance;
- (3) The completed Form of Bid;
- (4) Special Stipulations (Appendix-A to Bid);
- (5) The Particular Conditions of Contract – Part II;
- (6) The General Conditions – Part I;
- (7) The priced Bill of Quantities (Appendix-D to Bid);
- (8) The completed Appendices to Bid (B, C, E to L);
- (9) The Drawings;
- (10) The Specifications; and

(11) (any other).

In case of discrepancies between drawings, those of larger scale shall govern unless they are superseded by a drawing of later date regardless of scale. All Drawings and Specifications shall be interpreted in conformity with the Contract and these Conditions. Addendum, if any, shall be deemed to have been incorporated at the appropriate places in the documents forming the Contract.

The following Sub-Clauses 6.6 and 6.7 are added:

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

6.7 As-Built Drawings

At the completion of the Works under the Contract, the Contractor shall furnish to the Engineer 6 copies and one reproducible of all drawings amended to conform with the Works as built. The price of such Drawings shall be deemed to be included in the Contract Price.

10.1 Performance Security

The text is deleted and substituted with the following:

The Contractor shall provide Performance Security to the Employer in the prescribed form. The said Security shall be furnished or caused to be furnished by the Contractor within 28 days after the receipt of the Letter of Acceptance. The Performance Security shall be of an amount equal to 10% of the Contract Price stated in the Letter of Acceptance. Such Security shall, at the option of the bidder, be in the form of either (a) bank guarantee from any Scheduled Bank of Pakistan having AA rating (b) pay order by a Scheduled Bank of Pakistan.

The cost of complying with requirements of this Sub-Clause shall be borne by the Contractor.

The following Sub-Clause 10.4 is added:

10.4 Performance Security Binding on Variations and Changes

The Performance Security shall be binding irrespective of changes in the quantities or variations in the Works or extensions in Time for Completion of the Works which are

granted or agreed upon under the provisions of the Contract.

14.1 Programme to be Submitted

Delete the entire clause entirely

14.3 Cash Flow Estimate to be Submitted

Delete the entire clause entirely

15.2 Language Ability of Contractor's Representative

The Contractor's authorised representative shall be fluent in the English language. Alternately an interpreter with ability of English language shall be provided by the Contractor on full time basis.

15.3 Contractor's Representative

The Contractor's authorised representative and his other professional engineers working at Site shall register themselves with the Pakistan Engineering Council.

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

The following Sub-Clauses 16.3 and 16.4 are added:

16.3 Language Ability of Superintending Staff of Contractor

A reasonable proportion of the Contractor's superintending staff shall have a working knowledge of the English language. If the Contractor's superintending staff are not fluent in English language, the Contractor shall make competent interpreters available during all working hours in a number deemed sufficient by the Engineer.

16.4 Employment of Local Personnel

The Contractor is encouraged, to the extent practicable and reasonable, to employ staff and labour from sources within Pakistan.

The following Sub-Clauses 19.3 and 19.4 are added:

19.3 Safety Precautions

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 authorise 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 make, maintain and submit reports to the Engineer concerning safety, health and welfare of persons and damage to property, as the Engineer may from time to time prescribe.

19.4 Lighting Work at Night

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's Representative.

20.4 Employer's Risks

The Employer's risks are:

Delete the text and substitute with the following:

- (a) insofar as they directly affect the execution of the Works in Pakistan:
 - (i) war and hostilities (whether war be declared or not), invasion, act of foreign enemies,
 - (ii) rebellion, revolution, insurrection, or military or usurped power, or civil war,
 - (iii) ionizing radiations, or contamination by radioactivity from any nuclear fuel, or from any nuclear waste from the combustion of nuclear fuel, radioactive toxic explosive or other hazardous properties of any explosive nuclear assembly or nuclear component thereof,
 - (iv) pressure waves caused by aircraft or other aerial devices travelling at sonic or supersonic speeds,
 - (v) riot, commotion or disorder, unless solely restricted to the employees of the Contractor or of his Subcontractors and arising from the conduct of the Works;
- (b) loss or damage due to the use or occupation by the Employer of any Section or part of the Permanent Works, except as may be provided for in the Contract;
- (c) loss or damage to the extent that it is due to the design of the Works, other than any part of the design provided by the Contractor or for which the Contractor is responsible; and
- (d) any operation of the forces of nature (insofar as it occurs on the Site) which an experienced contractor:
 - (i) could not have reasonably foreseen, or
 - (ii) could reasonably have foreseen, but against which he could not reasonably have taken at least one of the following measures:
 - (a) prevent loss or damage to physical property from occurring by taking

- appropriate measures, or
(b) insure against.

21.1 Insurance of Works and Contractor's Equipment

(Employer may vary this Sub-Clause 21.1 (b))

21.4 Exclusions

The text is deleted and substituted with the following:

There shall be no obligation for the insurances in Sub-Clause 21.1 to include loss or damage caused by the risks listed under Sub-Clause 20.4 paras (a) (i) to (iv).

The following Sub-Clause 25.5 is added:

25.5 Insurance Company

The Contractor shall be obliged to place all insurances relating to the Contract (including, but not limited to, the insurances referred to in Clauses 21, 23 and 24) with either National Insurance Company of Pakistan or any other insurance company operating in Pakistan and acceptable to the Employer.

Costs of such insurances shall be borne by the Contractor.

The following Sub-Clause 31.3 is added:

31.3 Co-operation with other Contractors

During the execution of the Works, the Contractor shall co-operate fully with other contractors working for the Employer at and in the vicinity of the Site and also shall provide adequate precautionary facilities not to make himself a nuisance to local residents and other contractors.

The following Sub-Clauses 34.2 to 34.12 are added:

34.2 Rates of Wages and Conditions of Labour

Delet the entire clause eternity

34.3 Employment of Persons in the Service of Others

The Contractor shall not recruit his staff and labour from amongst the persons in the services of the Employer or the Engineer; except with the prior written consent of the Employer or the Engineer, as the case may be.

34.4 Housing for Labour

Save insofar as the Contract otherwise provides, the Contractor shall provide and maintain such housing accommodation and amenities as he may consider necessary

for all his supervisory staff and labour, employed for the purposes of or in connection with the Contract including all fencing, electricity supply, sanitation, cookhouses, fire prevention, water supply and other requirements in connection with such housing accommodation or amenities. On completion of the Contract, these facilities shall be handed over to the Employer or if the Employer so desires, the temporary camps or housing provided by the Contractor shall be removed and the Site reinstated to its original condition, all to the approval of the Engineer.

34.5 Health and Safety

Due precautions shall be taken by the Contractor, and at his own cost, to ensure the safety of his staff and labour at all times throughout the period of the Contract. The Contractor shall further ensure that suitable arrangements are made for the prevention of epidemics and for all necessary welfare and hygiene requirements.

34.6 Epidemics

In the event of any outbreak of illness of an 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 purpose of dealing with and overcoming the same.

34.7 Supply of Water

The Contractor shall, so far as is reasonably practicable, having regard to local conditions, provide on the Site, to the satisfaction of the Engineer or his representative, adequate supply of drinking and other water for the use of his staff and labour.

34.8 Alcoholic Liquor or Drugs

The Contractor shall not, otherwise than in accordance with the Statutes, Ordinances and Government Regulations or Orders for the time being in force, import, sell, give, barter or otherwise dispose of any alcoholic liquor or drugs, or permit or suffer any such importation, sale, gift, barter or disposal by his Subcontractors, agents, staff or labour.

34.9 Arms and Ammunition

The Contractor shall not give, or otherwise dispose of to any person or persons, any arms or ammunition of any kind or permit or suffer the same as aforesaid.

34.10 Festivals and Religious Customs

The Contractor shall in all dealings with his staff and labour have due regard to all recognised festivals, days of rest and religious and other customs.

34.11 Disorderly Conduct

The Contractor shall at all times take all reasonable precautions to prevent any

unlawful, riotous or disorderly conduct by or amongst staff and labour and for the preservation of peace and protection of persons and property in the neighbourhood of the Works against the same.

34.12 Compliance by Subcontractors

The Contractor shall be responsible for compliance by his Subcontractors of the provisions of this Clause.

The following Sub-Clauses 35.2 and 35.3 are added:

35.2 Records of Safety and Health

The Contractor shall maintain such records and make such reports concerning safety, health and welfare of persons and damage to property as the Engineer may from time to time prescribe.

35.3 Reporting of Accidents

The Contractor shall report to the Engineer details of any accident as soon as possible after its occurrence. In the case of any fatality or serious accident, the Contractor shall, in addition, notify the Engineer immediately by the quickest available means.

The following Sub-Clause 36.6 is added:

36.6 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.

41.1 Commencement of Works

The text is deleted and substituted with the following:

The Contractor shall commence the Works on Site within the period named in Appendix-A to Bid from the date of receipt by him from the Engineer of a written Notice to Commence. Thereafter, the Contractor shall proceed with the Works with due expedition and without delay.

44.1 Extension of time.

Add the following para:

The Contract shall be extended for another period of 365 days at the option of PQA, on the same terms & Conditions.

47.3 Bonus for Early Completion of Works

Delet the entire clause eternity

48.2 Taking Over of Sections or Parts

For the purposes of para (a) of this Sub-Clause, separate Times for Completion shall be provided in the Appendix-A to Bid “Special Stipulations”.

51.2 Instructions for Variations

At the end of the first sentence, after the word “Engineer”, the words “in writing” are added.

52.1 Valuation of Variations

In the tenth line, after the words “Engineer shall” the following is added:
within a period not exceeding one-eighth of the completion time subject to a minimum of 56 days from the date of disagreement whichever is later.

53.4 Failure to Comply

This Sub-Clause is deleted in its entirety.

54.3 Customs Clearance

(Employer may vary this Sub-Clause)

54.5 Conditions of Hire of Contractor’s Equipment

The following paragraph is added:

The Contractor shall, upon request by the Engineer at any time in relation to any item of hired Contractor’s Equipment, forthwith notify the Engineer in writing the name and address of the Owner of the equipment and shall certify that the agreement for the hire thereof contains a provision in accordance with the requirements set forth above.
The following Sub-Clauses 59.4 & 59.5 are added:

59.4 Payments to Nominated Subcontractors

Delete the entire clause entirely

59.5 Certification of Payments & Nominated Subcontractors

Before issuing a Payment Certificate which includes an amount payable to a nominated Subcontractor, the Engineer may request the Contractor to supply reasonable evidence that the nominated Subcontractor has received all amounts due in accordance with previous Payment Certificates, less applicable deductions for retention or otherwise. Unless the Contractor:

- a) submits reasonable evidence to the Engineer, or
- b) i) satisfies the Engineer in writing that the Contractor is reasonably entitled to withhold or refuse to pay these amounts, and

- ii) submits to the Engineer reasonable evidence that the nominated Subcontractor has been notified of the Contractor's entitlement,

then the Employer may (at his sole discretion) pay direct to the nominated Subcontractor, part or all of such amounts previously certified (less applicable deductions) as are due to the nominated Subcontractor and for which the Contractor has failed to submit the evidence described in sub-paragraphs (a) or (b) above. The Contractor shall then repay, to the Employer, the amount which the nominated Subcontractor was directly paid by the Employer.

60.1 Monthly Statements

In the first line after the word "shall", the following is added:

"on the basis of the joint measurement of work done under Clause 56.1,"

In Para (c) the words "the Appendix to Tender" are deleted and substituted with the words " Sub-Cause 60.11 (a)(6) hereof".
(in case Clause 60.11 is applicable)

60.2 Monthly Payments

In the first line, "28" is substituted by "14".

60.10 Time for Payment

The text is deleted and substituted with the following:

The amount due to the Contractor under any Interim Payment Certificate issued by the Engineer pursuant to this Clause, or to any other terms of the Contract, shall , subject to Clause 47, be paid by the Employer to the Contractor within 30 days after such Interim Payment Certificate has been jointly verified by Employer and Contractor, or, in the case of the Final Certificate referred to in Sub Clause 60.8, within 60 days after such Final Payment Certificate has been jointly verified by Employer and Contractor; Provided that the Interim Payment shall be caused in 42 days and Final Payment in 60 days in case of foreign funded project. In the event of the failure of the Employer to make payment within the times stated, the Employer shall pay to the Contractor compensation at the 28 days rate of KIBOR+2% per annum for local currency and LIBOR+1% for foreign currency, upon all sums unpaid from the date by which the same should have been paid. The provisions of this Sub-Clause are without prejudice to the Contractor's entitlement under Clause 69.

The following Sub-Clause 60.11 is added:

60.11 Secured Advance on Materials

Delet the entire clause entirety

60.11 Financial Assistance to Contractor

Delet the entire clause eternity

63.1 Default of Contractor

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

Provided further that in addition to the action taken by the Employer against the Contractor under this Clause, the Employer may also refer the case of default of the Contractor to Pakistan Engineering Council for punitive action under the Construction and Operation of Engineering Works Bye-Laws 1987, as amended from time to time.

65.2 Special Risks

The text is deleted and substituted with the following:

The Special Risks are the risks defined under Sub-Clause 20.4 sub paragraphs (a) (i) to (a) (v).

67.3 Arbitration

In the sixth to eight lines, the words “shall be finally settled appointed under such Rules” are deleted and substituted with the following:

shall be finally settled under the provisions of the Arbitration Act, 1940 as amended or any statutory modification or re-enactment thereof for the time being in force.

The following paragraph is added:

The place of arbitration shall be, Pakistan.

68.1 Notice to Contractor

The following paragraph is added:

For the purposes of this Sub-Clause, the Contractor shall, immediately after receipt of Letter of Acceptance, intimate in writing to the Employer and the Engineer by registered post, the address of his principal place of business or any change in such address during the period of the Contract.

70.1 Increase or Decrease of Cost

Sub-Clause 70.1 is deleted in its entirety

73.1 Payment of Income Tax

The Contractor, Subcontractors and their employees shall be responsible for payment of all their income tax, super tax and other taxes on income arising out of the Contract

and the rates and prices stated in the Contract shall be deemed to cover all such taxes.

73.2 Customs Duty & Taxes

(Employer may incorporate provisions where applicable)

74.1 Integrity Pact

If the Contractor or any of his Subcontractors, agents or servants is found to have violated or involved in violation of the Integrity Pact signed by the Contractor as Appendix-L to his Bid, 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, agents 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, agents or servants.

The termination under Sub-Para (b) of this Sub-Clause shall proceed in the manner prescribed under Sub-Clauses 63.1 to 63.4 and the payment under Sub-Clause 63.3 shall be made after having deducted the amounts due to the Employer under Sub-Para (a) and (c) of this Sub-Clause.

75.1 Termination of Contract for Employer's Convenience

The Employer shall be entitled to terminate the Contract at any time for the Employer's convenience after giving 56 days prior notice to the Contractor, with a copy to the Engineer. In the event of such termination, the Contractor :

- (a) shall proceed as provided in Sub-Clause 65.7 hereof; and
- (b) shall be paid by the Employer as provided in Sub-Clause 65.8 hereof.

76.1 Liability of Contractor

The Contractor or his Subcontractors or assigns shall follow strictly, all relevant labour laws including the Workmen's Compensation Act and the Employer shall be fully indemnified for all claims, damages etc. arising out of any dispute between the Contractor, his Subcontractors or assigns and the labour employed by them.

77.1 Joint and Several Liability

If the Contractor is a joint venture of two or more persons, all such persons shall be jointly and severally bound to the Employer for the fulfilment of the terms of the Contract and shall designate one of such persons to act as leader with authority to bind the joint venture. The composition or the constitution of the joint venture shall not be altered without the prior consent of the Employer.

78.1 Details to be Confidential

The Contractor shall treat the details of the Contract as private and confidential, save in so far as may be necessary for the purposes thereof, and shall not publish or disclose the same or any particulars thereof in any trade or technical paper or elsewhere without the prior consent in writing of the Employer or the Engineer. If any dispute arises as to the necessity of any publication or disclosure for the purpose of the Contract, the same shall be referred to the decision of the Engineer whose award shall be final.

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Port Qasim Authority

Civil Maintenance Department

BILL OF QUANTITIES

Subject: Annual Running Maintenance Contract for Water Supply Network & Sewerage System

S.NO.	Description	Qty.	Unit	Rate
1a.	Clearing jungle (ordinary) by cutting, removing all shrubs, tree, upto 6" inches (152 mm) girth, etc. and taking out their entire roots and filling the hollows with earth complete with dressing, consolidating and watering the filling including stacking the serviceable material and disposal of useless material as directed, lead to chains (305 Rm), cost of earth included.	1	Sq.m.	6.01
1b.	Clearing jungle (dense) by cutting, removing all shrubs, tree, upto 6" inches (152 mm) girth, etc. and taking out their entire roots and filling the hollows with earth complete with dressing, consolidating and watering the filling including stacking the serviceable material and disposal of useless material as directed, lead to chains (305 Rm), cost of earth included.	1	Sq.m.	15.17
2	Disposal of surplus excavated stuff distinct from the materials and the rubbish accumulated during construction upto one chain lead (average) and 5 feet (1.52 m) lift, levelling etc. complete.	1	Cu.m.	158.84
3	Excavation of trenches and pits of following kinds of soil dry or wet and disposal of excavation soil at suitable distance from trench including backfilling of aearth obtained from excavation trenches and arround structure after repair work including compacting dressing water and disposal of excess soil to designated lacion complete in all respect.			
	(i) Soft soils including lift upto 5 feet (1.52 m) and lead upto one chain (30.48 m).	1	Cu.m.	210.96
	(ii) Sandy soils including lift upto 5 feet (1.52 m) and lead upto one chain (30.48 m).	1	Cu.m.	219.75
	(iii) Hard soils including lift upto 5 feet (1.52 m) and lead upto one chain (30.48 m).	1	Cu.m.	228.53
	(iv) Gravelly soils including lift upto 5 feet (1.52 m) and lead upto one chain (30.48 m).	1	Cu.m.	246.10
	(v) In all kinds of soil, murum, hard, average or soft soils including lift upto 5 feet (1.52 m) and lead upto one chain (30.48 m).	1	Cu.m.	272.46
	(vi) Soft rock by hammering and chiseling including lift upto 5 feet (1.52 m) and lead upto one chain (30.48 m).	1	Cu.m.	671.29
	(vii) Hard rock by hammering and chiseling including sorting and stacking the excavated stuff in proper stack within a lead upto one chain (30.48 m) and lift upto 5 feet (1.52 m).	1	Cu.m.	635.72
(viii) Wet still, clay or mud including lift upto 5 feet (1.52 m) and lead upto one chain (30.48 m).	1	Cu.m.	306.98	
4	Add of additional lift of every three feet (0.91 m) or part thereof in items 1 to 14.	1	Cu.m.	35.15
5	Add of additional lead of every one chain (30.48 m) or part thereof in items 1 to 14.	1	Cu.m.	43.92
6	Back filling of earth obtained from excavation in trenches are around structures after repair work including compacting, dressing watering and disposal of exess of aearth to dstignated location complete in all respect.	1	Cu.m.	110.08
7	Cutting trenches through bituminous road for laying pipes etc. in any width and upto required depth including dismantling kerb stones, edge stones or channels, replacing soling stone (old and new 10%) with hand refilling with (old and new 25%). Ballast blinded with murum, watering and ramming complete, refixing edge stone, kerb stones or channels in cement mortar 1:3 as directed including recarpeting with 1" (25 mm) thick (consolidated) asphalt macadam as per specification complete (cost of new stone, ballast and new murum is inclusive): 1" (25 mm) thick consolidated asphalt macadam recarpet.	1	Sq.m.	1,155.23
8	Cutting trenches through bituminous road for laying pipes etc. in any width and upto required depth including dismantling kerb stones, edge stones or channels, replacing soling stone (old and new 10%) with hand refilling with (old and new 25%). Ballast blinded with murum, watering and ramming complete, refixing edge stone, kerb stones or channels in cement mortar 1:3 as directed including recarpeting with 1" (25 mm) thick (consolidated) asphalt macadam as per specification complete (cost of new stone, ballast and new murum is inclusive): 2" (51 mm) thick consolidated asphalt macadam recarpet.	1	Sq.m.	1,643.47
9	Cutting trenches through bituminous road for laying pipes etc. in any width and upto required depth including dismantling kerb stones, edge stones or channels, replacing soling stone (old and new 10%) with hand refilling with (old and new 25%). Ballast blinded with murum, watering and ramming complete, refixing edge stone, kerb stones or channels in cement mortar 1:3 as directed including recarpeting with 1" (25 mm) thick (consolidated) asphalt macadam as per specification complete (cost of new stone, ballast and new murum is inclusive): 3" (76 mm) thick consolidated asphalt macadam recarpet.	1	Sq.m.	1,698.60
10	Cutting trenches through cement concrete road with chisel etc. in any width and upto required depth including dismantling kerb stones, edge stones or channels, refilling with cement concrete 1:2:4 using crushed graded boulders of required size and grade including compacting with vibrators etc. complete refixing edge stones, kerb stones or channels in cement mortar 1:3 as desired: 4" (102 mm) thick 1:2:4 cement concrete.	1	Sq.m.	1,786.13

11	Cutting trenches through cement concrete road with chisel etc. in any width and upto required including dimantling kerb stones, edge stones or channels, refilling with cement concrete 1:2:4 using crushed graded boulders of required size and grade including compacting with vibrators etc. complete refixing edge stones, kerb stones or channels in cement mortar 1:3 as desired: extra for every 1/2" (13 mm) thickness over 4" (102 mm) thick 1:2:4 cement concrete.	1	Sq.m.	253.31
12	Bailing or pumping out sub-soil water or pipe/pit/chamber/trench during excavation or concreting etc. (trench volume below sub soil water level and concrete level repectively to be paid) once after final excavation and once concreting...	1	Cu.m.	386.56
13	Providing and fixing best quality squatting type white glazed earthenware W.C. Pan, Pakistani (of not less than 18" inches clear opening as measured between flushing rims) complete with and including the cost of 13.6 litre best quality low level plastic flushing cistem with internal fittings complete, P.V.C flushing pipe suitable for squatting type extra bends and length with fitting, C.I. trap 4" inchs (100 mm) dia and making requisite number of holes in walls, plinth & floor for pipe connection and making good in cement concrete 1:2:4	1	Each	4,406.16
14	Do. Do. With 4 Inch (100mm) dia. white glazed earthenware trap Do..	1	Each	3,373.10
15	(i) Providing and fixing squatting type W.C. Pan, in white vitreous china with integral treads (Pakistani) orissa pattern and C.I. trap 4" inchs (100 mm) dia, complete with and including the cost of 13.6 litre best quality low level plastic flushing cistem with internal fittings complete, P.V.C flushing pipe suitable for squatting for this type with fitting and making requisite number of holes in walls, plinth & floor for pipe connection and making good in cement concrete 1:2:4	1	Each	4,406.16
	(ii) Do. Do. Do with a white vitreous china 4 inches . (100mm) dia trap. Do Do Do..	1	Each	3,373.10
16	Providing and fixing Pakistani best quality European style white glazed earthenware W.C pan complete with and including the cost of plastic seat and buffers, 13.6 litres best quality low level plastic flushing cistem with internal fittings complete, P.V.C flushing pipe with fittings and making requisite number of holes in walls, plinth and floor for pipe connections and making good in cement concrete 1:2:4..	1	Each	5,919.57
17	Providing and fixing Pakistani make best available quality European style white glazed earthenware wash down W.C.Pan complete with and including the cost of a plastic seat (PVC cover and buffers 3 galls. (13.6 litres) white glazed earthenware low level flushing cistem with siphon fittings, 1-1/2 inches (40mm) dia white porcelain enamelled flush bend, 3/4 inch (20mm) dia, G.I. warning pipe carried outside and bent vertically downwards and making requisite number of holes in walls, plinth and floor for pipe connections and making good in cement concrete 1:2:4..	1	Each	6,181.21
18	Providing and fixing Pakistani make flat back lipid front urinal basin (of not less than 17 inches or 430 mm in height of white glazed earthenware complete with and including the cost of one gallon (4.5 litres) glazed earthen ware automatic flushing cistem with fittings a pet cock brackets standard flush pipe with fittings, standard waste pipe (enamelled iron) connection complete and making requisite number of holes in walls plinth and floor for pipe connections and making good in cement concrete 1:2:4.	1	Each	3,606.54
19	Providing and fixing 25 inches x 18 inches (635 mm x 457 mm) lavatory basin in white glazed earthenware (Pakistani) complete with and including the cost of Brass oxidized bolts kit built into wall 1/2 inch (15 mm) dia. Chrome plated mixer 1-1/4" inches (32mm) rubber plug and chrome plated brass chain, 1-1/4 inches (32 mm) dia brass waste of approved pattern, 1-1/4 inches (32 mm) dia. Malleable iron or C.P. brass traps malleable iron or brass unions and making requisite number of holes in walls plinth and floor for pipe connections and making god in cement concrete 1:2:4.	1	Each	6,520.16
20	Providing and fixing 22 inches x 16 inches (560 x 406 mm) lavatory basin in white glazed earthenware (Pakistani) complete with and including the cost of Brass oxidized bolts kit built into walls 1/2 inches (15 mm) dia. Chrome plated mixer, 1-1/4 inches (32 mm) rubber plug and chrome plated brass chain 1-1/4 inches (32 mm) dia brass waste of approved pattern 1-1/4 inches (32 mm) dia chromium plated battal trap with unions and making requisite, number of holes in walls, plinth and floor for pip.e connections and making good in cement concrete 1:2:4..	1	Each	5,954.10
21	Extra over item No. 8 and 9 for providing and fixing best available (Pakistani make) white glazed earthenware pedestal..	1	Each	1,111.32
22	Providing and fixing Pakistani bath tub made of Fiber glass of any color and design (over-all approximate size ' 5 feet - 6 inches x 2 feet - 4 inches x 1 foot -11 inches or 1680 mm x 711 mm x 584 mm) and including the cost of 1-1/2 inches (40 mm) C.P. brass waste, 1-1/4 inches (32 mm) dia brass overflow, common both mixer with telephonic shawer complete C.P. brass chain, with rubber plug and making requisite number of holes in walls, plinth and floor for pipe connections and making good in cement concrete 1:2:4....	1	Each	21,270.03
23	Providing and fixing Pakistani bath tub made of Fiber glass of any color and design (over-all approximate size 6' x 2' 4 inches x 1 foot - 11 inches or 1830 mm x 710 mm x 584 mm) and including the cost of 1-1/2 inches (40 mm) C.P. brass waste, 1-1/4 inches (32 mm) dia brass overflow, common both mixer with telephonic shawer complete C.P. brass chain, with rubber plug and making requisite number of holes in walls, plinth and floor for pipe connections and making good in cement concrete 1:2:4....	1	Each	22,685.18
24	Providing and fixing Shower tray made of fiber glass of any colour and design 31 inches x 31 inches (787 mm x 787 mm)..	1	Each	3,078.80
25	Extra over item No.8 and 9 for providing single hole chromium plated mixer tap 1/2 inch (15 mm) dia (English or approved foreign make)..	1	Each	1,670.58
26	Providing and fixing 6 inches x 2 inches or 6 inches x 3 inches (150 mm x 50 mm or 150 mm x 80 mm) C.I. floor trap of approved self cleansing design with C.I. screwed down grating with or without a vent arm complete with and including making requisite number of holes in walls, plinth and floor for pipe connection and making good in cement concrete 1:2:4.	1	Each	1,135.95
27	Providing 1/2 inch (15 mm) dia plastic connection complete with a 1/2 inch (15 mm) dia brass stop cock two brass nuts and lining jointed to plastic pipe.	1	Each	429.31
28	Providing and fixing standing wall shower of CP brass 3 knobs of approved quality mixer unit and moveable shower head complete..	1	Each	191.05
29	Providing and fixing approved quality stainless steel sink 60" x 20" Pak made (Atlas) complete with brass oxidized bolt kit/angle iron brackets built into walls 1/2" dia CP sink mixer 1-1/4" rubber plug and CP brass chain 1-1/4" CP brass waste 1-1/4" dia malleable iron or CP brass bottle trap with malleable iron or brass unions and making requisite number of holes in walls, plinth and floor for pipe connections and making good in cement concrete 1:2:4	1	Each	24,027.66
30	Providing and fixing approved quality stainless steel sink 48" x 20" Pak made (Atlas) complete with brass oxidized bolt kit/angle iron brackets built into walls 1/2" dia CP sink mixer 1-1/4" rubber plug and CP brass chain 1-1/4" CP brass waste 1-1/4" dia malleable iron or CP brass bottle trap with malleable iron or brass unions and making requisite number of holes in walls, plinth and floor for pipe connections and making good in cement concrete 1:2:4	1	Each	16,951.91

31	Providing and fixing approved quality stainless steel sink 33" x 18" Pak made (Atlas) complete with brass oxidized bolt kit/angle iron brackets built into walls ½" dia CP sink mixer 1-1/4" rubber plug and CP brass chain 1-1/4" CP brass waste 1-1/4" dia malleable iron or CP brass bottle trap with malleable iron or brass unions and making requisite number of holes in walls, plinth and floor for pipe connections and making good in cement concrete 1:2:4	1	Each	15,961.31
32	Providing & fixing approved Pak make Earthen ware glazed corner basin standard size (White/light colour) complete with and including the cost of brass oxidized bolt kits built into wall ½" dia C-P mixer, 1-1/4" dia brass waste of approved pattern 1-1/4" dia Malleable iron or C-P brass bottle traps malleable iron with brass unions and making requisite number of holes in walls, plinth and floor for pipe connection and making good in cement concrete 1:2:4. i/c cost of cartage at site.	1	Each	8,522.60
33	Providing and fixing approved quality earthen ware glazed vanity basin standard size (White/light colour) and including the cost of 1-1/4" dia brass waste 1-1/4" rubber plug and chrome plated brass chain PVC waste pipe 1-1/4" dia of approved pattern etc. complete.	1	Each	8,505.22
34	Providing and fixing 30" x 3/4"(762 mm x 20 mm) dia approved quality of chrome plated brass towel rail complete with brackets fixed with 1"(25 mm) long C.P brass screws and rawal plug.	1	Each	1,311.46
35	Providing and fixing 24"x3/4"(610 mm x 20 mm) dia approved quality of chrome plated brass towel rail complete with brackets fixed with 1"(25 mm) long C.P brass screws and rawal plug.	1	Each	1,245.90
36	Providing and fixing approved quality C.P. brass toilet paper holder.	1	Each	1,099.19
37	Providing and fixing plastic (PVC) toilet paper holder in wall complete of any colour.	1	Each	687.38
38	Providing and fixing 24 inches x 18 inches (610 mm x 457 mm) looking mirror of Imported glass 5 mm thick fixing with CP clamps and screws	1	Each	765.86
39	Providing and fixing 20 inches x 16 inches (508 mm x 406 mm) Looking mirror of Belgium glass complete with Plastic frame and C.P. Brass screws.	1	Each	1,186.73
40	Providing and fixing glass shelf 25 inches x 5 inches (610 mm x 127 mm) brackets and guard rail complete..	1	Each	527.27
41	Providing and fixing plastic shelf of standard size of any colour and design with CP brass screws.	1	Each	1,221.83
42	Providing and fixing bath room accessories of set of 6 pieces consist of one shelf, one towel rod with bracket, one towel ring, one soap dish, one tooth Brush holder with glass, one tissue paper holder one double hook etc complete of approved quality as per direction of Engineer in-charge.	1	Each	16,411.78
43	Providing and fixing bath room accessories of set of 7 pieces consist of one cosmetic shelf, one towel rod with bracket, one soap dish, one tooth brush holder with glass and cover, one tissue paper holder one double hook one towel ring etc complete of approved quality as per direction of Engineer in-charge.	1	Each	5,128.79
44	Providing and fixing Royal bath room accessories of set of 7 pieces consist of one cosmetic shelf, one towel rod with bracket, one soap dish, one tooth brush holder with glass and cover, one tissue paper holder one double hook one towel ring etc complete of approved quality as per direction of Engineer in-charge.	1	Each	5,553.33
45	Providing and fixing Royal bath room accessories of set of 6 pieces consist of one towel rod with bracket, one tooth brush holder with glass and cover, one double hook one towel ring etc complete of approved quality as per direction of Engineer in-charge.	1	Each	6,119.39
46	Providing & fixing chromium plated Muslim bib-cock with out Muslim Shower of approved quality.	1	Each	927.49
47	Providing and fixing approved quality of Plastic Sheet with lid, buffers.	1	Each	1,218.77
48	Providing and fixing approved quality of Pakistani make Stainless steel sink 48" thick x 20" (1016 mm x 508 mm)	1	Each	10,939.47
49	Providing and fixing approved quality of Pakistani make Stainless steel sink 33" x 18" (838 mm x 457 mm).	1	Each	9,948.87
50	Providing and fixing C.P. brass chain and rubber plug for sinks and lavatory basins....	1	Each	126.40

51	Providing and fixing 1-1/4 inches (32 mm) dia C.P. brass bottle trap....	1	Each	1,750.94
52	Providing and fixing 1-1/2 inches (40 mm) dia C.P. brass bottle trap of 3 inches (80 mm) seal..	1	Each	1,949.06
53	Providing and fixing M.S. clamps of the approved design to 4 inches (100 mm) dia C.I. pipe spun sockets including the cost of cutting and making good to wall or M.S. bolts and nuts built 4 inches (100 mm) in to wall including pipe distance pieces, extra painting to match the colour of the building and cartage within 10 miles. (16.09 km.)..	1	Each	166.53
54	Providing and fixing M.S. clamps of the approved design to 3 inches (80mm) dia C.I. pipe sockets including the cost of cutting and making good to wall or M.S. Bolts and nuts built 3 inches (80mm) into walls including pipe distance pieces and extra painting to match the colour of the building and cartage within 10 miles. (16.09 Km) (for Spun pipe).	1	Each	159.46
55	Providing and fixing M.S. clamps of approved design to 2 inches (50mm) dia .C.I pipe sockets including the cost of cutting holes and making good to walls or M.S. bolts and nuts built 2 inches (50mm) into walls including pipe distance pieces and extra painting to match the colour of the building and cartage within 10 miles (16.09 Km) (for Spun pipe).	1	Each	153.18
56	Providing and fixing 2 inches (50mm) dia C.I. waste and vent pipes including cutting fitting and extra painting to match the colour of the building and cartage within 10 miles. (16.09 km.) (for Spun pipe)..	1	Ru.m	1,297.06
57	Providing and fixing 2 inches x 2 inches (50mm x 50mm)dia. plain branch of the required degree including extra painting to match the colour of the building and cartage within 10 miles (16.09 Km) (for Spun pipe).	1	Each	1,205.14
58	Providing and fixing 2 inches x 2 inches x 2 inches (50mm x 50mm x 50mm)dia. C.I. plain branch of the required degree including extra painting to the colour of the building and cartage within 10 miles (16.09 Km) (for Spun pipe).	1	Each	1,275.90
59	Providing and fixing 2 inches (50mm) dia. C.I. offsets of various lengths including extra painting to match the colour of the building and cartage within 10 miles.(16.09 Km) (for Spun pipe).	1	Each	1,294.01
60	Providing and fixing 2 inches (50mm) dia. C.I. bend of the required degree with access door, rubber washer 1/8 inches (3.2mm) thick and bolts and nuts and extra painting to match the colour of the building and cartage within 10 miles.(16.09 Km) (for Spun pipe).	1	Each	1,576.08
61	Providing and fixing 2 inches (50mm) dia. C.I. plain bend of the required degree including extra painting to match the colour of the building and cartage within 10 miles.(16.09 Km) (for Spun pipe).	1	Each	904.56
62	Providing and fixing 2 (50mm) dia. C.I. terminal guards including extra painting to match the colour of the building and cartage within 10 miles.(16.09 Km) (for Spun pipe).	1	Each	469.83
63	Providing and fixing 2 (50mm) dia. C.I. terminal guards including extra painting to match the colour of the building and cartage within 10 miles.(16.09 Km) (for Spun pipe).	1	Each	171.61
64	Providing G.I. pipes, specials and clamps etc., including fixing cutting and fitting complete with and including the cost of breaking through walls and roof, making good etc., painting 2 coats after cleaning the pipe etc.; with white zinc paint with pigment to match the colour of the building and testing with water to a pressure head of 200 feet (61 M) and cartages within 10 miles (16.09 km.) (ILLM). 1/2 inch (15mm) dia pipe.	1	Ru.m	286.25
	(i) Do. Do. 3/4 inch (20 mm) dia pipe. (ILLM).	1	Ru.m	372.61
	(ii) Do. Do. 1 inch (25 mm) dia pipe (ILLM).	1	Ru.m	539.17
	(iii) Do. Do. 1-1/4 inches (32 mm) dia pipe (ILLM).	1	Ru.m	699.85
	(iv) Do. Do. 1-1/2 inches (40 mm) dia pipe (ILLM).	1	Ru.m	755.09
	(v) Do. , Do. 2 inches (50 mm) dia pipe (ILLM).	1	Ru.m	1,023.44
	(vi) Do. Do. 3 inches (80 mm) dia pipe (ILLM).	1	Ru.m	1,293.74
	(vii) Do. Do. 4 inches (100 mm) dia pipe (ILLM).	1	Ru.m	1,649.50
	(viii) Do. Do. 5 inches (125 mm) dia pipe (ILLM).	1	Ru.m	1,872.36
(ix) Do. Do. 6 inches (150 mm) dia pipe (ILLM).	1	Ru.m	2,119.84	
65	Providing G.I. pipes, specials and clamps etc., including fixing cutting and fitting complete with and including the cost of breaking through walls and roof, making good etc., painting 2 coats after cleaning the pipe etc.; with white zinc paint with pigment to match the colour of the building and testing with water to a pressure head of 200 feet (61 M) and cartages within 10 miles (16.09 km.) (ILLM). 1/2 inch (15mm) dia pipe.	1	Ru.m	288.35
	(i) Do. Do. 3/4 inch (20 mm) dia pipe. (ILLM).	1	Ru.m	359.85
	(ii) Do. Do. 1 inch (25 mm) dia pipe (ILLM).	1	Ru.m	507.96
	(iii) Do. Do. 1-1/2 inches (40 mm) dia pipe (ILLM).	1	Ru.m	719.99
	(iv) Do. , Do. 2 inches (50 mm) dia pipe (ILLM).	1	Ru.m	979.36
	(v) Do. Do. 3 inches (80 mm) dia pipe (ILLM).	1	Ru.m	1,264.73
	(vi) Do. Do. 4 inches (100 mm) dia pipe (ILLM).	1	Ru.m	1,423.72
	(vii) Do. Do. 6 inches (150 mm) dia pipe (ILLM).	1	Ru.m	1,997.63

66	Providing and fixing un platisized polyvinyl chloride pipe (u.P.V.C) "E" class with specials) and clamps etc., including cutting and fitting, complete with and including the cost of breaking through walls and roof and making good etc.; after cleaning the pipe and cartage within 10 miles (16.09 km) (working pressure 12 kg/cm2): 3/4 inch (20 mm) dia.	1	Ru.m	148.60
	(i) Do. Do. 1 inch (25mm) dia.	1	Ru.m	178.24
	(ii) Do. Do. 1-1/2 inch (40 mm) dia..	1	Ru.m	346.55
	(iii) Do. Do. 2 inches (50 mm) dia pipe..	1	Ru.m	480.73
	(iv) Do. Do. 2-1/2 inches (65 mm) dia pipe..	1	Ru.m	694.70
	(v) Do. Do. 3 inches (80 mm) dia pipe..	1	Ru.m	908.96
	(vi) Do. Do. 4 inches (100 mm) dia pipe.	1	Ru.m	1,577.63
	(vii) Do. Do. 5 inches (125 mm) dia pipe..	1	Ru.m	2,249.33
	(viii) Do. Do. 6 inches (150 mm) dia pipe...	1	Ru.m	2,896.44
67	Providing and fixing un platisized polyvinyl chloride pipe (u.P.V.C) "D" class and specials etc. including cutting and fitting complete with and including the cost of cutting trench upto 1-1/2 feet deep refilling, watering, ramming, and disposal of surplus earth within one chain and after cleaning the pipe and cartage within 10 miles (16.09 km.) (working pressure 12 kg/cm2).			
	(i) 1/2 inch (12.5 mm) dia			120.00
	(ii) 3/4 inch (19 mm) dia.			166.00
	(iii) 1 Inch (25 mm) dia pipe			240.00
	(iv) 1-1/4 inches (31.75 mm) dia pipe..			325.00
	(v) Do Do. 1-1/2 inches (40 mm) dia pipe..	1	Ru.m	385.00
	(vi) Do Do. 2 inches (50 mm) dia pipe..	1	Ru.m	520.00
	(vii) Do Do. 3 inches (80 mm) dia pipe..	1	Ru.m	1100.00
	(viii) Do Do. 4 inches (100 mm) dia pipe..	1	Ru.m	1550.00
	(ix) Do. Do. 6 inches (150 mm) dia pipe.	1	Ru.m	2700.00
	(x) Do. Do. 8 inches (200 mm) dia pipe.	1	Ru.m	3,001.88
68	Providing and fixing 1/2 inches dia. (15 mm) brass bib cocks.	1	Each	501.42
	(i) Do. Do. 3/4 inches (20 mm) dia brass bib cocks....	1	Each	678.31
	(ii) Do. Do. 1/2 inches (15 mm) dia brass stop cocks.	1	Each	359.90
	(iii) Do. Do. 3/4 inch (20 mm) dia brass stop cocks..	1	Each	607.55
	(iv) Do. Do. 4 inches (100 mm) dia shower rose (with detachable lid)..	1	Each	831.79
69	Providing and fixing 1/2 inches (15 mm) dia full way gun metal valves with wheels threaded or flanged ends with rubber washers, (standard pattern)..	1	Each	713.69
	(i) Do. Do. 3/4 inch (20 mm) dia Do..	1	Each	1,138.23
	(ii) Do. Do. 1 inch (25 mm) dia Do...	1	Each	1,138.23
	(iii) Do. Do. 1-1/2 inches (40 mm) dia Do..	1	Each	1,718.44
	(iv) Do. Do. 2 inches (50 mm) dia Do..	1	Each	1,775.05
	(v) Do. Do. 2-1/2 inches (65 mm) dia Do...	1	Each	2,001.47
	(vi) Do. Do. 3 inches (80 mm) dia Do..	1	Each	2,863.75
	(vii) Do. Do. 4 inches (100 mm) dia Do..	1	Each	4,031.25
	(viii) Do. Do. 6 inches (150 mm) dia Do..	1	Each	6,534.14
70	Providing and fixing 1/2 inch (15 mm) dia ball valve (with PVC Ball) made to B.S.S. 1212.....	1	Each	166.93
	(i) Do. Do. 3/4 inch (20 mm) dia Do.	1	Each	195.23
	(ii) Do. Do. 1 inch (25 mm) dia Do..	1	Each	322.60
	(iii) Do. Do. 1-1/4 inches (32 mm) dia Do..	1	Each	442.89
	(iv) Do. Do. 1-1/2 inches (40 mm) dia Do.	1	Each	555.14
	(v) Do. Do. 2 inches (50 mm) dia Do..	1	Each	753.26
71	Making connection with the existing G.I. pipe upto 2 inches (50 mm) dia including cutting the pipe and providing and fixing necessary fittings.	1	Each	577.10
72	Making connection with the existing G.I. pipe of size larger than 2 inches to 6 inches (50 mm to 150 mm) dia. including cutting the pipe and providing and fixing necessary fittings.	1	Each	5,649.28

73	Providing and fixing gun-metal non-return valves with male and female ends as required. 1/2 inches (15 mm) dia..	1	Each	732.03
	(i) Do. Do. Do. 3/4 inches (20 mm) dia.....	1	Each	944.30
	(ii) Do. Do. Do. 1 inch (25 mm) dia.....	1	Each	1,156.57
	(iii) Do. Do. Do. 1-1/2 inches (40 mm) dia.....	1	Each	1,736.79
	(iv) Do. Do. Do. 2 inches (50 mm) dia.....	1	Each	1,800.47
	(v) Do. Do. Do. 2-1/2 inches (65 mm) dia.....	1	Each	2,003.74
	(vi) Do. Do. Do. 3 inches (80 mm) dia.....	1	Each	2,753.77
	(vii) Do. Do. Do. 4 inches (100 mm) dia.....	1	Each	4,067.93
74	Providing chambers 15 inches x 9 inches (380 mm x 230 mm) (inside dimensions) x 24 inches (610 mm) deep for house meters with 6 inches (150 mm) thick C.C. 1:3:6 blocks sets in 1:6 C.M. 6" inches (150mm) C.C. 1:4:8 the foundation, 1/2" Thick (13mm cement plaster, 1:3: to all inside wall surfaces and to top, 1" inch (25mm thick), C.C. 1:2:4 flooring complete with hinged cast iron cover and frame 15 inches x 9 inches (360 mm x 230 mm) (inside) clear opening (wt =1 Qtr. or 12.7 kg) fixed in cement concrete 1:2:4 including curing excavation, back filling and disposal of surplus earth etc. complete.	1	Each	3,597.44
75	Providing and fixing water tank made of food grade polyethylene material 200 gallon (Supper tuff) i/c cost of specials and cartage upto site as per direction of Engineer in charge.	1	Each	12,664.18
76	Providing and fixing water tank made of food grade polyethylene material 300 gallon (Supper tuff) i/c cost of specials and cartage upto site as per direction of Engineer in charge.	1	Each	15,696.84
77	Providing and fixing water tank made of food grade polyethylene material 400 gallon (Supper tuff) i/c cost of specials and cartage upto site as per direction of Engineer in charge.	1	Each	21,762.18
78	Providing and fixing water tank made of food grade polyethylene material 500 gallon (Supper tuff) i/c cost of specials and cartage upto site as per direction of Engineer in charge.	1	Each	24,871.26
79	Providing and fixing water tank made of food grade polyethylene material 1000 gallon (Supper tuff) i/c cost of specials and cartage upto site as per direction of Engineer in charge.	1	Each	67,631.43
80	Providing and fixing cast iron sluice valves with' flanged ends and two tail pieces to each valve complete with bolts and nuts, including the cost of insertion rubber washers (valves to stand test pressure head of 400 feet (122 m). 3 inches (80 mm) dia..	1	Each	6,465.99
	(i) Do. Do. 4 inches (100 mm) dia..	1	Each	8,305.69
	(ii) Do. Do. 6 inches (150 mm) dia..	1	Each	10,151.49
	(iii) Do. Do. 9 inches (230 mm) dia..	1	Each	19,780.63
	(iv) Do. Do. 12 inches (305 mm) dia..	1	Each	26,296.43
	(v) Do. Do. 15 inches (380 mm) dia..	1	Each	41,060.97
	(vi) Do. Do. 18 inches (460 mm) dia..	1	Each	66,990.71
	(vii) Do. Do. 21 inches (535 mm) dia..	1	Each	100,012.61
(viii) Do. Do. 24 inches (610 mm) dia..	1	Each	126,112.51	
81	HYDRANTS Providing and fixing standard pattern fire hydrants (similar to C 29, glen field and Kennedy's catalogue) with 3 inches (80 mm) dia. inlet and 2-1/2 inches (65 mm) dia. screwed outlet complete with 1/8 inch (3.2 mm) thick rubber washer and nuts & bolts..	1	Each	2,763.89
82	Providing and fixing cast iron hydrant bend 3 inches (80 mm) dia. of short radius with integral flange on one end and other end with spigot..	1	Each	1,575.01
83	Providing and fixing cast iron non-return or reflex valve with gun-metal working parts with hinged door, flanged ends and rubber washer and bolts and nuts. 3 inches (80 mm) dia. valve..	1	Each	7,881.14
	(i) Do. Do. 4 inches (100 mm) dia. valve ..	1	Each	8,871.75
	(ii) Do. Do. 6 inches (150 mm) dia. valve..	1	Each	9,302.40
	(iii) Do. Do. 9 inches (230 mm) dia. valve..	1	Each	21,337.29
(iv) Do. Do. 12 inches (305 mm) dia. valve..	1	Each	56,752.72	

84	Providing and fixing cast iron foot valve with flanged ends complete with a strainer suitable for fixing to 1 inch (25 mm) dia. suction pipe including 1/8 inches (3.2 mm) thick rubber washer...	1	Each	990.61
	(i) Do. Do. Do. to 1-1/2 inches (40 mm) dia..	1	Each	1,132.12
	(ii) Do. Do. Do. to 2 inches (50 mm) dia..	1	Each	1,330.24
	(iii) Do. Do. Do. to 3 inches (80 mm) dia..	1	Each	1,514.21
	(iv) Do. Do. Do. to 4 inches (100 mm) dia..	1	Each	6,934.24
	(v) Do. Do. Do. to 5 inches (130 mm) dia..	1	Each	9,906.05
	(vi) Do. Do. Do. to 6 inches (150 mm) dia..	1	Each	12,170.29
85	Providing chambers 2-1/3 ft x 1-1/2 ft or 685 mm x 460 mm (inside dimensions) x 4-1/2 ft (1372 mm) deep as per approved design for sluice valves 3 inches to 12 inches (80 mm to 305 mm) dia, with 18 inches (460 mm) dia, (inside) cast iron cover and frame (wt = 1 cwt. 3 qr. or 88.9 kg) fixed in R.C.C. 1:2:4 slab 4 inches (100 mm) thick (with 5 lbs.. of steel per CFT or 80.09 kg/cm.) 8 inches (205 mm) thick C.C. 1:3:6 block masonry walls set in 1:4 C.M., 6 inches (150 mm) thick C.C. 1:3:6 in foundation, 1/2 inches (13 mm) thick cement plaster 1:3 to all inside wall surfaces and to top. including providing and fixing C.I. foot rest at every one foot beyond 2-1/2 feet (765 mm) depth, curing, excavation, back filling and disposal of surplus earth etc. complete..	1	Each	21,627.62
86	Add for extra depth beyond 4-1/2 feet (1.37 m) including cost of C.I. foot rest for every one foot or 305 mm depth (for depths less upto than 4-1/2 feet or 1.37 m deduct at the same rate)..	1	C.m.	68.97
87	Providing chambers 3-1/2 feet x 2-1/2 feet or 1.07 m x 0.75 m (inside dimension) x 7 feet (2.14 deep as per approved design for sluice valves 15 inches to 24 inches (380 mm to 610 mm) dia. with 24 inches (610 mm) dia. (inside) cast iron cover and frame (wt = 2 cwt. 2 Qtr. or 127 kg.) fixed in R.C.C. 1:2:4 slab, 6 inches (152 mm) (with 5 lbs.. steel per CFT. or 80.09 kg/cm) 8 inches (205 mm) thick C.C. 1:3:6 block masonry walls set in 1:6 C.M. 6 inches (150mm) thick in cement concrete 1:3:6 in foundation 1" inch (25mm) thick C. 1:2:4 flooring, 1/2 inch (13 mm) thick cement plaster 1:3 to all inside wall surfaces and to top including providing and fixing C.I. foot rest at every one foot beyond 2-1/2 feet (765 mm) depth curing, excavation, back filling and disposal of surplus earth etc., complete..	1	Each	26,547.00
88	Add for extra depth beyond 7 feet (2.14 m) including cost of C.I. foot rest at every one foot (305 mm) depth (for depth less than 7 feet or 2.14 m deduct at the same rate)..	1	C.m.	102.49
89	Providing chambers 3-3/4 feet x 3-1/2 feet or 1.14 m x 1.07 m (inside dimensions) x 8 feet (2.44 m) deep as per approved design for sluice valves (27 inches to 30 inches or 686 mm x 762 mm) dia. (inside) cast iron cover and frame (wt = 3 cwt. or 152.4 kg.) fixed in R.C.C. 1:2:4 slab 6 inches (152 mm) thick (with 5 lbs.. steel per CFT or 80.09 kg/cm) 8 inches (205 mm) thick C.C. 1:3:6 block masonry walls set in 1:4 C.M., 6 inches (152 mm) thick C.C. 1:3:6 in foundation, 1 inch (25 mm) thick C.C. 1:2:4 flooring, 1/2 inch (13 mm) thick cement plaster 1:3 to all inside wall surfaces and to top, including providing and fixing C.I. foot rest at every one foot beyond 2-1/2 feet (762 mm) depth including cost of excavation, back filling and disposal of surplus earth etc. complete..	1	Each	40,290.15
90	Providing chamber 2-1/2 feet x 1-1/2 feet or 765 mm x 460 mm (inside dimension) x 4-1/2 feet (1372 mm) deep as per approved design for sluice valve 3 inches to 12 inches (80 mm to 305 mm) dia. with 18 inches (460 mm) dia. (inside) cast iron cover and frame (wt. =1.3 Qtr. or 88.9 kg) fixed in R.C.C. 1:2:4 slab 4 inches (100 mm) thick (with 5 lbs. steel per Cft. or 80.09 kg/cm) 9 inches (229 mm) thick burnt brick masonry walls set in 1:6 C.M., 6 inches (152 mm) thick C.C. 1:3:6 in foundation, 1 inch (25 mm) thick C.C. 1:2:4 flooring 1/2 inch (13 mm) thick cement plaster 1:3 to all inside wall surfaces and to top, including providing and fixing C.I. foot rest at every one foot beyond 2-1/2 feet (765 mm) depth, curing, excavation, back filling and disposal of surplus earth etc. complete...	1	Each	50,087.15
91	Add for extra depth beyond 4-1/2 feet (1.37 M) including cost of C.I. foot rest for every 1 foot (305 mm) depth (for depth less than 4-1/2 feet or 1.37 M deduct at the same rate)..	1	C.m.	135.75
92	Providing chambers 3-1/2 feet x 3-1-12 feet or 1.07 m x 1.07 m (inside dimensions) x 7 feet (2.14 m) deep as per approved design for sluice valves 15 inches to 24 inches (380 mm to 610 mm) dia with 24 inches (610 mm) dia. (inside) cast iron cover and frame (wt = 2 cwt. 2 Qtr. or 127 kg.) fixed in R.C.C. 1:2:4, slab 6 inches (152 mm) thick (with 5 lbs. steel per Cft or 80.09 kg/cm) 9 inches (230 mm) thick burnt brick masonry walls set in 1:4 C.M., 6 inches (152 mm) thick C.C. 1:3:6 in foundation, 1 inch (25 mm) thick C.C. 1:2:4 flooring, 1/2 inch (13 mm) thick cement plaster 1:3 to all inside wall surfaces and to top including providing and fixing C.I. foot rest at every one foot beyond 2-1/2 feet (765 mm) depth, curing, excavation, back filling and disposal of surplus earth etc. complete...	1	Each	47,891.49
93	Add for extra depth beyond 7 feet (2.14 m) including cost of C.I. foot rest at every one foot (305 mm) depth (for depth less than 7 feet or 2.14 M deduct at the same rate)..	1	C.m.	138.25
94	Providing chambers 3-3/4 feet x 3-1/2 feet or (1.14 m x 1.07 m inside dimensions) x 8 feet (2.44 m) deep as per approved design for sluice valves 27 inches to 30 inches (686 mm to 765 mm) dia, with 30 inches (686 mm) dia. (inside) cast iron cover and frame (wt = 3 Cwt. or 190.5 kg) fixed in R.C.C 1:2:4 slab 6 inches (152 mm) thick (with 5 lbs.. steel per CFT or 80.09 kg/cm) 9 inches (229 mm) thick burnt brick masonry walls set in 1:6 C.M., 6 inches (150mm) thick C.C. 1:3:6 in foundation 1" inch thick (25mm) C.C. 1:2:4 flooring, 1/2 inch (13 mm) thick cement plaster 1:3 to all inside wall surfaces and to top, including providing and fixing C.I. foot rest at every one foot (305 mm) beyond 2-1/2 feet (765 mm) depth, curing, excavation, back filling and disposal of surplus earth etc. complete...	1	Each	61,477.73
95	Add for extra depth beyond 8 feet (2.44 m) including cost of C.I. foot rest at every one foot (305 mm) depth, for depth less than 8 feet (2.44 m) deduct at the same rate..	1	C.m.	158.28

96	Providing R.C.C. pipes and collars of class 'B' and fixing in trench including cutting, fitting and jointing with maxphalt composition and cement mortar (1:1) and back filling the excavated material in trench including testing with water to a pressure head of 50 feet (15.24m) and cartage within 10 miles (16.09 km), for 4 inches (100 mm) dia. pipe..	1	Ru.m	586.10
	(i) Do. Do. 6 inches (150 mm) dia. pipe..	1	Ru.m	785.44
	(ii) Do. Do.. 9 inches (230 mm) dia. pipe..	1	Ru.m	1,056.28
	(iii) Do. Do. 12 inches (305 mm) dia. pipe..	1	Ru.m	2,129.83
	(iv) Do. Do. 15 inches (380 mm) dia. pipe..	1	Ru.m	2,943.24
	(v) Do. Do. 18 inches (460 mm) dia. pipe..	1	Ru.m	3,519.75
97	Providing R.C.C. pipes and collars of class 'C' and fixing in trench including cutting, fitting and jointing with maxphalt composition and cement mortar (1:1) and back filling the excavated material in trench including testing with water to a pressure head of 80 feet (25 m) and cartage within 10 miles (16.09 km.), 4 inches (100 mm) dia. pipe...	1	Ru.m	714.66
	(i) Do. Do. 6 inches (150 mm) dia. pipe..	1	Ru.m	831.00
	(ii) Do. Do. 8 inches (200 mm) dia. pipe...	1	Ru.m	812.01
	(iii) Do. Do. 10 inches (250 mm) dia. pipe....	1	Ru.m	1,641.81
	(iv) Do. Do. 12 inches (305 mm) dia. pipe..	1	Ru.m	1,915.10
	(v) Do. Do. 15 inches (380 mm) dia. pipe...	1	Ru.m	2,390.97
	(vi) Do. Do. 18 inches (460 mm) dia. pipe..	1	Ru.m	5,308.16
98	Excavation in soft soils including lift up to 5 feet (1.52 m) and lead up to one chain (30.48 m).	1	Cu.m.	210.96
99	Excavation in sandy soils including lift up to 5 feet (1.52 m) and lead up to one chain (30.48 m).	1	Cu.m.	219.75
100	Excavation in hard soils including lift up to 5 feet (1.52 m) and lead up to one chain (30.48 m)..	1	Cu.m.	228.53
101	Excavation in gravelly soils including lift up to 5 feet (1.52 m) lead up to one chain (30.48 m)..	1	Cu.m.	246.10
102	Excavation for sewerage / drainin work in all kinds of soil, murum, hard, average or soft including lift up to 5 feet (1.52 m) and lead up to one chain (30.48 m)..	1	Cu.m.	272.46
103	Excavation for sewerage / drainin work in soft rock by hammering and chiseling including lift up to 5 feet (1.52 m) and lead up to one chain (30.48 m)..	1	Cu.m.	671.29
104	Excavation for sewerage / drainin work in hard rock by hammering and chiseling including sorting and stacking the excavated stuff in proper stacks within a lead of one chain (30.48 m) and lift up to 5 feet (1.52m)..	1	Cu.m.	1,607.14
105	Excavation for sewerage / drainin work in wet silt, clay or mud including lift up to 5 feet (1.52 m) and lead up to one chain (30.48 m)..	1	Cu.m.	316.93
106	Add for additional lift of every three feet (0.91 m) or part thereof in items 1 to 14..	1	Cu.m.	35.14
107	Add for additional lead of every one chain (30.48 m) or part thereof in items 1 to 14..	1	Cu.m.	35.14
108	Providing and fixing 6" x 4" (150 mm x 100 mm) cement concrete gully trap with 4 inches (100 mm) outlet, complete with 4 inches (100 mm) thick 1:2:4 cement concrete for bed and kerb, 1/2 inch (13 mm) thick cement plaster 1:3 to the kerb, C.I. grating 6 inches x 6 inches (150 mm x 150 mm) and C.I. cover and frame 12" x 12" (305 mm x 305 mm) (inside) etc., complete..	1	Each	1,294.97
	(i) Do. Do. with RCC cover (12" x 12") (305 mm x 305 mm) 2 inches (50 mm) thick with handle. Do. Do.	1	Each	837.17
109	Providing and fixing 6" x 6" (150 mm x 150 mm) with 4 inches (100 mm) outlet cement concrete C.I. gully trap wt: 42 lbs. (19 kg.) complete with 4 inches thick (100 mm) 1:2:4 cement concrete for bed and kerb, 1/2 inch (13 mm) thick cement plaster (1:3) to the kerb, C.I. grating 6 inches x 6 inches (150 mm x 150 mm) and C.I. cover and frame 12 inches x 12 inches (305 mm x 305 mm) (inside) etc., complete...	1	Each	2,101.61
	(i) Do. Do. RCC cover (12" x 12") (305mm x 305mm) thick with handle...	1	Each	1,644.36
110	Providing RCC pipes and collars of class 'A' and fixing in trench including cutting, fitting and jointing with maxphalt composition and cement mortar (1:1) and testing with water to a head of 4 feet (1.22 m) above the top of the highest pipe including cartage within 10 miles (16.09 km.) 4 inches (100 mm) dia. pipe..	1	Ru.m	476.12
	(i) Do. Do. 6 inches (150 mm) dia. pipe..	1	Ru.m	643.83
	(ii) Do. Do. 9 inches (230 mm) dia. pipe.	1	Ru.m	1,014.50
	(iii) Do. Do. 12 inches (305 mm) dia. pipe.	1	Ru.m	1,110.72
	(iv) Do. Do. 15 inches (380 mm) dia. pipe..	1	Ru.m	1,779.73
	(v) Do. Do. 18 inches (460 mm) dia. pipe...	1	Ru.m	2,320.72

111	Providing manhole type 'A' size 2 feet x 1-1/2 feet or (610 mm x 457 mm) (inside dimensions) x 2 feet (610 mm) deep as per approved design and specifications complete for 4 inches to 12 inches (100 to 305 mm) dia pipes up to 3 feet-11 inches (1.19 m) depth with cast iron cover and frame 16 inches (406 mm) dia, inside (weight=1 Cwt.1 Qtr.) or 63.5 kg. fixed in 4 inches (100 mm) thick RCC 1:2:4 slab, 8 inches (203 mm) thick c.c. 1:3:6 block masonry walls set in 1:3 c.m; 6 inches (150 mm) thick 1:3:6 c.c. in foundation 1:2:4 c.c. in benching, 1/2 inches (13 mm) thick cement plaster in 1:3 C.M. to all inside wall surface, channels and benching etc. and to top including making requisite umber of main and branch channels but excluding the cost of excavation back filling and disposal of excavated stuff, manhole cover and frame.	1	Each	8,338.66
112	Add for extra depth beyond 2 feet and up to 3 feet-11 inches (610 mm and up to 1194 mm) for 'A' type manholes (for depth lesser than 2 feet or 610 mm deduct at the same rate)..	1	C.m.	262.47
113	Providing manhole type 'B' size 3 feet x 2-1/2 feet or 914 mm x 762 mm (inside dimensions) x 4 feet (1.22m) deep as per approved design and specifications complete 4 inches to 12 inches (100 mm to 305 mm) dia. pipes 4 feet to 7 feet-5 inches (1.22 m to 2.26 m) depth with cast iron cover and frame 18 inches (460 mm) dia. (inside) weight -1 Cwt. 3 Qtrs. (88.90 kg,) in 6 inches (150 mm) thick RCC 1:2:4 slab, 8 inches (203 mm) thick c.c. 1:3:6 block masonry walls set in 1:3 c.m. 6 inches (150mm) thick, 1:3:6, c.c in foundation 1:2:4 c.c in benching, 1/2 inch (13mm) thick cement plaster in 1:4 c.m. to all inside wall surfaces, channels and benching etc. and to top including providing and fixing cast iron foot rest at every foot of depth and making requisite number of main and branch channels complete but excluding the cost of excavation, back filing, disposal of excavated stuff manhole cover and frame.	1	Each	22,439.75
114	Add for extra depth beyond 4 feet and up to 7 feet -5 inches (1.22 m and up to 2.26 m) 'B' type manholes and including the cost of cast iron foot rest at every foot (305 mm) of depth, (for depth lesser than 4 ft. (1,22 m) deduct at same rate) ..	1	C.m.	73.37
115	Providing manholes type 'C' size 3 feet x 2-1/2 feet or 914 mm x 762 mm (inside dimensions) x 7 1/2 feet (2.28 m) deep as per approved design and specifications complete for 4 inches to 12 inches (100 mm to 300 mm) dia pipe 7 feet-6 inches to 12 Ft. (2.28 to 3.66 m) depth with cast iron cover and frame 18 inches (460 mm) dia. Inside weight=1 Cwt.3 Qrs. (88.90 kg.) fixed in 6 inches (150 mm) thick R.C.C. 1:2:4 Slab, 8 inches (203 mm) thick C.C. 1:3:6 block masonry walls sets in 1:3 C.M., 6 inches (152 mm) thick 1:3:6 C.C. in foundation 1:2:4 C.C. in benching, 1/2 inch (13 mm) thick C.P. in 1:4 Cu.m. to all inside wall surfaces channels and benching etc., and to top including providing and fixing cast iron foot rest at very foot of depth and making requisite number of main and branch channels but excluding the cost of excavation, back filling and disposal of excavated stuff, manhole cover and frame.	1	Each	30,768.41
116	Add for extra depth beyond 7-1/2 feet (2.28 m) and upto 12 feet (3.66 m) for 'C' type manholes including cost of cast iron foot rest at every foot of depth. (For depth lesser than 7-1/2 feet or 2.28 M deduct at the same rate)..	1	C.m.	80.01
117	Providing manholes type 'D' size 4-1/2 feet x 3 feet (1.37 M x 0,91 M) at bottom and 4 feet x 2 feet (914 mm x 610 mm) at top (inside dimensions at both levels) and 13-1/2 feet (4.11 m) deep in all as per design and specifications complete for 6 inches to 15 inches (150 mm x 380 mm) dia. Pipes deeper than 12 ft. (3.66 M) and upto 20 feet. 6.10 m) depth with cast iron cover and frame 20 inches (508 mm) inside (weight-2 Cwt. or 101 kg.) fixed in 6 inches (150 mm) thick R.C.C. 1:2:4 slab and 7 inches (178 mm) thick R.C.C. slab and lintel 1:2:4 for supporting 8 inches (203 mm) thick C.C. 1:3:6 block masonry walls (8 inches or 203 mm thick masonry upto 7 feet-6 inches or 2.28 m depth from top and 16 inches or 406 mm thick masonry 6 feet high from bottom set in 1:4 C.M., 9 inches (229 mm) thick 1:3:6 C.C. in foundation, 1:2:4 C.C. in benching, 1/2 inch (13 mm) thick cement plaster in 1:3 C.M., to all inside wall surfaces, channels and benching etc. and to top including providing and fixing cast iron foot rest at every foot of depth and making requisite number of main and branch channels but excluding the cost of excavation, back filling and disposal of excavated stuff, manhole cover and frame.	1	Each	86,105.43
118	Providing & fixing C.I Cover & Frame 16" dia (406 mm) weight 1 cwt 1 Qtr (63.50 Kg.)	1	Each	10,064.59
119	Providing & fixing C.I Cover & Frame 18" dia (460 mm) weight 1 cwt 3 Qtr (88.90 Kg.)	1	Each	11,282.47
120	Providing & fixing C.I Cover & Frame 24" dia (610 mm) weight 2 cwt 2 Qtr (127.00 Kg.)	1	Each	16,138.66
121	Providing & fixing C.I Cover & Frame 30" dia (765 mm) weight 3 cwt (152.41 Kg.)	1	Each	19,372.53

122	Providing & laying R.C.C 1:2:4 slab cover 3" thick average (precast complete with M.S flat iron, M.S bars embedded in concrete) of any shape including the cost of reinforcement and welding etc. as per direction of Engineer Incharge.	1	Cu.m.	30,205.17
123	Applying two coats of aluminum paint Jenson and Nicholson or its equivalent standard if directed by Engr. In-charge in approved shade over and including priming coat..	1	Sq.m.	211.98
124	Applying two coats of anti corrosive bitumen paint of approved quality on iron work pipe etc..	1	Sq.m.	160.91
125	Providing and wrapping tightly round pipes upto 6 inches (150 mm) dia Hessian soaked in bitumen paint of approved quality...	1	Ru.m	94.23
126	Making open drains 6 inches (150 mm) dia. Semicircular bottoms and vertical sides upto 18 inches (457 mm) deep with cement concrete 1:2:4 of 3/4 inch (20 mm) crushed stones in foundation and sides and 1/2 inch 13 mm thick cement plaster 1:3 cement mortar including making channel etc., complete..	1	Ru.m	943.80
127	Cutting holes in walls 18 inches and 16 inches (457 mm and 406 mm) thick and making them good in cement concrete 1:2:4....	1	Each	525.84
128	Cutting holes in walls 12 inches (305 mm) thick and making them good in cement concrete 1:2:4..	1	Each	432.44
129	Cutting holes in walls 9 inches and 8 inches (229 mm and 203mm) thick and making them good in cement concrete 1:2:4..	1	Each	374.42
130	Cutting holes in walls 6 inches and 4 inches (150 mm and 100 mm) thick and making them good in cement concrete 1:2:4...	1	Each	311.44
131	Making connection with the existing manhole including the cost of cutting holes in walls, making them good in cement concrete 1:2:4 and .making the required channel etc., complete	1	Each	165.06
	Note.- Provision of cutting holes and making them good (required for sanitary fittings and pipe work of all sorts has already been made in the rate of the items under the different sub-heads. The holes in this sub-head shall be paid only in cases where they are meant for any other purpose.			
132	Providing and laying floors of 2 inches (51 mm) thick 1:2:4 cement concrete using graded screened bajri 3/4 inch (19 mm) and down gauge in ground floor laid in panels including form work, consolidation, finishing, and curing etc. complete.	1	Sq.m.	422.81
133	Providing and laying floors of 3 inches (76 mm) thick 1:2:4 cement concrete using graded screened bajri 3/4 inch (19 mm) and down gauge in ground floor laid in panels including form work, consolidation, finishing and curing etc. complete.	1	Sq.m.	594.00
134	Providing and laying floor of 6mm (approx: 1/4") thick white glazed tiles 12" x12" (304mm x 304mm) of master make (Pakistani) first grade in ground floor laid over 1" (25mm) thick cement mortar 1:2 (1 cement and 2 sand) including jointing and washing the tiles with white cement slurry and curing etc, complete.	1	Sq.m.	2,344.45
135	Providing and laying floor of 6mm (approx: 1/4") thick coloured glazed tiles 12" x 12" (304mm x 304mm) of master make (Pakistani) first grade in ground floor laid over 1" (25mm) thick cement mortar 1:2 (1 cement and 2 sand) including jointing and washing the tiles with white cement slurry a matching colour (by using pigment in white cement) and curing etc. complete.	1	Sq.m.	2,542.39
136	Providing and laying floor of 6 mm (approx. 1/4 inch) thick white glazed tiles 6" X 6" (152 mm X 152 mm) Pakistani of approved make in ground floor laid over 1 inch (25 mm) thick cement mortar base 1:2 (one cement two sand) including jointing and washing the tiles with white cement slurry including curing etc. complete.	1	Sq.m.	1,838.59
137	Providing and laying floor of 6 mm (approx. 1/4 inches) thick coloured glazed tiles 6" X 6" (152 mm X 152 mm) Pakistani of approved make in ground floor laid over 1 inch (25 mm) thick cement mortar base 1:2 (one cement 2 sand) including jointing and washing the tiles with white cement slurry of matching colour (by using pigment in white cement) and curing etc. complete.	1	Sq.m.	2,009.70

138	Providing and laying in floor C.C. 1:2:4: tuff paver 2-1/2" thick of approved design and colour patten (average strength 7000 psi) laid on sand cushion filling of joint with sand and warring etc. complete as per direction of Engineer Incharge. (the cost of sand cushion is included)	1	Sq.m.	1,037.04
139	Providing and laying in floor C.C. 1:2:4: tuff pavers 2" thick of approved design and colour and patten (average strength 7000 psi) laid on sand cushion filling of joint with sand and warring etc. complete as per direction of Engineer Incharge. (the cost of sand cushion is included)	1	Sq.m.	853.60
140	Providing and laying light colour, glazed/non skid vitrified porcelean tiles (Polished) not exceeding 1600 Sqcm each, (Pak made) on walls and floors, in any floor, laid with dry bond (stile bond) over a base of 1" thick cement mortar (1:3) including jointing to tiles with joint filler of approved quality as per direction of the Engineer incharge.	1	Sq.m.	2,476.31
141	Providing & laying light/colour unglazed vitrified porcelain tiles (polished) not exceeding 1600 Sq. cm each on walls & floors foreign make (Italian or equivalent except China make) in any floor laid with dry bond (stile bond) over existing floor including jointing the tiles with joint filler of approved quality as per direction of the Engineer incharge.	1	Sq.m.	3,406.01
142	Providing & laying light/colour unglazed vitrified porcelain tiles (polished) not exceeding 1600 Sq. cm each on walls & floors foreign make (Italian or equivalent except China make) in any floor laid with dry bond (stile bond) over on 1" thick cement mortar (1:3) including jointing the tiles with joint filler of approved qualityas per direction of the Engineer incharge.	1	Sq.m.	3,625.92
143	Providing and fixing M.S. moulded steel door frame of 4" x 2-1/2" (102 mm x 64 mm) manufactured from mild steel sheet of 18 gauge (1.41 mm) conforming to BSS. 1245 having a single rebate size 1-1/2" x 1/2" (38 mm x 13 mm) with provision of 3 Nos. M.S. plate, section 1-1/2" x 1/4" (38 mm x 6 mm), (2 Nos. 6 inch long welded with frame at not less than 10 points and 1 No., 12 inch long welded with frame at not less than 20 points), with holes and threads for fixing steel hinges, fitted with one locking box of same sheet (point welded inside the frame), 6 Nos. 6 inches long flat iron fixing lugs, of 1-1/4" x 3/16" section, treated with special red oxide primer coat all around including cutting holes and filling the cavity with cement concrete 1:2:4 etc. in any floor at any height complete as directed by the Engineer-in-Charge	1	Ru.m	663.18
144	Providing and fixing M.S. moulded steel door frames of 5.73" x 2-1/2" (146 mm x 63 mm) manufactured from mild steel sheet of 18 gauge (1.41 mm) conforming to B.S.S. 1245 having a double rebate size 1-1/2" x 1/2" (38 mm x 12 mm) provision of 3 Nos. M.S. plate, section 1-1/2" x 1/4" (38 mm x 6 mm) (2 Nos. 6 inch long welded with frame at not less than 10 points and 1 Nos. 12 inch long welded with frame at not less than 20 points), with holes and threads for fixing steel hings, fitted with one locking box of same sheet (point welded inside the frame), 6 Nos. 6 inches long flat iron fixing lugs of 1-1/4" x 3/16" section, treated with special red oxide primer coat all around including cutting holes and filling the cavity with cement concrete 1:2:4 etc. in any floor at any height complete as directed by the Engineer-in-Charge	1	Ru.m	782.30
145	Providing and fixing best quality deodar wood built in frame with 1/2 inch (13 mm) thick deodar wood beading as stopper for doors, windows, ventilators, clerestory, windows, shelves, partitions, trellis work, etc., as required	1	Cu.m.	232,301.09
146	Providing and fixing best quality deodar wood built in frame with 1/2 inch (13 mm) thick deodar wood beading as stopper for doors, windows, ventilators, clerestory, windows, shelves, partitions, trellis work, etc., as required	1	Sq.m.	9,783.25
147	Providing and fixing 1-3/4 inch (44 mm) thick best quality deodar wood shutters fully panelled with same wood, approved iron hinges and tower bolts, etc., as required..	1	Sq.m.	8,967.93
148	Providing and fixing 1-1/2 inches (38 mm) thick best quality deodar wood shutters fully panelled with commercial ply wood (5 ply), approved iron hinges and tower bolts etc., as required.	1	Sq.m.	6,075.57
149	Providing and fixing 1-1/2 inches (38 mm) thick best quality deodar wood shutters fully panelled with commercial plywood (3 ply), approved iron hinges and tower bolts etc., as required..	1	Sq.m.	5,966.26
150	Providing and fixing with C.P. brass screws dado main door lock with handle (USA make) of approved design, cutting wood etc., to required size, with two operating keys as per direction of the Engineer-in-Charge .	1	Each	16,619.72

151	Providing and fixing with brass screws or specially supplied screws yale night latch of approved design and colour (No. 3612), (Japan make) cutting wood etc., to required shape and size with two operating keys as per direction of the Engineer-in-Charge.	1	Each	5,340.89
152	Providing and fixing with brass or specially supplied screws yale night latch design No. 620, (Japan make) cutting wood etc., to required shape and design as per direction of the Engineer-in-Charge .	1	Each	5,340.89
153	Providing and fixing with brass screws or specially supplied screws yale night latch design of approved design No. 610, Italian make, cutting wood etc., to required shape and size as per direction of the Engineer-in-charge.	1	Each	5,340.89
154	Providing and fixing with brass screws or specially supplied screws night latch design No. 558, China make, cutting wood, etc., to required shape as per direction of the Engineer-in-Charge .	1	Each	1,042.02
155	Providing and fixing with brass screws or specialty supplied screws hydraulic door closer Rayobi of approved design No. 62, Japan make, cutting wood etc., to required shape and size as per direction of engineer-in-charge.	1	Each	2,883.68
156	Providing and fixing with brass screws Alpha "W" lock knob set Plain Latch of approved design (Japan make) cutting wood to required shape and size with two operating keys as per direction of the Engineer-in-Charge	1	Each	1,809.67
157	Providing and fixing with brass screws lucky lock knob set of approved design (Taiwan make) cutting wood to required shape and size with two operating keys as per direction of the Engineer-in-Charge.	1	Each	2,347.03
158	Providing and fixing with brass screws door Alpha lock with handle of approved design (Taiwan make), cutting wood etc., to required shape and size with two operating keys as per direction of the Engineer-in-Charge.	1	Each	1,036.33
159	Providing and fixing with brass screws door Alpha "W" high living lock of approved design (Japan make), cutting wood etc., to required shape and size with two operating keys as per direction of the Engineer-in-Charge.	1	Each	4,337.25
160	Providing and fixing with brass screws door Alpha lock of approved design (Taiwan make), cutting wood etc., to required shape and size with two operating keys as per direction of the Engineer-in-Charge .	1	Each	1,113.10
161	Providing and fixing with brass screws approved piano hinges of brass sheet 3/4" (19 mm) wide as per direction of the Engineer-in-Charge .	1	Rft.	333.62
162	Providing and fixing with C.P.brass screws approved piano hinges of aluminium sheet 3/4" (19 mm) wide as per direction of the Engineer-in-charge .	1	Rft.	268.22
163	Providing and fixing approved brass sliding bolts or aldrops bolts 12" x 3/4" (305 mm x 19 mm) size with necessary brass screws and iron bolts and nuts.	1	Each	2,186.00
164	Providing and fixing approved brass sliding bolts or aldrops bolts 10" x 5/8" (254 mm x 16 mm) size with necessary brass screws and iron bolts and nuts	1	Each	1,368.59
165	Providing and fixing approved heavy type oxidised iron sliding or aldrops bolts 9" x 5/8- (229 mm x 16 mm) size with necessary oxidised iron screws and oxidised iron bolts and nuts.	1	Each	327.75
166	Providing and fixing approved heavy type oxidised iron sliding or aldrops bolts 6" x 1/2" (152 mm x 13 mm) size with necessary oxidised iron screws and oxidised iron bolts and nuts.	1	Each	339.06
167	Providing and fixing approved heavy type iron sliding or aldrops bolts 12" x 3/4" (305 mm x 19 mm) size with necessary iron screws, iron bolts and nuts .	1	Each	576.79
168	Providing and fixing approved heavy type iron sliding or aldrops bolts 10" x 5/8" (254 mm x 16 mm) size with necessary iron screws, iron bolts and nuts .	1	Each	292.47
169	Dismantling cement concrete block masonry work in lime or cement mortar in foundation, basement, plinth and ground floor including stacking salvaged material (serviceable) and disposing of surplus material as directed with in three chains (91.5 m).	1	Cu.m.	449.31
170	Dismantling hollow cement concrete block masonry in lime or cement mortar in foundation, basement, plinth and ground floor including stacking salvaged material (serviceable) and disposing..of surplus material as directed within three chains (91.5 m) .	1	Cu.m.	493.24
171	Dismantling lime or cement concrete in foundation or under floor basement, plinth and ground floor and disposing of surplus material as directed within three chains (91.5 m)..	1	Cu.m.	537.17
172	Dismantling D.P.C. of cement concrete and disposing of the material as directed within three chains (91.5 m)..	1	Cu.m.	449.31

173	Dismantling R.C.C. including separating reinforcement from concrete in foundation, basement, plinth and ground floor including stacking at site and disposing of unserviceable material within three chains (91.5 m)	1	Cu.m.	1,260.09
174	Dismantling C.C. work cast in situ in foundation, basement, plinth and ground floor including disposing of the material as directed within three chains (91.5 m).	1	Cu.m.	981.46
175	Providing and laying mild steel plain reinforcement bars (having minimum yield strength of 36,000 psi) with and including the cost of straightening, cutting, bending, binding, wastage, and such overlaps as are not shown over the drawings, placing in position on cement concrete 1:2:4 precast or m.s. chairs, tying with binding wire, cost of chair and wires etc. in all kinds of RCC work in foundation, basement, plinth and ground floor of building including septic tank and under ground tank and in projections for future extension .	1	Kg.	127.37
176	Providing and laying in situ 1:4:8 cement concrete in walls more than 6 inches (152 mm) in thickness in superstructure using screened graded bajri 3/4 inch (19 mm) and down gauge including compacting, curing, cost of form work and its removal etc. complete in ground floor .	1	Cu.m.	7,140.04
177	Providing and laying in situ 1:3:6 cement concrete in walls more than 6 inches (152 mm) in thickness in superstructure using screened graded bajri 3/4 inch (19 mm) and down gauge including compacting, curing, cost of form work and its removal etc. complete in ground floor .	1	Cu.m.	7,773.34
178	Providing and laying in situ 1:2:4 cement concrete in walls more than 6 inches (152 mm) in thickness in superstructure using screened graded bajri 3/4 inch (19 mm) and down gauge including compacting, curing, cost of form work and its removal etc. complete in ground floor .	1	Cu.m.	8,795.96
179	Providing and laying 1:3:6 cement concrete solid block masonry 4 to 6 inches (102 mm to 152 mm) thick using graded screened bajri 3/4 inch (19 mm) and down gauge set in lime cement mortar 1:1:6 including scaffolding, raking out joints and curing etc. complete in ground floor superstructure.	1	Cu.m.	6,663.90
180	3/4" (19 mm) thick cement plaster 1:3 on walls and columns etc. in basement, plinth, mezzanine and ground floor including making edges, corners, and curing etc., complete.	1	Sq.m.	362.11
181	1" (25 mm) thick cement plaster 1:3 on walls and columns etc. in basement, plinth, mezzanine and ground floor including making edges, corners, and curing etc., complete.	1	Sq.m.	465.80
182	Painting wood work with super glass enamel paint of approved make and shade two coats over and including the cost of one coat of priming complete at any height in any floor .	1	Sq.m.	359.51
183	Painting plastered surface with super glass synthetic enamel paint of approved make and shade two coats over and including the cost of one coat of priming complete at any height in any floor	1	Sq.m.	316.17
184	Painting iron work with enamel paint of approved make and shade two coats over and including the cost of one coat of priming complete at any height in any floor.	1	Sq.m.	376.99
185	Painting with (ICI) Dulux plastic emulsion paint VIP of approved shade two coats over and including the cost of one priming coat complete over plastered surface at any height in any floor .	1	Sq.m.	379.72
186	Applying two coats of enamel paint of approved quality and shade over a coat of red oxide on following dia pipes including special complete in all floors.			
	(i) 1/2" (15 mm) dia pipes	1	Ru.m	26.18
	(ii) 3/4" (20 mm) dia pipes	1	Ru.m	32.16
	(iii) 1" (25 mm) dia pipes	1	Ru.m	41.67
	(iv) 1-1/2" (40 mm) dia pipes	1	Ru.m	59.52
	(v) 2" (50 mm) dia pipes	1	Ru.m	73.79
	(vi) 3" (75 mm) dia pipes	1	Ru.m	109.48
	(vii) 4" (100 mm) dia pipes	1	Ru.m	140.46
(viii) 6" (150 mm) dia pipes	1	Ru.m	201.45	
187	Providing and fixing 25 mm (01 inch) Mechanical meter kent / elester or equivalent made including all necessary fittings but excluding the cost of chamber and pipe length complete in all respects.*	1	Each	58,655
188	Providing and fixing 50 mm (02 inch) Mechanical water meter kent / elester or equivalent made including all necessary fittings but excluding the cost of chamber and pipe length complete in all respects.*	1	Each	60,410
189	Providing and fixing 75 mm (03 inch) Mechanical water meter kent / elester or equivalent made including all necessary fittings but excluding the cost of chamber and pipe length complete in all respects.*	1	Each	68,743
190	Providing and fixing 100 mm (04 inch) Mechanical water meter kent / elester or equivalent made including all necessary fittings but excluding the cost of chamber and pipe length complete in all respects.*	1	Each	82,939
191	Providing and fixing 152 mm (06 inch) Mechanical water meter kent / elester or equivalent made including all necessary fittings but excluding the cost of chamber and pipe length complete in all respects.*	1	Each	144,583
192	Providing and fixing 204 mm (08 inch) Mechanical water meter kent / elester or equivalent made including all necessary fittings but excluding the cost of chamber and pipe length complete in all respects.*	1	Each	171,856
193	Providing and fixing 304 mm (12 inch) Mechanical water meter kent / elester or equivalent made including all necessary fittings but excluding the cost of chamber and pipe length complete in all respects.*	1	Each	430,388

194	Providing and fixing 25 mm (01 inch) dia Electromagnetic flow meter seimens or equivalent made including all necessary fittings but excluding the cost of chamber and pipe length complete in all respects.*	1	Each	153,176
195	Providing and fixing 50 mm (02 inch) dia Electromagnetic flow meter Elster Brand UK or equivalent made including all necessary fittings but excluding the cost of chamber and pipe length complete in all respects.*	1	Each	267,871
196	Providing and fixing 75 mm (03 inch) dia Electromagnetic flow meter Elster Brand UK or equivalent made including all necessary fittings but excluding the cost of chamber and pipe length complete in all respects.*	1	Each	387,797
197	Providing and fixing 102 mm (04 inch) dia Electromagnetic flow meter Elster Brand UK or equivalent made including all necessary fittings but excluding the cost of chamber and pipe length complete in all respects.*	1	Each	567,125
198	Providing and fixing 152 mm (06 inch) dia Electromagnetic flow meter Elster Brand UK or equivalent made including all necessary fittings but excluding the cost of chamber and pipe length complete in all respects.*	1	Each	694,896
199	Providing and fixing 200 mm (08 inch) dia Electromagnetic flow meter Elster Brand UK or equivalent made including all necessary fittings but excluding the cost of chamber and pipe length complete in all respects.*	1	Each	734,124
200	Providing and fixing 300 mm (12 inch) dia Electromagnetic flow meter Elster Brand UK or equivalent made including all necessary fittings but excluding the cost of chamber and pipe length complete in all respects.*	1	Each	1,126,404
201	Providing and fixing brass garden splinkers of 75 mm to 38 mm dia complete with necessary fittings but excluding the cost of valves and pipe length complete in all respects.*	1	Each	11,423
202	Cleaning of sewerage mainhole manually upto 5 feet depth including removal of rubbish and debries complete in all respects.*	1	Each	1,144
203	Cleaning of sewerage mainhole manually from 5 feet to 10 feet depth including removal of rubbish and debries complete in all respects.*	1	Each	1,456
204	Cleaning of sewerage mainhole manually more than 10 feet depth including removal of rubbish and debries complete in all respects.*	1	Ru.m	2,295
205	Routin cleaning of sawerage line manually including removal of rubbish and debries complete in all respects. (RA for 60 meter length)*	1	Ru.m	68
206	Cleaning of blocked sewerage line manually including removal of rubbish and debries complete in all respects.(RA for 60 meter length)*	1	Ru.m	124
207	Cleaning of blocked sewerage line using mechanical equipment including removal of rubbish and debries complete in all respects.(RA for 60 meter length)*	1	Ru.m	493
208	Cleaning of Underground water tank of any size and description including removal of rubbish and debries and apply chemical treatment to tank complete in all respects.*	1	Cu.m.	525
209	Cleaning of Over head water tank of any size and description including removal of rubbish and debries and apply chemical treatment to tank complete in all respects.*	1	Cu.m.	871
210	Providing Sweeper for any routine / emergency work including all travelling allowance*	1	Each	949
211	Providing Plumber helper for any routine / emergency work including all travelling allowance*	1	Each	949
212	Providing Skilled Plumber for any routine / emergency work including all travelling allowance*	1	Each	1,582
213	Providing Skilled Labour for any routine / emergency work including all travelling allowance*	1	Each	1,000
214	Providing laying and fixing following size quality Geysers (Water heated) with all necessary fitting and fixures, complete in all respect as directed by the Engineer.*			
	(i) Gas Geyser 50 gallons.	1	Each	41,210
	(ii) Gas Geyser 30 gallons.	1	Each	28,500
	(iii) Electric Geyser 20 gallons.	1	Each	21,000
	(iv) Electric Geyser 08 gallons.	1	Each	20,000
(v) Electric Geyser 05 gallons.	1	Each	18,500	
215	Providing and fixing cost iron / M.S Steel for pipe such as, clamp, tee, cross saddle, flanged tail piece, reducer, short pierce tie dibault joint etc. completed, of required weight and suitable for the specified pressure, fitting shall be measured as per number installed*			
	(i) 300 mm	1	Each	29,273
	(ii) 250 mm	1	Each	22,087
	(iii) 200 mm	1	Each	16,733
	(iv) 150 mm	1	Each	8,131
(v) 100 mm	1	Each	3,613	

216	Repairing and services of non-return, sluice and gate valves of following dia including replacing 25% - 50% parts disconnecting and fixing in its original place complete in all respects i.e. testing painting etc. and as directed by the Engineer.* A: Replacing of Spindle			
	(i) 450 mm	1	No.	6,091
	(ii) 400 mm	1	No.	4,867
	(iii) 350 mm	1	No.	4,542
	(iv) 300 mm	1	No.	3,962
	(v) 250 mm	1	No.	3,290
	(vi) 200 mm	1	No.	3,131
	(vii) 150 mm	1	No.	2,732
	(viii) 100 mm	1	No.	2,249
	B: Replacing of Set			
	(i) 450 mm	1	No.	19,354
	(ii) 400 mm	1	No.	18,216
	(iii) 350 mm	1	No.	15,939
	(iv) 300 mm	1	No.	14,800
	(v) 250 mm	1	No.	13,662
	(vi) 200 mm	1	No.	11,385
	(vii) 150 mm	1	No.	9,108
	(viii) 100 mm	1	No.	6,831
	C: Replacing of Gland Dori			
(i) 450 mm	1	No.	239	
(ii) 400 mm	1	No.	205	
(iii) 350 mm	1	No.	182	
(iv) 300 mm	1	No.	142	
(v) 250 mm	1	No.	137	
(vi) 200 mm	1	No.	124	
(vii) 150 mm	1	No.	114	
(viii) 100 mm	1	No.	103	
217	Providing and fixing sluice gate valves of design standard BS 5150/API 600 compliance with EN 1171/BS 5163 having nominal pressure PN-16--Class 125 S.S. Cr. 13% Seat & Stem with Nuts, Bolts, Gas kit/Rubber packing including labour complete in all respect as per stisfacion of Engineer / Incharge.* <i>(Note: This items will be use after aproval of Authriry)</i>			
	(i) 450 mm	1	No.	356,324
	(ii) 400 mm	1	No.	323,931
	(iii) 350 mm	1	No.	294,483
	(iv) 300 mm	1	No.	267,712
	(v) 250 mm	1	No.	197,512
	(vi) 200 mm	1	No.	109,512
	(vii) 150 mm	1	No.	76,318
	(viii) 100 mm	1	No.	46,483
TOTAL			Rs.	8,934,265.68

I / We hereby quote _____ % (in words _____ percentage) above / below of each unit rate mentioned in the BOQs applicable to all items and my / our bid for the purposes of bid evaluation in Rs: _____ (Rupees _____ only) on the basis of the aforesaid mention percentage above / below of the total of the unit rates of Rs: _____ / = stated in the BOQs.

GENERAL REQUIREMENTS

01 GENERAL

The General Conditions of Contract Part I & II shall form an integral part of these General Requirements.

The Contractor shall notify all sub-contractors of the provisions of the Conditions of Contract and the General Requirement of this Specification.

The arrangement and divisions of these Specifications is not to be construed as establishing the limits of responsibility of sub-trades.

The Contractor is responsible for delineating the scope of Sub-Contracts and for coordinating all the Works.

All works shall be carried out in accordance with the following specifications, supplemented by detailed specifications contained in the following sections. Any inconsistencies or ambiguities shall be brought to the notice of the Engineer for his clarification/decision. Decision and direction of the Engineer, in all such cases, shall be final and binding.

The Contractor shall make himself thoroughly familiar with the site conditions, foresee any and all problems likely to be encountered during execution of the works, and shall be able and ready to solve them effectively. Proposals for solutions to the problems shall be submitted to the Engineer for approval before proceeding with the work.

02 APPLICABLE CODES AND STANDARDS

In the absence of other Standards being required by the Contract Documents, all work and materials shall meet the requirement of the Uniform Building Code of the United States, and/or applicable American Society for Testing Materials (ASTM) American Association of State Highway and Transportation Officials (AASHTO) Specifications and the latest American Concrete Institute Manual of Concrete Practice and American Institute of Steel Construction (AISC) Manual relevant to the Works except in cases where the Pakistan Building Code requires a higher standard. In such cases the Pakistani Code shall govern. Where the abbreviations listed below are used, it refers to the latest code, standards, or publication of the following organizations:

AASHTO American Association of State Highway and Transportation Officials.

ACI American Concrete Institute

AISC American Institute of Steel Construction

ANSI American National Standards Institute

ASA American Standard Association

ASCE American Society of Civil Engineers

ASTM American Society for Testing and Material

AWS American Welding Society

BSI British Standards Institute

ICAO International Civil Aviation Organization

BSICP British Standard Institute Code of Practice

PCA Portland Cement Association

PSI Pakistan Standard Institute

UBC Uniform Building Code

Should the Contractor, at any time and for any specific reasons, wish to deviate from the above standards or desires to use materials or equipment other than those provided for by the above standards, then he shall state the exact nature of the change giving the reasons

for making the change and shall submit complete specifications of the materials and descriptions of the equipment for the Engineer's approval, whose decisions shall be conclusive and binding upon the Contractor.

03 CODES, STANDARDS, CERTIFICATES

The Contractor shall supply and have at his site office:

Copies of all latest editions of codes and standards referred to in these specifications by number, or equivalent codes and standards approved by the Engineer.

Catalogues and published recommendations from manufacturers supplying products and materials for the project.

The Contractor shall provide manufacturer's or supplier's certificates to the Engineer for all products and materials which must meet the requirements of a specific code or standard as stated in these Specifications.

04 UNITS OF MEASUREMENTS

The International System of Units (SI) shall be used throughout this Project.

05 MANUFACTURER'S RECOMMENDATIONS

Installation of manufactured items shall be in accordance with procedures recommended by the manufacturer or as approved by the Engineer.

06 EXISTING CONDITION AT SITE

Drawings and information pertaining to existing project conditions are furnished for reference.

Neither the Employer nor the Engineer warrants the adequacy or correctness of these.

07 PROTECTION AND PRECAUTIONS

The Contractor and his sub-contractors shall afford all necessary protection to existing structures and will be required to make good at his own expense any damage done to such structures through his own or his representatives or subcontractors' fault and negligence.

The Contractor and his sub-contractors shall afford all necessary protection to existing roads in the area. He will clear and make good at his own expense any damage to or debris on these roads through his own fault and negligence. He must at all time ensure the free and normal flow of traffic and shall not cause obstruction to the traffic system. The Contractor and his sub-contractors shall provide and maintain necessary protection and precautionary measures such as warning signs, warning lamps and barricades etc. to prevent accidents.

The Contractor shall promptly correct all such damage to original condition at no additional expense to the Employer.

The Contractor shall cooperate with trades performing work under other Contracts as necessary for completion.

08 SETTING OUT OF WORK

Establish all boundaries, markers, levelling stakes and bench marks on the site to adequately set out all work. Verify all data and their relationship to established and Engineer's survey control points and public bench-marks and report discrepancies to the Engineer. Permanently mark the necessary controls for distance and elevation sufficient to serve throughout the Contract and protect these control points adequately against damage and displacement.

Project setting out is for the use of all trades; each trade is responsible for the layout of its own work.

09 SEQUENCE OF CONSTRUCTION

The Contractor shall submit his proposal for approval of the Engineer the sequence of Construction, prior to starting the works. The works shall be executed as per approved sequence of construction.

10 LINES AND LEVELS

Survey control points will be established by the Engineer. The Contractor shall be responsible for verifying these and shall be responsible for all requirements necessary for the execution of any work to the locations, lines, and levels specified or shown on the drawings, subject to such modifications as the Engineer may require as work progresses.

11 PARTIAL POSSESSION

Whenever, as determined by the Employer any portion of work performed by the Contractor is in a condition suitable for use, the Employer may take possession of or use such portion.

Such use by the Employer shall in no instance be construed as constituting final acceptance, and shall neither relieve the Contractor of any of his responsibilities under the Contract, nor acts a waiver by the Employer of any of the conditions thereof, provided that the Contractor shall not be liable for the cost of repairs, re-work, or renewals which may be required due to ordinary wear and tear resulting from such use. However, if such use increase the cost or delays to the completion of remaining portions of work, the Contractor will be entitled to an equitable adjustment.

If, as a result of the Contractor's failure to comply with the provision of the Contract, such use proves to be unsatisfactory, the Employer will have the right to continue such use until such portion of the work can, without injury to the Employer, be taken out of service for correction of defects, errors, omissions, or replacement of unsatisfactory materials or equipment, as necessary for such work to comply with the Contract; provided that the period of such operation or use pending completion of appropriate remedial action shall not exceed twelve months unless otherwise mutually agreed upon in writing between the parties.

12 EXISTING SERVICES

The Contractor shall search for, find, locate and protect any wiring, cable, duct, pipework, etc., within or immediately adjoining the site area.

The Contractor shall take full responsibly for safety of existing service lines, utilities and utility structures uncovered or encountered during excavation and construction operations.

The Contractor shall take full responsibility for damaging any such service lines, utility/utility structure and any cost and/or expense that arises or issues from any such damage shall be borne directly by himself. Should any damage to any such service occur the Contractor shall forthwith take remedial action, initiate safety precautions, install temporary services and carryout repair all at his own cost and expense and inform the Engineer and notify all relevant authorities. Existing utilities which are to remain in service for or after the works are to be determined by the Contractor. If any existing service lines, utilities and utility structures which are to remain in service are uncovered or encountered during these operations, they shall be safeguarded, protected from damage, and supported.

13 PLANT AND EQUIPMENT

The Contractor shall submit a detailed list of plant and equipment which he shall undertake to bring to the site to carry out the work. The list shall satisfy the Engineer as to type, size and quantity. The list shall include for each piece of equipment the type, manufacturer, model, identification number and year of manufacture. The Contractor shall provide on the site of the work at his cost all of the equipment listed and all subsequent equipment required for approval of the detailed programme of work and such equipment which may be directed by the Engineer. The Contractor shall supply all plant and equipment necessary for the construction of each phase of the work and it must be on site, inspected and approved by the Engineer.

14 CONSTRUCTION AREA AND ACCESS

The Contractor shall confine his operations to the areas that are actually required for the Works and shall fence the area accordingly. Arrangements for access roads, storage areas and routes for haulage of materials are to be made by the Contractor at his own cost, subject to the approval of the Engineer.

15 STORAGE & HANDLING FACILITIES

The Employer will provide the Contractor possible space within or nearby the area of site of works for the storage of plant, equipment and materials and for Contractor's temporary office, during the currency of the Contract. In case the adjacent area as required by the Contractor is not available within the Project boundary for storage of plant, equipment and machines then the Contractor shall arrange at his own expense possible space for storage of plant, equipment and machines at his own cost and expense. On no account shall such temporary installations conflict/interfere with any of the permanent installations, services and any operational function of Employer. The handling and storage of all plants, equipment and materials at site shall be the sole responsibility of the Contractor and at no risk and cost to the Employer.

The Contractor shall protect all material against corrosion, mechanical damage or deterioration during storage and erection on site. The protection methods shall be to the approval of the Engineer.

16 TEST LABORATORY AND TESTING

16.1 Testing, except as otherwise specified herein, shall be performed by an approved testing agency as proposed by the Contractor and at no extra cost to the Employer. The Engineer may require all testing to be carried out under his supervision only.

16.2 If suitable and adequate material testing laboratory is not available in the vicinity, then the Contractor shall provide and maintain a materials testing laboratory in the vicinity of the Contractor's Camp and the laboratory shall have sufficient working area and shall be equipped with all necessary facilities including a suitable store room.

16.3 The Contractor shall supply and maintain to the satisfaction of the Engineer or his representative complete testing equipment, apparatus, tools, gauges, instruments, etc. in sufficient number and adequate for all tests to be carried out as specified in these specifications. Valid calibration certificates of gauges / instruments / equipment shall be provided by the Contractor.

16.4 The Contractor, after the approval by the Engineer for the source of cement and steel shall make available at the site sufficient stock of the materials in advance in order to allow sample testing for quality control prior to use.

16.5 The quality control testing shall be performed by the Contractor's competent personnel in accordance with a site testing and quality control programme to be established by the Contractor and approved by the Engineer or his Representative. The Contractor

shall keep a complete record of all quality tests performed on site and submit the same to the Engineer. All quality control and related tests shall be carried out in accordance with applicable standards and codes.

17 CONSTRUCTION & CHECKING AT SITE

The Contractor shall submit to the Engineer in due time for approval and discussion, his proposals and plans as to the method and procedure to be adopted for the temporary and permanent works involved.

The submitting to these suggestions and arrangements, and the approval thereof by the Engineer shall not relieve the Contractor of his responsibilities and duties under the Contract.

The carrying out of all work included in the Contract is to be supervised by a sufficient number of qualified representatives of the Contractor and full facilities and assistance are to be afforded by the Contractor for the Engineer or his Representative to check & examine the execution of the work.

The Engineer reserves the right to inspect all parts of the works but may at his discretion waive inspection on certain items. This shall in no way absolve the Contractor from his responsibilities. This particularly applies to the checking of materials, the accurate setting out of foundations, and to the levelling, setting and aligning of the various parts, and to the proper fitting and adjustment of manufactured and finished materials and fixtures in position.

If the Engineer or his Representative find that the work progress is slow in such a way that the works or parts thereof will not be completed in the time specified, then he shall order the Contractor to work overtime or in shifts and the Contractor shall comply. These arrangements will be free of all financial encumbrances and at no additional costs to the Employer.

In the event of night work, the Contractor shall provide sufficient and adequate lighting to the satisfaction of the Engineer or his Representative and shall supply the necessary manpower for satisfactory continuation of the work after normal hours.

18 BAR BENDING SCHEDULE

Bar bending (reinforcement bars) schedule of all drawings shall be prepared by the Contractor and submitted in triplicate to the Engineer for approval.

19 DRAWINGS

19.1 Tender Drawings: The drawings listed in the General Conditions of Contract, Volume I and provided in Volume III are referred to as Tender Drawings and these show the scope of work to be performed by the Contractor. Tender Drawings shall not be used as a basis for fabrication or construction but may be used as a basis for placing preliminary order for materials, subject to corrections based on the future issue of Drawings as provided under sub-clause 19.2 Drawings Issued for Construction. Tender Drawings are subject to be modified and supplemented by additional detail by the Engineer.

19.2 Drawings Issued for Construction: After Award of Contract, Tender Drawings shall be placed by Drawings Issued for Construction including supplementary Specifications as may be necessary. Such drawings and specifications shall be construed to be included in the expression Custody of Drawings under Sub-Clause 6.1 of General Conditions of Contract Part I. Drawings Issued for Construction may include some of the Tender Drawings with or without modification and additional drawings as required to express design intent in greater detail. Such drawings may also be modified from time to time.

Drawings Issued for Construction will be the drawings from which shop, fabrication, erection, installation, concrete placing, formwork, or other construction detail drawings shall be prepared by the Contractor. The work shall be executed in conformity with Drawings Issued for Construction. The Contractor shall prepare a schedule of Drawings Issued for Construction of various parts of the Works based on Construction programme approved by the Engineer for issuance to the Contractor from time to time.

19.3 Study of Drawings: The Contractor shall study all Drawings Issued for Construction carefully as soon as practicable after receipt thereof, and any errors discovered shall promptly be brought to the knowledge of the Engineer for his instructions.

19.4 Copies of Drawing: Drawings will be issued to the Contractor free of charge as follows:

Drawings Issued for Construction - Two copies as specified in sub-clause 6.1 Custody of Drawings, of General Conditions of Contract - Part I Volume I.

19.5 Drawings to be furnished by the Contractor:

(a) Shop Drawings.

All 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 Engineer. If additional detail drawings are necessary to complete any part of the work, such including reinforcing steel, drawings shall be prepared by the Contractor and submitted to the Engineer for approval. All drawings shall be complete and shall be submitted in due time and in logical order to facilitate proper coordination.

(b) Lift and placement Drawings.

At least thirty calendar days prior to starting construction of any concrete lift or other placement, the Contractor shall submit lift or other placement drawings to the Engineer for approval. Lift or other placement drawings shall be submitted for each lift or other placement of concrete to be placed. These drawings shall be to such scale as to clearly show all recesses, openings, and embedded parts, including embedded structural steel, mechanical and electrical items, reinforcement placement in each lift in sufficient detail for proper execution of the work.

(c) Construction Plant Layout Drawings.

Three prints of drawings, showing the layout of construction plant and equipment the Contractor proposes to use on the work, shall be submitted by the Contractor for review to the Engineer. The drawings shall show the locations of the principal components of the construction plant, offices; storage areas and yards which the Contractor proposes to construct or use at the site of the work and elsewhere. The drawings shall also show the unloading facilities for materials and equipment at the work site.

19.6 Submissions and Approvals:

(a) Except as otherwise specified, three copies of each drawing for approval or review shall be furnished to the Engineer. Within thirty calendar days after receipt, the Engineer will send one copy to the Contractor marked Approved, Approved/Except as Noted, or Returned for Correction. The notations Approved and Approved/Except as Noted will authorize the Contractor to proceed with the fabrication of the materials and equipment covered by such drawings subject to the corrections, if any, indicated thereon.

correction will be resubmitted for approval in the same manner as for new drawings. Every revision made during the life of the Contract shall be shown by number, date and subject in a revision block.

(b) Upon receipt of prints which have been Approved or Approved Except as Noted, the Contractor shall furnish three prints plus one reproducible of each drawing to the Engineer.

If revisions are made after a drawing has been approved, the Contractor shall furnish 3 additional prints and one reproducible subsequent to each approved revision.

(c) Shop drawings to be prepared by a Sub-contractor shall be submitted in the same manner as (a) & (b) above but they will be submitted through the Contractor.

(d) All of the applicable requirements of this Clause with reference to drawings to be prepared by the Contractor, including Sub-contractors, shall apply equally to catalogue cuts, illustrations, printed specifications, or other data submitted for approval.

(e) Any work done on Contractor's drawings shall be at the Contractor's risk. The Engineer will have the right to request any additional details and to require the Contractor to make any changes in the drawings which are necessary to conform to the provisions and intent of design and specifications without additional cost to the Employer. The approval of the drawings by the Engineer shall not be construed as a complete check but will indicate only that the general method of construction and detailing is satisfactory. Approval by the Engineer of the Contractor's drawings shall not be held to relieve the Contractor of his obligation to meet all the requirements of the Specifications or of his responsibility for the correctness of the Contractor's drawings or of his responsibility for correct fit of assembled parts in final position or of his responsibility for the adequacy of method of construction.

20 AS-BUILT DRAWINGS

The Contractor shall, at all times, keep on the site one copy of all drawings and approved samples together with copies of all building, mechanical, electrical and public safety codes and relevant standards applicable to the works. All such material shall be made available to the Engineer.

In addition, the Contractor shall, at all times, keep on site a separate set of prints on which shall be noted neatly, accurately and promptly as the work progresses all significant changes between the work shown on the drawings and that which is actually constructed. The sub-Contractors shall each keep on site, at all times, a separate set of prints of the drawings showing their parts of the work on which shall be noted, neatly accurately and promptly as work progresses the exact physical location and configuration of the works as actually installed, including any revisions or deviation from the Contract Documents.

At the completion of the works, the Contractor shall at his expense, supply to the Engineer six copies and one reproducible copy of all drawings alongwith CD containing all as built drawings amended to comply with the work "As Built". The Contractor shall provide in the same format as the original drawings, any additional drawing required to record the work.

21 RESTORATION AND CLEANING

The Contractor shall do regular cleaning and clean away all rubbish and excess materials that may accumulate from time to time on completion and before handing over. Upon completion of the works he shall obliterate all signs of temporary construction facilities such as work areas, structures, foundations of temporary structures, stock piles of excess or waste materials, or any other vestiges of construction, unless otherwise directed by the Engineer. The works and site shall be left in a clean and satisfactory state for immediate use and occupation. Care shall be taken not to use any cleaning materials which may cause damage to the surface to be cleaned.

22 PROTECTION OF THE WORKS

The Contractor shall whenever necessary cover up and protect the works from weather and damage by his own or other workmen performing subsequent operation. He shall provide all necessary dust sheets, barriers and guard rails and clear away the same at completion. The Contractor shall take all proper steps for protection at all places on or about the works which may be dangerous to his workmen or any other person or to traffic. The Contractor shall provide and maintain warning signs, warning lamps and barricades as necessary.

23 PRODUCT DATA

Manufacturer's standard schematic drawings shall be modified or deleted to indicate only information which is applicable to the project. Such standard information shall be supplemented to provide all additional applicable information.

Manufacturer's catalogue sheets, brochures, diagrams, schedules, performance charts, illustrations and other standard descriptive literature shall be clearly marked to identify pertinent materials products or models. Dimensions and required clearances shall be indicated. Shop performance characteristics and capacities shall be noted.

24 SAMPLES

24.1 The Contractor shall furnish for approval of the Engineer with reasonable promptness all samples as directed by the Engineer or specifically called for in these Specifications. The Engineer shall check and approve such samples with reasonable promptness for compliance with the requirements of Contract Documents. All work shall be in accordance with approved samples.

24.2 Duplicate final approved samples, in addition to any required for the Contractor's use, shall be furnished to the Engineer, one for office use and the other for the Site.

24.3 Samples shall be furnished so as not to delay fabrication, allowing the Engineer reasonable time for consideration of the sample submitted.

24.4 Each sample shall be properly labeled with the name and quality of the material, manufacturer's name, name of the project, the Contractor's name and the date of submission, and the Specifications Article number to which the sample refers.

24.5 The manufacturer's installation directions shall be provided with each sample. The Contractor shall pay all transportation costs and deliver samples to the Engineer's office, Site or testing laboratory as directed by the Engineer.

Samples will not be returned unless return is requested at the time of submission; all packing and transportation costs for the return of samples shall be paid by the Contractor.

24.6 Samples shall be of adequate size and number to permit proper evaluation of the material by the Engineer. Where variations in colour, texture, dimensions or other characteristics are to be expected, the Contractor shall submit samples showing the maximum range of variation. Materials exceeding the range of variation of the approved samples shall not be used on the Work.

24.7 If both Shop Drawings and samples are required for the same item, the Engineer may require both to be submitted before approving either.

24.8 No acceptance or approval of any Shop Drawings or sample, or any indication or directions by the Engineer on any Shop Drawings shall constitute an authorization for any increase in the Contract Sum.

25 PRODUCT QUALITY AND HANDLING

Suppliers of local and foreign products and installations specified shall have been regularly engaged in the business of manufacturing, fabricating, installing and / or servicing work

required for a period not less than 5 years. In addition, the Engineer may request as appropriate a:

- list of similar installations that describes project, scope and date of completion.
- complete literature, performance data, and technical data.
- list of services record within Pakistan.
- location of service office from which this installation could be maintained.

For the actual fabrication, installation, and testing of the specified work, use only thoroughly trained and experienced workmen completely familiar with the items required and with the manufacturers recommended methods of installation. In acceptance or rejection, no allowance will be made for the lack of skill on the part of workmen.

Use all means necessary to protect materials before, during and after installation and to protect the installed work and materials of all other trades. In the event of damage, immediately make all repairs and replacement necessary for approval and at no additional cost to the Employer.

26 INSPECTION & TESTS REPORTS

All equipment and materials furnished under these specifications and all work performed in connection therewith will be subject to rigid inspection by the Engineer or the Engineer's Representative. Acceptance of equipment and material or the waiving off inspection thereof shall in no way relieve the Contractor of his responsibility for meeting the requirements of the Contract.

The Contractor shall furnish the Engineer with certified true copies of test reports of all materials used in the manufacture and fabrication of all equipment and material including metal work, steel pipes, fire bricks etc. The result of these tests shall be in such form as to show compliance with the applicable Specifications, standards and codes for the material used.

27 ACCIDENT PREVENTION, PROTECTIVE EQUIPMENT

The Contractor shall comply and enforce compliance by all his sub-Contractors with the highest standards of safety and accident prevention in accordance with international standards and in compliance with all applicable laws, ordinances and statutory provisions in Pakistan.

All requisite barriers, fences, warning signs, lights and other safety precautions as required for the protection of persons and property on or adjacent to the site shall be provided at the Contractor's cost.

All warning signs shall be in two languages, English and Urdu, and shall at all times be maintained in a clean and legible condition, to the satisfaction of the Engineer. Trash shall be removed at frequent intervals to the satisfaction of the Engineer.

28 TEMPORARY FACILITIES

The Contractor shall provide, erect or install, maintain, alter as necessary and remove on completion except as otherwise directed by the Engineer all temporary facilities and services including access roads as described hereinafter and/or in the Contract Document. The Contractor's temporary site office shall be available for use not later than one month after the date of the site handing over.

Installation of temporary services at the site shall be given priority over all other construction at the site.

28.1 Temporary Road

The Contractor shall prepare and maintain such temporary roads as may be necessary, from the site to the nearest road and also within the site. Such roads shall be positioned strictly in accordance with the Engineer's instructions and the Contractor shall reduce or control any dust nuisance by spraying with water as directed. The Contractor shall satisfy himself as to the locations and nature of the proposed access routes to the site and shall be responsible for preventing any damage whatsoever to adjacent property and vegetation and keeping the access road free from debris at all times.

28.2 Temporary Services

28.2.1 Temporary Water Supply

The Contractor shall supply in sufficient quantity all necessary potable and other water for construction purposes for all trades at point within a reasonable distance of the work. He shall make arrangements and pay charges for water service installation, maintenance and removal thereof, and pay the costs of water for all trades.

When the permanent water supply and distribution system has been installed, it may be used as the source of water for construction purposes provided that the Contractor obtains the written approval of the Engineer and the Employer and assumes full responsibility for the entire water distribution system and pays all charges/costs for operation and maintenance of the system mutually agreed between the Employer and the Contractor.

Temporary pipe lines and connections from the permanent service line, whether outside or within the area of site of works but necessary for the use of Contractor and his sub-contractor shall be installed, protected and maintained at the expense of the Contractor.

At completion of the work or at such time as the Contractor makes use of the permanent water supply installation, the temporary water services equipment and piping shall be removed by the Contractor at his own expense.

28.2.2 Temporary Electricity

The Contractor shall make all the necessary arrangements for a temporary electricity service, pay all expense in connection with the installation, operation and removal thereof and pay the costs of electricity consumed by all trades.

In the event that the site can not be connected to a local electricity network or where the available power is insufficient the Contractor has to make his own provision and maintain such installation.

A temporary lighting system shall be furnished, installed and maintained by the Contractor as required to satisfy the minimum requirements for safety and security. The temporary lighting system shall afford adequate general illumination to all building areas. Adequate outdoor lighting shall be provided to illuminate staging trenches and the like to the satisfaction of the Engineer and general illumination throughout adequate for watchmen and emergency personnel.

Temporary equipment and wiring for power and lighting shall be in accordance with the applicable provisions of governing codes. Temporary wiring shall be maintained in a safe manner and utilised so as not to constitute a hazard to persons or property.

When the permanent electrical power and lighting systems are in an operating condition, they may be used for temporary power and lighting for construction purposes provided that the Contractor obtains the written approval of the Engineer and the Employer and assumes full responsibility for the entire power and lighting system and pays all charges/costs for operation and maintenance of the system mutually agreed between the Employer and the Contractor.

Approval, license etc. if required under local laws will be obtained by the Contractor on his own responsibility and cost.

At completion of construction work, or at such time as the Contractor makes use of permanent electrical equipment and devices, temporary electricity services shall be removed by the Contractor as his own expense.

28.2.3 Waste Disposal

The Contractor shall make such temporary provisions as may be required in order to dispose of any chemicals, fuels, grease, bituminous materials, waste and soil waste and the like without causing pollution to either the site or the environment. Disposal of any materials, wastes, effluents, garbage, oil, grease, chemicals and the like shall be in areas specified by the concerned local authority proposed by the Contractor and subject to the approval of the Engineer. If any waste material is dumped in unauthorized areas the Contractor shall remove the material and restore the area to the condition of the adjacent undisturbed area. If necessary, contaminated ground shall be excavated, disposed off as directed by the Engineer and replaced with suitable fill material compacted and finished with topsoil all at the expense of the Contractor.

28.2.4 Fire Protection

The Contractor shall provide and maintain adequate fire protection in the form of barrels of water with buckets, fire bucket tanks, fire extinguishers, or other effective means ready for instant use, distributed around the project and in and about temporary inflammable structures during construction of the works.

Gasoline and other flammable liquids shall be stored in and dispensed from safety containers approved by the Engineer and storage shall not be within building.

Torch-cutting and welding operations performed by the Contractor shall have the approval of the Engineer before such work is started and a chemical extinguisher is to be available at the location where such work is in progress.

The Contractor shall follow the instructions and specifications of the Civil Defence Department and or other local authority.

28.2.5 Telephone

The Contractor shall immediately after receiving the Letter of Acceptance take the necessary steps to obtain a mobile and landline telephone on site. He shall be responsible for all installation and connection charges and periodic mobile and landline telephone accounts. The telephone shall be made available to the Engineer for the due performance of his duties at all times and free of charge during construction and defects liability period.

29 CONSTRUCTION SCHEDULE

A Construction schedule shall be maintained in accordance with the provisions of the General Conditions of Contract.

The schedule shall be accompanied with sufficient data and information including all necessary particulars of constructional plant, equipment machinery, temporary Works, arrival of plant, equipment at site and their installation, method of operation, work forces employed, etc., for an activities of the Works.

Should the Engineer consider any alteration or addition in the programme and time schedule, the Contractor shall conform thereto without any cost to the Employer.

Whenever necessary and wherever the progress of the actual work shows departure, the programme and time schedule shall be undated and submitted to the Engineer for his approval.

30 NOTIFICATION TO THE ENGINEER

The Engineer's Representative shall be notified daily in writing of the nature and location of the Works the Contractor intends to perform the next day so as to enable necessary inspection and measurement to be carried out. The Engineer may, if necessary, direct that longer notice be given of certain operations.

31 NIGHT WORK

When work is done at night the Contractor shall maintain from sunset to sunrise such lights on or about his work and plant as the Engineer may deem necessary for the proper observations of the work and the efficient prosecution hereof.

32 WEATHER

No work is to be undertaken when, in the opinion of the Engineer, the weather is so unsuitable that proper protection of the work cannot be ensured.

33 CO-ORDINATION WITH OTHER CONTRACTORS

The Contractor shall make all necessary coordination with other Contractor and shall make sure that all embedding components such as pipes, steel bases etc. (as required for completion of electrical works) are properly, accurately and timely installed.

The Contractor shall inform the other contractor the schedule of any construction activity well in advance giving him sufficient time to finish his part of job, before any compaction/concreting etc. The Contractor shall get the signature of the authorized representation of the other contractor before carrying out any construction activity.

If any part of electrical work is damaged or has to be dismantled or redone due to negligence/omissions/incorrect position of the embedding etc. on part of the Contractor, all such losses/expensed shall be borne by the Contractor.

All expenses incurred for the above works including coordination are deemed to be covered in his tendered cost and no separate/extra payment shall be paid against such item.

34 SUBMISSION REQUIREMENTS

34.1 Schedule submission at least sixty days before the dates when reviewed submittals will be needed.

34.2 Submit Shop Drawings as per provision given in Sub-Clause 19.5 (a) and number of copies of Product Data which the Contractor requires for distribution plus four copies which will be retained by the Engineer.

34.3 Submit three samples unless otherwise specified.

34.4 Accompany submittals with transmittal letter, in duplicate, containing:

- Date

- Project title and number

- Contractor's name and address
- The number of each Shop Drawing, Product Data and the Sample submitted.
- Notification of deviations from Contract Documents.
- Other pertinent data.

35 RESUBMISSION REQUIREMENTS

Shop Drawings:

- Revise initial drawings as required and resubmit as specified for initial submittal.
- Indicate on drawings any changes which have been made by the Engineer.
- Product Data and Samples: Submit new data and samples as required for initial submittal.

36 SURVEY INSTRUMENTS

All the instruments, equipment, stakes and other material necessary to perform all work shall be provided by the Contractor. The survey work shall be carried out by competent staff consistent with the current practices. The Contractor shall maintain on site surveying instruments in perfect working conditions to enable the Engineer to check lines and level at all times.

Survey instruments and equipment shall include but not limit to the following:

- Electronic Total Station
- Electronic Data Recorder
- Disto Laser Meter
- Precision Level Invert Staff
- Automatic Levels
- Power level
- Compass, steel tape, ranging poles

37 WEEKLY PROGRESS REPORT AND PHOTOGRAPHS

37.1 During the continuance of the Contract, the Contractor shall submit weekly progress reports on forms as approved by the Engineer. Such weekly reports shall show the actual progress completed as of date of the report plotted against the schedule as given by the Contractor at the start of work and shall be broken down so as to indicate status of all activities associated with mobilization design, material procurement, manufacture, surveys works, tests with regard to the agreed contract programme.

37.2 The Employer and the Engineer reserve the right to coordinate the schedules of this Contractor and other Contractors working at the Site, and to adjust and/or change any and 0100-14 all such schedules as required during the course of construction in order to achieve a coordinated project in harmony with the Employer's completion date.

37.3 Commencing after the first week of construction, and continuing every week until completion, the Contractor shall take and submit photographs to the Engineer's

Representative, to show progress of his work and completion of each structure or major feature.

38 CONTRACTOR TO NOTIFY DELAYS ETC.

Any delay which will affect the completion of Works shall be detailed by the Contractor who shall state the action he is taking for effective completion of the Contract programme.

The Contractor shall submit a report in respect of the various sections of the Works, the equipment in use or held in readiness, a return of labour and supervisory staff, and details of any matters arising which may generally affect the progress of the work.

The Contractor shall give a summary of the detailed progress report giving the position with regard to the agreed Contract programme.

The progress reports shall be set out in a format to the approval of the Engineer, and forwarded promptly so that on receipt the information contained therein is not more than 21 days out of date.

If during execution of the Contract, the Employer considers the progress position of any section of the work to be unsatisfactory, or for any other reason relating to the Contract, he will be at liberty to convene a meeting and the Contractor's Representatives are to attend such meeting.

The Contractor's Site Office shall prepare and submit 6 copies of a weekly progress report to the Employer and Engineer's Site Office. This report shall summarize site activities and record and details where difficulties in maintaining the agreed programme are being experienced or are likely to cause subsequent delay.

The Contractor's Site Office shall also prepare and submit to the Engineer's Site Office 2 copies of Daily Activity Report summarizing the main activities to be undertaken each day, noting special activities such as tests, alignment checks, etc. The Contractor shall be responsible for expediting the delivery of all material and equipment to be provided by him and his subcontractors.

39 PHOTOGRAPHS

As soon as work commences on Site, the Contractor shall provide photographs (at least 10 to 12) of the works from positions to be selected by the Engineer. Each photographic print shall not be less than 297mm x 210mm and shall bear a printed description, a serial number and the date when taken.

The negatives of all photographs shall be held at the Contractor's Site Office, numbered and handed over to the Employer at the completion of the Contract.

40. FACILITIES FOR THE ENGINEER

40.1 Site Office

The Contractor shall maintain Engineer's Office, for the full construction period and Defects Liability Period.

The Engineer's office shall be furnished and equipped with new and unused furniture, equipment, electrical fittings etc., as per the list given below and as per requirement or directed by Engineer.

1. Wooden office table with drawers and side racks 1 (One) No.
2. Office Chairs 1 (One) No.
3. Wooden sitting visitors chairs with arms (standard size) 3 (Three) No.
4. Steel filing cabinet (standard size) 1 (One) No.

If any equipment, furniture and installations become unserviceable for any reason whatsoever the Contractor shall promptly replace the same as and when directed by the Engineer. The Engineer's office with fittings, fixtures and all other equipment/accessories shall be maintained and operated for the entire duration of construction period as well as for the duration of subsequent defects liability period.

40.2 Transport

The Contractor shall provide, operate and maintain brand new, One (1) 800cc Suzuki Mehran Euro-II including comprehensive insurance for the exclusive use of the Employer/Engineer / Engineer's site supervision team to meet his transportation needs for the entire duration of actual construction period as well as for the duration of subsequent defects liability period. The use of such transport facility shall be under the control of the Engineer, and the Contractor shall be wholly responsible for providing at all times satisfactory operating services for the Engineer. The Contractor shall furnish, supply and provide, as may be necessary without specific direction of the Engineer, all fuels (300 liters/month), lubricants, tires and other supplies, all maintenance, repairs and running costs and suitably qualified drivers at all times.

Prior to Ordering the Vehicle, the Contractor shall furnish to the Engineer for approval, detailed specification, name of manufacturer and model no. of the vehicle to be supplied. These data shall be presented within one week from the date of Engineer's Order to proceed with the works and the vehicle shall be furnished to the Engineer upon approval within two weeks from the date of Engineer's Order to supply the Vehicle.

The vehicle shall be right hand drive, and shall be brand new, properly serviced and ready for use. The Contractor shall provide vehicle to replace any such motor vehicle that is temporarily or permanently rendered unserviceable for any reason or declared to be beyond repair by the Engineer, at no additional cost to the Employer. The vehicle shall become the property of the Contractor on completion of the Contract.

Failure of the Contractor to provide and maintain Engineer's facilities and transport, shall make him liable to bear actual cost of office, furniture, equipment & vehicle and up to Rs. 5,000/- per day on account of maintenance, which will be deducted from the Contractor's monthly payment statements for the entire Contract period or till such time that transport as stipulated above is provided by him.

42 PAYMENT OF WORK

No payment shall be made for the works involved within the scope of this section of specification.

The cost thereof shall be deemed to have been included in the quoted unit rate of other items of the Bills of Quantities.

43.0 All the **specification** will be governed as per the following codes:

- i. AASHTO American Association of State Highway and Transportation Officials.
- ii. ACI American Concrete Institute
- iii. AISC American Institute of Steel Construction
- iv. ANSI American National Standards Institute
- v. ASA American Standard Association
- vi. ASCE American Society of Civil Engineers
- vii. ASTM American Society for Testing and Material
- viii. AWS American Welding Society
- ix. BSI British Standards Institute
- x. ICAO International Civil Aviation Organization
- xi. BSICP British Standard Institute Code of Practice
- xii. PCA Portland Cement Association
- xiii. PSI Pakistan Standard Institute
- xiv. UBC Uniform Building Code
- xv. Pak PWD Schedule.