

# GOVERNMENT OF SINDH



## IRRIGATION DEPARTMENT

CHOTIARI RESERVOIR (I) DIVISION SANGHAR

### BIDDING DOCUMENT

#### VOLUME – 1

- INVITATION FOR BIDS
- INSTRUCTIONS TO BIDDERS
- BIDDING DATA
- FORM OF BID AND APPENDICES TO BID
- CONDITIONS OF CONTRACT
- SPECIFICATIONS

**NAME OF WORK:** MAKHI FARASH LINK CANAL PROJECT  
(CHOTIARI PHASE-II) FOR WATER SUPPLY  
TO THAR COAL

**PACKAGE Va:** WORKS FROM RD 208+000 TO 265+000

**EMPLOYER:** SINDH IRRIGATION DEPARTMENT THROUGH  
CHOTIARI RESERVOIR (I) DIVISION SANGHAR

**Issued to:** \_\_\_\_\_

**Amount of Document Fee Rs. 3,000/-**

**DR No. & Date:** \_\_\_\_\_

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## NOTICE INVITING TENDERS

**Date:** \_\_\_\_\_

**Federal/ Provincial/ Local Government Funds/ Loan / Credit No.** \_\_\_\_\_

**Bid Reference No.** \_\_\_\_\_

1. The Irrigation Department, Government of Sindh (the "Procuring Agency") has received funds from the Planning & Development Department, Government of Sindh towards the cost of **MAKHI FARASH LINK CANAL PROJECT (CHOTIARI PHASE-II)** and it is intended that part of the proceeds of the funds will be applied to eligible payments under the contract for the -----  
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Bidding is open to all the Pre-qualified bidders.

Bidding is open to all prequalified bidders.

2. Procuring agency invites sealed bids from the prequalified bidders for above specified description of works.
3. Prequalified Bidders may obtain any further information from the Office of the procuring agency, up to date 28.01.2019 and time 12:00 hours, at the address given below:
4. A complete set of bidding documents in English may be purchased by prequalified bidder on submission of a written application to the office given below and upon payment of a non-refundable fee of Rs. 3,000/- (Rupees Five Thousand Rupees only).
5. All bids must be accompanied by a bid security of 3% of the Bid amount. All bids must be delivered to the address below address at or before 12:00 hours, on 28.01.2019 (Date). Bids will be opened at 13:00 hours on the same day, in the presence of bidder's representatives who choose to attend at the same address.
6. Procuring agency reserves right to annul the bidding process and reject all bids or proposals, as per SPP Rules 2010.

The address referred to above is:

**Project Director/  
Superintending Engineer**  
Chotiari Reservoir Project Circle Sanghar  
Telephone:

## 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 Procuring agency as defined in the bidding data hereinafter called “the procuring agency” wishes to receive bids for the construction and completion of works as described in these bidding documents, and summarized in the bidding data hereinafter referred to as the “Works”.

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 Procuring agency has received/allocated/ applied for loan/ grant/ Federal/ Provincial/Local Government funds from the source(s) indicated in the bidding data in various currencies towards the cost of the project /scheme specified in the bidding data, and it is intended that part of the proceeds of this loan/grant/funds will be applied to eligible payments under the contract for which these bidding documents are issued.

#### IB.3 Eligible Bidders

This Invitation for Bids is open to all Prequalified bidders / Firms who are prequalified by Project Director / Superintending Engineer Chotiari Reservoir Project Circle Sanghar vide Notification No. Supdt:/PD/CRPC/28 dated 08.01.2019.

Firms and individuals, national or international, may be allowed to bid for any project where international competitive bidding is feasible. Any conditions for participation shall be limited to those that are essential to ensure the bidder’s capability to fulfill the contract in question.

- (a) Bidders may be excluded if;
  - (i) as a matter of law or official regulations, commercial relations are prohibited with the bidder’s country by the federal government in case of ICB, or
  - (ii) a firm is blacklisted/ debarred by the procuring agency and the matter has been reported to the Authority, subject to Rule 30 of Sindh Public Procurement Rules 2013.
  
- (b) Government-owned enterprises or institutions may participate only if they can establish that they are;

- (i) legally and financially autonomous, and
- (ii) operate under commercial law.

Provided that where government-owned universities or research centers in the country are of a unique and exceptional nature and their participation is critical to project implementation, they may be allowed to participate; and Bidders shall include all those contractors who are registered or incorporated in Pakistan, irrespective of the nationality of their owners and professional staff, or

- (c) Bidders are:
  - (i) pre-qualified with procuring agency for particular project/scheme;
  - (ii) registered with Pakistan Engineering Council in particular category and discipline,
  - (iii) registered with relevant tax authorities (income/sales tax, wherever applicable)

#### **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 procuring agency 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 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 procuring agency 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 procuring agency, 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 (SPP RULE 21)**

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.

- a. Instructions to Bidders.
- b. Bidding Data.
- c. General Conditions of Contract, Part-I (GCC).
- d. Particular Conditions of Contract, Part-II (SCC)
- e. Specifications.
- f. Form of Bid and Appendices to Bid.
- g. Bill of Quantities (Appendix-D to Bid).
- h. Form of Bid Security.
- i. Form of Contract Agreement.
- j. Forms of Performance Security, Mobilization Advance Guarantee, Integrity Pact and Indenture bond for secured advance.
- k. 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 BD will be rejected.

### **IB.8 Clarification of Bidding Documents (SPP RULE 23(1)):**

Any interested bidder requiring any clarification(s) in respect of the bidding documents may notify the procuring agency in writing at the procuring agency's address indicated in the Invitation for Bids/NIT. Procuring agency will respond to any request for clarification provided they are received at least five (05) calendar days prior to the date of opening of bid.

Provided that any clarification in response to query by any bidder; shall be communicated to all parties who have obtained bidding documents.

### **IB.9 Addendum/Modification of Bidding Documents:**

9.1 At any time prior to the deadline for submission of bids, the procuring agency may, for any reason, whether at his own initiative or in response to a clarification requested by a interested 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 IB 7.1 hereof and shall be communicated in writing to all bidders. Interested bidders shall acknowledge receipt of each addendum in writing to the procuring agency.

9.3 To afford bidders reasonable time in which to take an addendum into account in preparing their bids, the procuring agency may extend the deadline for submission of bids in accordance with 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 procuring agency shall be in the language stipulated in the bidding data and Particular Conditions of the 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 authorization on the letterhead of the bidding firm, 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 along with average annual construction turnover;
  - (ii) Financial predictions for the current year and the following two 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) 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;
- (b) the bid, and in case of a successful bid, the Form of Contract Agreement shall be signed by the authorized partner so as to be legally binding on all partners;
- (c) the partner-in-charge shall always be duly authorized to deal with the procuring agency 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 (a) above as well as in the Form of Bid and in the Form of Contract Agreement (in case of a successful bid);
- (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 partners without prior written consent of the procuring agency;
- (f) submission of an alternative Letter of Intent to execute a Joint Venture Agreement shall be mandatory.

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 sub-clause IB 1.2 hereof.

#### **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 IB 1.1 hereof, based on the unit rates or prices submitted by the bidder or percentage quoted above or below on the rates of Composite

Schedule of Rates (CSR), as the case may be.

- 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 procuring agency when executed and shall be deemed to be covered by rates and prices for other items in the Bill of Quantities. In case of Composite Schedule of Rates, if the bidder fails to mention the percentage above or below, it shall be deemed to be at par with the rates of Composite Schedule of Rates.
- 12.3 The bid price submitted by the contractor shall include all rates and prices including the taxes. All duties, taxes and other levies payable by the contractor under the contract, or for any other cause during the currency of the execution of the work or otherwise specified in the contract as on the date seven days prior to the deadline for submission of bids.

Additional / reduced duties, taxes and levies due to subsequent additions or changes in legislation shall be reimbursed / deducted as per Sub-Clause 13.7 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 13.7 of GCC. 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. Adjustment in prices quoted by bidders shall be allowed as per Sub-Para 4(ii) of Section C of Instructions to bidders and bidding data.

### **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 procuring agency'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 the bid.
- 13.2 The rates of exchange to be used by the bidder for currency conversion shall be the selling rates published and authorized by the State Bank of Pakistan prevailing on the date, 07 (seven) 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 from the date of opening of bid specified in clause IB.23.
- 14.2 In exceptional circumstances, prior to expiry of the original, the procuring agency may request the bidders to extend the period of validity for a specified additional period, which shall not be for more than one third of the original period of bid validity. The request and the responses thereto, shall be made in writing. A bidder may refuse the request without the forfeiture of the bid security. In case, a bidder agreed to the request, shall not be required or permitted to modify the bid, but will be required to extend the validity of the 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 the 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 deposit at call, 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 in favour of the procuring agency, which should commensurate with the bid validity period. The bank guarantee for bid security shall be acceptable in the manner as provided at Annexure BS-1
- 15.3 Any bid not accompanied by an acceptable bid security shall be rejected by the procuring agency as non-responsive.
- 15.4 Bid security shall be released to the unsuccessful bidders once the contract has been signed with the successful bidder or the validity period has expired.
- 15.5 The bid security of the successful bidder shall 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 except as provided in sub- clause IB 22.1;
  - (b) if the bidder does not accept the correction of his bid price pursuant to sub-clause IB 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/Bids**

- 16.1 Each bidder shall submit only one bid either by himself, or as a member of a joint venture, until and unless they have been requested or permitted for alternative bid, then he has to purchase separate bidding documents and alternate bid shall be treated as separate bid.
- 16.2 Alternate proposals are allowed only for procurement of works where technical complexity is involved and more than one designs or technical solutions are being offered. Two stage two envelope bidding procedure will be appropriate when alternate proposal is required.
- 16.3 Alternate bid(s) shall contain (a) relevant design calculations; (b) technical specifications; (c) proposed construction methodology; and (d) any other relevant details / conditions, provided that the total sum entered on the Form of Bid shall be that which represents complete compliance with the bidding documents.

**IB.17 Pre-Bid Meeting**

- 17.1 Procuring agency may, on his own motion or at the request of any bidder, 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, shall be communicated to all bidders. All bidders or their authorized representatives shall be invited to attend such a pre-bid meeting at their own expense.
- 17.2 The bidders are requested to submit questions, if any, in writing so as to reach the Procuring agency 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 bidders. Any modification of the bidding documents listed in sub- clause IB 7.1 hereof, which may become necessary as a result of the pre-bid meeting shall be made by the procuring agency 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 Alteration is not to be made neither 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 without alterations and shall provide an original copy along with photocopies as per the requirement of the procuring agency specified in the bidding data. The original as well as copies of the document shall be clearly marked as "ORIGINAL" and „COPY", as the case may be. If there is any discrepancy between original and copy (ies) then 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(s) duly authorized to sign on behalf of the bidder pursuant to sub- clause IB 11.1(a) hereof. All pages of the bid shall be initialed and stamped by the person(s) signing the bid.
- 18.6 The bid shall contain no alterations, omissions or additions, except to comply with instructions issued by the procuring agency, or as are necessary to correct errors made by the bidder. Such corrections shall be initialed by the person(s) signing the bid.
- 18.7 Bidders shall indicate in the space provided in the Form of Bid their full and proper postal 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 two COPIES of the bid shall be separately sealed and put in separate envelope and marked as such.
  - (b) The envelopes containing the ORIGINAL and COPIES shall be put in one sealed envelope and addressed as given in sub – clause IB 19.2 hereof.
- 19.2 The inner and outer envelopes shall:
- (a) be addressed to the procuring agency 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 IB 19.2 hereof, the inner envelope shall indicate the name and postal 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 procuring agency 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 procuring agency at the address specified not 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 shall 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 Procuring Agency may, at its discretion, extend the deadline for submission of bids by issuing an amendment in accordance with IB 09. In such case, all rights and obligations of the procuring agency and the bidders shall remain the same as mentioned in the original deadline.

**IB.21 Late Bids**

- (a) any bid received by the procuring agency after the deadline for submission of bids prescribed in to clause IB 20 shall be returned unopened to such bidder.
- (b) delays in the mail, 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 submit the bid in time.

**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 procuring agency 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 to sub - clauses IB 22.1 and IB 27.2.

- 22.4 Withdrawal of a bid during the interval between the deadlines 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 Procuring agency 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 or their representatives who are in attendance shall sign an attendance sheet.
- 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 Procuring agency shall read aloud the name of the bidder, total bid price and price of any Alternate Proposal(s), if any, discounts, bid modifications, substitution and withdrawals, the presence or absence of bid security, and such other details as the procuring agency may consider appropriate, and total amount of each bid, and of any alternative bids if they have been requested or permitted, shall be read aloud and recorded when opened.
- 23.4 Procuring Agency shall prepare minutes of the bid opening, including the information disclosed to those present in accordance with the sub-clause IB.23.3.

### **IB.24 Process to be Confidential. (SPP Rule 53)**

- 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 in accordance with the requirements of Rule 45, which states that Procuring agencies shall announce the results of bid evaluation in the form of a report giving reasons for acceptance or rejection of bids. The report shall be hoisted on website of authority and that of procuring agency if it website exists and intimated to all bidders at least seven (7) days prior to the award of contract. The announcement to all bidders will include table(s) comprising read out prices, discounted prices, price adjustments made, final evaluated prices and recommendations against all the bids evaluated. Any effort by a bidder to influence the procuring agency'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 as per Rule 31; however mere fact of lodging a complaint shall not warrant suspension of the procurement process.

### **IB.25 Clarification of Bid (SPP Rule 43)**

- 25.1 To assist in the examination, evaluation and comparison of bids, the procuring agency

may, at its discretion, ask any bidder for clarification of the 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 procuring agency 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 procuring agency will determine whether the bidder fulfills all codal requirements of eligibility criteria given in the tender notice such as registration with tax authorities, registration with PEC (where applicable), turnover statement, experience statement, and any other condition mentioned in the NIT and bidding document. If the bidder does not fulfill any of these conditions, it shall not be evaluated further.
- 26.2 Once found to be fulfilling the eligibility criteria, as mentioned in sub- clause 26.1, the bids of eligible bidders will be evaluated for technical responsiveness as per specification and criteria given in the bidding documents. Technical and financial evaluations may be carried out in accordance with single stage-single one envelope, single stage-two envelopes, two stage or two stage-two envelopes bidding procedures, depending on the selection procedure adopted by the procuring agency.
- 26.3 A bid will be considered technically responsive if it (i) has been properly signed; (ii) is accompanied by the required bid security; and (iii) 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 procuring agency'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.
- 26.4 If a bid has major deviations to the commercial requirements and technical specifications will be considered technically non responsive. As a general rule, major deviations are those that if accepted, would not fulfill the purposes for which the bid is requested, or would prevent a fair comparison or affect the ranking of the bids that are compliant with the bidding documents.

#### **(A). Major (material) Deviations include:-**

- (i) has been not properly signed;
- (ii) is not accompanied by the bid security of required amount and manner;
- (iii) stipulating price adjustment when fixed price bids were called for;
- (iv) failing to respond to specifications;
- (v) failing to comply with Mile-stones/Critical dates provided in Bidding Documents;
- (vi) sub-contracting contrary to the Conditions of Contract specified in Bidding Documents;

- (vii) refusing to bear important responsibilities and liabilities allocated in the Bidding Documents, such as performance guarantees and insurance coverage;
- (viii) taking exception to critical provisions such as applicable law, taxes and duties and dispute resolution procedures;
- (ix) a material deviation or reservation is one :
  - (a) which affect in any substantial way the scope, quality or performance of the works;
  - (b) adoption/rectification whereof would affect unfairly the competitive position of other bidders presenting substantially responsive bids.

### **(B) Minor Deviations**

Bids that offer deviations acceptable to the Procuring Agency and which can be assigned a monetary value may be considered substantially responsive at least as to the issue of fairness. This value would however be added as an adjustment for evaluation purposes only during the detailed evaluation process.

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

### **IB.27 Correction of Errors before Financial Evaluation**

- 27.1 Bids determined to be substantially responsive will be checked by the procuring agency for any arithmetic errors. Errors will be corrected by the procuring agency 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 procuring agency 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 procuring agency in accordance with the above procedure for the correction of errors and with the concurrence of the bidders. The amount thus corrected shall be considered as binding upon the bidder. If the bidder does not accept the corrected bid price, his bid will be rejected, and the bid security shall be forfeited in accordance with sub- clause IB 15.6(b) hereof.

### **IB.28 Financial Evaluation and Comparison of Bids**

- 28.1 The procuring agency 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 procuring agency 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 (if any), for contingencies in the Summary Bill of Quantities, but including competitively priced Day work; 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.

If the bid of the successful bidder is seriously unbalanced in relation to the procuring agency's estimate of the cost of work to be performed under the contract, the procuring agency 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 procuring agency 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 procuring agency against financial loss in the event of default of the successful bidder under the contract.

- 28.5 Bidders may be excluded if involved in **“Corrupt and Fraudulent Practices”** means either one or any combination of the practices given below SPP Rule2(q);
- (i) **“Coercive Practice”** means any impairing or harming, or threatening to impair or harm, directly or indirectly, any party or the property of the party to influence the actions of a party to achieve a wrongful gain or to cause a wrongful loss to another party;
  - (ii) **“Collusive Practice”** means any arrangement between two or more parties to the procurement process or contract execution, designed to achieve with or without the knowledge of the procuring agency to establish prices at artificial, noncompetitive levels for any wrongful gain;
  - (iii) **“Corrupt Practice”** means the offering, giving, receiving or soliciting, directly or indirectly, of anything of value to influence the acts of another party for wrongful gain;
  - (iv) **“Fraudulent Practice”** means any act or omission, including a misrepresentation, that knowingly or recklessly misleads, or attempts to mislead, a party to obtain a financial or other benefit or to avoid an obligation;
  - (v) **“Obstructive Practice”** means harming or threatening to harm, directly or indirectly, persons or their property to influence their participation in a procurement process, or affect the execution of a contract or deliberately destroying, falsifying, altering or concealing of evidence material to the investigation or making false statements before investigators in order to

materially impede an investigation into allegations of a corrupt, fraudulent, coercive or collusive practice; or threatening, harassing or intimidating any party to prevent it from disclosing its knowledge of matters relevant to the investigation or from pursuing the investigation, or acts intended to materially impede the exercise of inspection and audit rights provided for under the Rules.

#### **28.6 Evaluation Report (SPP Rule 45)**

After the completion of evaluation process, as described in clauses IB 27 and IB 28, the procuring agency shall announce the results of bid evaluation in the form of report (available on the website of the authority) giving reasons for acceptance and rejection of bid. The report shall be hoisted on website of the authority and that of procuring agencies if its website exists and intimated to all bidders at least seven (7) days prior to the award of contract.

### **F. AWARD OF CONTRACT**

#### **IB.29 Award (SPP Rule 49)**

29.1 Subject to clauses IB 30 and IB 34 and provision of the rule: The procuring agency shall 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, but not necessarily the lowest submitted price, within the original or extended period of bid validity. Provided that such bidder has been determined to be eligible in accordance with the provisions of clause IB 03 and qualify pursuant to sub-clause IB 29.2

29.2 Procuring agency, at any stage of the bid evaluation, having credible reasons for or having *prima facie* evidence of any deficiency(ies) in contractor's capacities, may require the contractor to provide information concerning their professional, technical, financial, legal or managerial competence whether already pre-qualified or not for the said project.

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

#### **IB.30 Procuring Agency's Right to reject all Bids or Annul/Cancellation the Bidding Process (SPP Rule 25)**

Notwithstanding clause IB 29 and provision of the rule: (1) A procuring agency reserves may cancel the bidding process at any time prior to the acceptance of a bid or proposal; (2) The procuring agency shall incur no liability towards bidders solely by virtue of its invoking sub –rule (1); (3) Intimation of the cancellation of bidding process shall be given promptly to all bidders and bid security shall be returned along with such intimation; (4) The procuring agency shall, upon request by any of the bidders, communicate to such bidder, grounds for cancellation of the bidding process, but is not required to justify such grounds.

**IB.31. Notification/Publication of the Award of Contract (SPP Rule 25).**

- 31.1 Prior to expiry of the period of bid validity, including extension, prescribed by the procuring agency, the procuring agency shall notify the successful bidder in writing (“Letter of Acceptance”) that his bid has been accepted. This letter shall mention the sum which the procuring agency will pay to 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, procuring agency may hold meetings to 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 procuring agency and the bidder till signing of the formal Contract Agreement.
- 31.4 Upon furnishing by the successful bidder of a Performance Security and signing of the contract, the procuring agency will promptly notify the name of the successful bidder to all bidders and return their bid securities accordingly.
- 31.5 Within seven days of the award of contract, procuring agency shall publish on the website of the Authority and on its own website, if such a website exists, the results of the bidding process, identify the bid through procurement identifying numbers, and the following information:
- (1) Evaluation Report;
  - (2) Form of Contract and letter of Award;
  - (3) Bill of Quantities or Schedule of Requirement.
- 31.6 Debriefing (SPP Rule 51).
- (a) A bidder may ask the procuring agency for reasons for non-acceptance of his bid and may request for a debriefing meeting and procuring agency shall give him the reasons for such non acceptance, either in writing or by holding a debriefing meeting with such a bidder.
  - (b) The requesting bidder shall bear all the costs of attending such a debriefing.

**IB.32 Performance Security (SPP Rule 39)**

- 32.1 The successful bidder shall furnish to the procuring agency a Performance Security in the form of pay order or demand draft or bank guarantee, 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.
- 32.3 Validity of performance security shall extend at least ninety days beyond the date of completion of contract, or as mentioned in the bidding data to cover defects liability

period or maintenance period subject to final acceptance by the procuring agency.

**IB.33 Signing of Contract Agreement (SPP Rule 39)**

33.1 Within 14 days from the date of furnishing of acceptable Performance Security under the Conditions of Contract, the procuring agency 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 procuring agency and the successful bidder shall be executed within 14 days of the receipt of the Contract Agreement by the successful bidder from the procuring agency.

33.3 A procurement contract shall come into force when the procuring agency requires signs contract, the date on which the signatures of both the procuring agency and the successful bidder are affixed to the written contract. Such affixing of signatures shall take place within the time prescribed in the bidding documents

Provided that the procuring agency may reduce the maximum time limit for signing of contract, as and when required, and shall be mentioned in the bidding documents.

33.4 Stamp Duty.

The formal Agreement between the Procuring Agency and the successful bidder shall be duly stamped at rate of 0.35% of bid price (updated from time to time) stated in Letter of Acceptance and shall be paid by the successful bidder.

**IB.34 General Performance of the Bidders**

Procuring agency may in case of consistent poor performance of the contractor and his failure to remedy the underperforming contract may take such action as may be deemed appropriate under the circumstances of the case including the rescinding the contract and/or black listing of such contractor and debarring him from participation in future bidding process.

**IB.35 Integrity Pact (SPP Rule 89)**

The bidder shall sign and stamp the Integrity Pact provided at Appendix-L to the bidding documents for all Provincial/Local 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.

**IB.37 Arbitration (SPP Rule 34)**

Any dispute that is not amicably resolved shall be finally settled, unless otherwise specified in the Contract, under the Arbitration Act 1940 updated from time to time and would be held anywhere in the Province of Sindh at the discretion of procuring agency.

## BIDDING DATA

Instructions to Bidders

Clause Reference

**1.1 Name and address of the procuring agency:**

Irrigation Department, Government of Sindh, through  
Project Director/ SE,  
Chotiari Reservoir Project Circle, Sanghar,  
Camp Office at Left Bank Barrage Colony Hyderabad  
Tel. +92 022 9210074  
Fax. +92 22-9210089

**1.2 Name of the Project and Summary of the works:**

**MAKHI FARASH LINK CANAL PROJECT (CHOTIARI PHASE-II) FOR WATER SUPPLY TO THAR COAL  
PACKAGE VA: WORKS FROM RD 208+000 TO 265+000**

**Summary of Works**

The Works are part of the project for water supply to Thar Coal. The Package Va involves works in Makhi Farash Link Canal Project from RD 208+000 to 265+000 including remodeling and lining of distributaries / minors originating from within this reach, as summarized below:

**PACKAGE VA: WORKS FROM RD 208+000 TO 265+000**

- Makhi Farash Link Canal
  - o Earth Work in Length of 57+000 RDs
- Structures
  - o Road Bridge (243+066 RDs)
  - o Water Course 22 Nrs.

2.1 Name of the Borrower/Source of Financing/Funding Agency/Funding Source;  
Federal Government PSDP Scheme for the year 2015-16

8.1 Time limit for clarification:

Not later than 5 working days prior to last date of submission

10.1 Bid language:

English

11.1 (a) Prequalification Information to be updated (where applicable):

1. Company Profile

2. General Experience Record

(i) Details of Contracts of Similar Nature and Complexity completed over the last 05 years

(ii) Projects of similar nature and complexity in hand.

(iii) Projects executed in similar geographical conditions in last five (5) years.

3(A) Personnel Capabilities

Firms/ Contractors should provide the names of suitably qualified personnel to meet the specified requirements

3(B) Curriculum Vitae (CV) for Proposed Experts

4. Firm/ Contractor shall provide adequate information to demonstrate clearly that it has the capability to meet the requirements for the key equipment whether owned/ leased/ rented

- a. Equipment Capabilities (owned by the contractor/ firm)
- b. Equipment Capabilities (leased/ rented by the contractor/ firm)

5 Financial Resources

- a. Banker's Information:
- b. Financial Status: Summarize actual assets and liabilities in Pak Rupees for the previous three years.
- c. Source of Financing: Contractor/ firm shall provide documentary evidence for funding the project for which the prequalification is being undertaken.

11.1 (b) Furnish Technical Proposal

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

13.1 Bidders to quote entirely in Pakistani Rupee.

14.1 Period of Bid Validity:

90 days

15.1 Amount of Bid Security:

The amount of Bid Security in Pakistan Rupees shall be minimum 2% of the Bid Price in the form of Pay Order in the name of the procuring agency or an unconditional Bank Guarantee from any scheduled Bank of Pakistan.

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

As indicated in the Notice Inviting Tenders.

18.4 Number of copies of the bid to be completed and returned:

The bidder has to complete and submit one original and two copies.

19.2 (a) Procuring Agency's address for the purpose of bid submission:

Office of the Project Director/  
Superintending Engineer  
Chotiari Reservoir Project Circle Sanghar  
Left Bank Barrage Colony,  
Hyderabad

(b) Name and Identification Number of the Contract:  
**MAKHI FARASH LINK CANAL PROJECT (CHOTIARI PHASE-II) FOR  
WATER SUPPLY TO THAR COAL  
PACKAGE VA: WORKS FROM RD 208+000 TO 265+000**

20.1 (a) Deadline for submission of bids:

Time 14:00 hours and Date \_\_\_\_\_

(b) Venue, time, and date of bid opening:

14:30 hours and Date \_\_\_\_\_  
Office of the Project Director/  
Superintending Engineer  
Chotiari Reservoir Project Circle Sanghar  
Left Bank Barrage Colony,  
Hyderabad

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

The performance security shall be in the form of unconditional Bank Guarantee from a schedule Bank of Pakistan as per standard form provided for an amount of 5% of the Contract Price.

32.3 Stamp duty

0.35% of bid price (as per applicable law) shall be paid by the successful bidder as stamp duty.

## FORM OF BID

Bid Reference No. \_\_\_\_\_

Name of Contract/Work: **MAKHI FARASH LINK CANAL PROJECT (CHOTIARI PHASE-II) FOR WATER SUPPLY TO THAR COAL PACKAGE VA: WORKS FROM RD 208+000 TO 265+000**

To:

Project Director  
Superintending Engineer  
Chotiari Reservoir Project Circle Sanghar

1. Having examined the bidding documents including Instructions to Bidders, Bidding Data, and Conditions of Contract, Specifications, Drawings and Bill of Quantities and Addenda Nos. \_\_\_\_\_ for the execution of the above-named work, we/I, the undersigned, offer to execute and complete the work 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/I 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/I submit herewith a bid security in the amount of Rupees (Rs. \_\_\_\_\_) drawn in your favour or made payable to procuring agency and valid for a period of days \_\_\_\_\_ beginning from the date, bid is opened.
4. We/I 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/I agree to abide by this bid for the period of \_\_\_\_\_ days from the date fixed for opening 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.
9. We undertake, if our/my bid is accepted, to execute the Performance Security referred to in Clause 10 of Conditions of Contract for the due performance of the Contract.
10. We confirm, if our bid is accepted, that all partners of the joint venture shall be

liable jointly and severally for the execution of the Contract and the composition or the constitution of the joint venture shall not be altered without the prior consent of the procuring agency.

In the capacity of \_\_\_\_\_ duly authorized to sign Bids for and on behalf of

Dated this \_\_\_\_\_ day of \_\_\_\_\_ 20

Signature: \_\_\_\_\_

---

(Name of Bidder in Block Capitals)

(Seal)

Address: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Witness:

Signature: \_\_\_\_\_

Name: \_\_\_\_\_

Address: \_\_\_\_\_

Occupation: \_\_\_\_\_

**Appendix-A to Bid**

**CONTRACT DATA**

<b>S. No.</b>	<b>Conditions of Contract</b>	<b>Clause</b>	<b>Data</b>
1.	Engineer representing Consulting Firm hired by the procuring agency to issue variation in case of emergency.	3.1	Up to 2% of the contract price stated in the Letter of Acceptance.
2.	Amount of Performance Security	4.2	5% of Contract Price stated in the Letter of Acceptance.
3.	Time for Furnishing Programs	8.3	Within 14 days from the date of receipt of Engineers Notice to Commence, this shall be issued within fourteen (14) days after signing of Contract Agreement.
4.	Minimum amount of Third Party Insurance	18.3	With 42 days from the date of receipt of Letter of Acceptance
5.	Time for Commencement	8.1	Within 14 days from the date of receipt of Engineer's Notice to Commence, this shall be issued within fourteen (14) days after signing of Contract Agreements
6.	Time for Completion (works & sections)	8.2 & 10.2	548 days from the date of receipt of Engineer's Notice to Commence.
7.	Amount of Liquidity Damages/Delay Damages / Penalties	8.7	0.05% of Contract Price as damages per day 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	11.1	365 days from the effective date of Taking Over Certificate.
9.	Percentage of Retention Money	14.2	10% of the amount of Interim / Running Payment Certificate.
10.	Limit of Retention Money	14.2	5% of Contract Price stated in the Letter of Acceptance.
11	Minimum amount of Interim/Running Payment Certificates	14.2	Rs. 12 Million
12	Time of Payment from delivery of Engineer's Interim/ Running Payment Certificate to the procuring agency	14.7	30 days in case of local currency or 42 days in case of foreign funded projects.
13.	Mobilization Advance.	14.2	10% of Contract Price stated in the Letter of Acceptance.

**Appendix-B to Bid**

**FOREIGN CURRENCY REQUIREMENTS**

1. The bidder may indicate herein below his requirements of foreign currency (if any), with reference to various inputs to the works.
2. Foreign Currency Requirement as percentage of the bid price excluding Provisional Sums \_\_\_\_\_%.
3. Table of Exchange Rates

Unit of Currency	Equivalent in Pak. Rupees
Australian Dollar	-----
Euro	-----
Japanese Yen	-----
U.K. Pound	-----
U.S. Dollars	-----
-----	-----
-----	-----

**NOT USED**

**Appendix-C to Bid**

**PRICE ADJUSTMENT UNDER CLAUSE 13.8  
OF CONDITIONS OF CONTRACT**

**A. Weightages or coefficients are used for price adjustment.**

The source of indices and the weightages or coefficients for use in the adjustment formula under Clause 13.8 shall be as follows:

Cost Element	Description	Weight ages	Applicable index
1	2	3	4
(i)	Fixed Portion	0.350	
(ii)	Local Labor		Government of Pakistan (GoP) Federal Bureau of Statistics (FBS) Monthly Statistical Bulletin.
(iii)	Cement – in bags	-	“ “ “
(iv)	Reinforcing Steel	-	“ “ “
(v)	High Speed Diesel (HSD)	-	“ “ “
(vi)	Bricks	-	“ “ “
(vii)	Bitumen	-	“ “ “
(viii)			
	Total	1.000	

**Notes:**

- Indices for “(i)” to “(iv)” are taken from the Government of Pakistan Federal Bureau of Statistics, Monthly Statistical Bulletin. The base cost indices or prices shall be those applying 15 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.
- Any fluctuation in the indices or prices of materials other than those given above shall not be subject to adjustment of the Contract Price.
- Fixed portion shown here is for typical road project, procuring agency to determine the weight age of Fixed Portion considering only those cost elements having cost impact of seven (7) percent or more on his specific project.

**B. When Escalation is allowed on the materials only.**

Price adjustment on following items shall be allowed:

Cost Element	Description	Weight ages	Applicable index
1	2	3	4
i	Cement – in bags	-	Government of Pakistan (GoP) Federal Bureau of Statistics (FBS) Monthly Statistical Bulletin.
ii	Reinforcing Steel		“ “ “ “
iii	Bricks		“ “ “ “
iv	Bitumen		“ “ “ “
v	Wood (Composite item)		“ “ “ “
	Total		“ “ “ “

**Notes:**

1. Indices are taken from the Government of Pakistan Federal Bureau of Statistics, Monthly Statistical Bulletin. The base cost indices or prices shall be those applying 15 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.

**Appendix-D to Bid**

**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 (in case of item not mentioned in Bill of Quantities).
3. The rates and prices entered in the priced Bill of Quantities shall, except insofar as it is otherwise provided under the Contract include supply of material, carriage, all costs of contractor's plant, labour, supervision, 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 14 days prior to deadline for submission of Bids in case of ICB/NCB respectively, 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 and shall not be paid separately.
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 summarized 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 13.5 of Part I, General Conditions of Contract.
8. Bidder shall price the Bill of Quantities in Pakistani Rupees only.
9. The bidder must fill Part C: Day Work Schedule

**B. WORK ITEMS**

The Bill of Quantities contains the following Bills and Items:

SUMMARY

Bill #	Description	Amount (Rs)
1	EARTHWORKS FOR CANAL (RD-208+000 To 270+000)	
2	CONSTRUCTION OF WATER COURSES (22) Nos	
3	CONSTRUCTION OF DISTRICT ROAD BRIDGES (01) Nos	

BILL OF QUANTITY					
BILL NO -1: EARTHWORK FOR CANAL					
Sr. No.	Description of Items	Unit	Quantity	Rate (Rs)	Amount (Rs.)
1	Jungle clearance and removing within 100ft (light) Provisional Quantity (S.I No-4a, P-95).	%0 Sft	17,100,000.00	75.63	1,293,273.00
2	Cutting and Removing Trees within a distance 100ft (b) from 2.6 ft to 6ft Girth RD-208 to314 (Wherever necessary) RD-208 to 314 (Both Sides) (P-95 I-2(b) SCR: 2012)				
	(a) Upto 2.5 feet girth.	No	500.00	535.43	267,715.00
	(b) From 2.6 feet to 6.0 feet girth.	No	500.00	1,043.63	521,815.00
3	Earth work excavation inirrigation channels drains etc.Dressed to design section grades and profiles exczvatd material disposed off and dreeesd within 50ft lead (S.I No-5a, P-1)	%0 Cft	39,102,572.75	2,420.00	94,628,226.06
4	Rehandling of earth work (b) Upto 50' 3 leads (S.I No-9b, P-2)	%0 Cft	81,002,630.00	1,058.75	85,761,534.51
5	Extra for wet earth Provisional Quantity (S.I No-15, P-3)	%0 Cft	11,730,772.00	1,058.75	12,419,954.86
6	Borrow pit excavation undressed lead upto 100ft (a) ordinary soil, (S.I No-3a, P-1)	%0 Cft	5,501,763.75	2,117.50	11,649,984.74
7	Carriage of 100 Cft 5 Ton of all materials like stone, aggregate, spawl, coal , lime , Surkhi, etc: B.G Rail fastening point and crossing bridge, girders, Pipes, sheets rail, M.S Bars etc: or 1000 Nos bricks , 10"x5"x3" or 1000 No Tiles, 12" x 6"x 2" or 150 Cft of timber or 100 Maundas of fuel wood by trucks or any other means owned by the contractors. (Schedule of Carriage, 2011, Page 57 Item.1) For One Mile	% Cft	3,151,120.50	407.00	12,825,060.44
8	Extra for every 50ft additional lead or part therof. (a) For earth work (soft, ordinary, hard and v.hard) (3 Leads 100.78*3=302.34) (S.I No-8a, P-2)	%0 Cft	2,350,643	302.34	710,693
9	Earth work compaction soft ordinary hard soil (b) laying earth work in 6" layers leveling dressing & watering for compaction etc complete. (S.I No-13b, P-3)	%0Cft	33,414,407.25	354.00	11,828,700.17
10	Earth work compaction by sheep feet roller and power roller with optimum moisture content (a) for 85 % modified AASHO density (S.I No-7c, P-2 HWay)	%0Cft	33,414,407.25	1,445.58	48,303,198.83
				<b>Total</b>	<b>280,210,155.00</b>

<b>BILL OF QUANTITY</b>					
<b>BILL NO -2 : CONSTRUCTION OF WATER COURSES/OUTLET STRUCTURES (22 Nrs.)</b>					
<b>Sr. No.</b>	<b>Description of Items</b>	<b>Unit</b>	<b>Quantity</b>	<b>Rate (Rs)</b>	<b>Amount (Rs.)</b>
1	Excavation in foundation of buildings, bridges and other structures i/c dagbelling, dressing, refilling around the structure with excavated earth watering and ramming lead upto one chain and lift upto 5ft (In ordinary soil) (1/18 (b) P-4)	%0 Cft	52,347.24	3,176.25	166,267.92
2	Cement concrete plain including placing, compacting, finishing, and curing complete (including screening and washing of stone aggregate) without shuttering. Ratio: 1:3:6. Volume-III, Part-II, I-5(i), P-16	%Cft	4,149.75	12,595.00	522,661.01
3	Pacca brick work in foundation in plinth in: (a) Cement sand mortar. 1:4 (S.I-4)(c), P-19)	%Cft	9,941.00	12,501.41	1,242,764.79
4	Pacca brick work other than building including striking of joints upto 20 feet height in: (a) Cement sand mortar. 1:2 (S.I-7)(a), P-22)	%Cft	17,376.47	14,201.00	2,467,632.61
5	Cement plaster 1:4 upto 12' height. (c) 3/4" thick. (S.I-11 (c), P-51)	%Sft	15,334.53	3,015.76	462,452.56
6	Providing, Laying R.C.C pipe and collars Class "A" and fixing in trench to required depth & fixing in position including cutting, fitting & jointing with maxphalt composition & cement mortar 1: 1 and testing with water pressure jto a head of 4.5 meter or 15 feet a bove the top of the heghest pipe & refilling with excavated staff. (S.I-A1 P-15 PHE)				
	(a) 3" dia	Rft	80.00	90.00	7,200.00
	(c) 6" dia	Rft	120.00	142.00	17,040.00
	(d) 9" dia	Rft	200.00	142.00	28,400.00
	(e) 12" dia	Rft	280.00	246.00	68,880.00
	(g) 18" dia	Rft	160.00	351.00	56,160.00
	(k) 30" dia	Rft	40.00	789.00	31,560.00
7	Filling and compacting soil and boulder behind retaining walls (i/c excavation of soil and lead upto 50ft (S.I.23, P-4)	% 0 Cft	31.02	2,722.00	84,436.44
				<b>Total</b>	<b>5,155,455</b>
				<b>Cartage</b>	<b>1,141,857</b>
				<b>Total</b>	<b>6,297,312</b>

<b>BILL OF QUANTITY</b>					
<b>BILL NO -3 : CONSTRUCTION OF ROAD BRIDGES</b>					
<b>S. No.</b>	<b>Description</b>	<b>Unit</b>	<b>Quantity</b>	<b>Rate (Rs)</b>	<b>Amount (Rs)</b>
1	Structural Excavation in Common Material (NHA Sindh CSR-2014 -Sanghar-Item- 107a)	CM	148.24	361.08	53,528.17
2	Lean Concrete (NHA Sindh CSR-2014 -Sanghar-Item- 401f)	CM	12.73	6,609.11	84,106.16
3	Concrete Class 'C' On Ground (NHA Sindh CSR-2014 -Sanghar-Item- 401 cii)	CM	9.62	11,000.01	105,804.58
4	Reinforced cement concrete Class A-3 (Under Ground) (NHA Sindh CSR-2014 -Sanghar-Item- 401 a3i)	CM	233.85	11,196.06	2,618,236.04
5	Reinforced cement concrete Class A-3 (On Ground) (NHA Sindh CSR-2014 -Sanghar-Item- 401 a3ii)	CM	40.09	12,056.11	483,312.28
6	Reinforced cement concrete Class A-3 (Elevated) (NHA Sindh CSR-2014 -Sanghar-Item- 401 a3iii)	CM	306.87	12,467.43	3,825,826.23
7	Precast kerbs in concrete class A-1 of Size 450 X 150 mm Incl Bedding and Haunching (NHA Sindh CSR-2014 -Sanghar-Item- 601 dii)	M	67.36	1,112.30	74,921.76
8	Reinforcement as per AASHTO CM1 Grade 60 (NHA Sindh CSR-2014 -Sanghar-Item- 404 b)	Ton	64.11	115,614.06	7,411,628.59
9	Elastomeric Bearing Pad (according to Size and Thickness) (NHA Sindh CSR-2014 -Sanghar-Item- 406 e)	Cu.cm	226,314.00	1.97	445,838.58
10	Cast In place Piles Upto 1.00 Meter Dia in Normal Soil (Boring Only) (NHA Sindh CSR-2014 -Sanghar-Item- 407d1)	RM	414.53	5,585.15	2,315,200.99
11	Pile Load Test Up to 120 Tons (NHA Sindh CSR-2014 -Sanghar-Item- 407h)	Each	1.00	319,308.48	319,308.48
12	Pre-Stressing Wire Strand 3/8"-1/2" Dia Complete In All Respect. (NHA Sindh CSR-2014 -Sanghar-Item- 405a)	Ton	2.99	224,729.48	672,190.12
13	Launching Of Girder (NHA Sindh CSR-2014 -Sanghar-Item- 405b)	Ton	224.70	1,311.50	294,690.72
14	Steel Expansion Joints (Local) (NHA Sindh CSR-2014 -Sanghar-Item- 406ci)	Kg	1,093.07	264.67	289,303.72
15	Neoprene Rubber Joint Filler 12 Mm Thick With Bitumastic Joint Seal (NHA Sindh CSR-2014 -Sanghar-Item- 406b)	Sqm	8.22	1,521.87	12,512.69
16	Concrete Beam Guardrail (Incl.Reinforcement) (NHA Sindh CSR-2014 -Sanghar-Item- 605a)	CM	6.37	24,452.33	155,769.37
17	Concrete Post Guardrail (Incl.Reinforcement) (NHA Sindh CSR-2014 -Sanghar-Item- 605c)	CM	2.48	22,636.43	56,078.36

18	Supply and installing PVC blind pipe Class B of approved design quality and make Including necessary sockets etc. complete (PHE Rates Page 44, Item 12-b CSR 2012)	RM	85.64	587.63	50,327.35
<b>APPROACH ROADS</b>					
<b>Embankment</b>					
19	Compaction of Natural Ground (NHA Sindh CSR-2014 -Sanghar-Item- 104)	SM	12,724.58	27.68	352,216.48
20	Formation of Embankment From Borrow Excavation in Common Material (NHA Sindh CSR-2014 -Sanghar-Item- 108c)	CM	22,980.16	447.49	10,283,393.83
<b>Sub-Base</b>					
21	Granular Sub Base (NHA Sindh CSR-2014 -Sanghar-Item- 201)	CM	423.78	2,009.41	851,552.91
<b>Base Course</b>					
22	Aggregate Base Course (NHA Sindh CSR-2014 -Sanghar-Item- 202)	CM	423.78	2,334.89	989,485.66
<b>Tripple Surface Treatment.</b>					
23	Tripple Surface Treatment. (NHA Sindh CSR-2014 -Sanghar-Item- 304c)	SM	3,273.90	566.23	1,853,782.24
<b>Brick on End Edging</b>					
24	Brick on End Edging (NHA Sindh CSR-2014 -Sanghar-Item- 603)	Rm	975.31	81.41	79,400.18
<b>Total</b>					<b>33,678,415</b>
<b>G.Total For 1Nos</b>					<b>33,678,415</b>

## **C. Daywork Schedule**

### **General**

1. Reference is made to Sub-Clause 13.6 of the General Conditions of Contract. Work shall not be executed on a day work basis except by written order of the Engineer. Bidders shall enter basic rates for day work items in the Schedules, which rates shall apply to any quantity of day work ordered by the Engineer. Nominal quantities have been indicated against each item of day work, and the extended total for day work shall be carried forward to the bid price.

### **Day work Labour**

2. In calculating payments due to the contractor for the execution of day work, the actual time of classes of labour directly doing the day work ordered by the Engineer and for which they are competent to perform will be measured excluding meal breaks and rest periods. The time of gangers (charge hands) actually doing work with the gang will also be measured but not the time of foreman or other supervisory personnel.
3. The contractor shall be entitled to payment in respect of the total time that labour is employed on day work, calculated at the basic rates entered by him in the Schedule of day work Rates for labour together with an additional percentage, payment on basic rates representing the contractor's profit, overheads, etc., as described below:
  - a) the basic rates for labour shall cover all direct costs to the contractor, including (but not limited to) the amount of wages paid to such labour, transportation time, overtime, subsistence allowances and any sums paid to or on behalf of such labour for social benefits in accordance with Pakistan law. The basic rates will be payable in local currency only; and
  - b) the additional percentage payment to be quoted by the bidder and applied to costs incurred under (a) above shall be deemed to cover the contractor's profit, overheads, superintendence, liabilities and insurances and allowances to labour timekeeping and clerical and office work; the use of consumable stores, water, lighting and power; the use and repair of staging's, scaffolding, workshops and stores, portable power tools, manual plant and tools; supervision by the contractor's staff, foremen and other supervisory personnel; and charges incidental to the foregoing.

**Appendix-D to Bid**

**SCHEDULE OF DAYWORK RATES**

**I. Labour**

<b>Item No.</b>	<b>Description</b>	<b>Unit</b>	<b>Nominal Quantity</b>	<b>Rate (Rs) in Figure</b>	<b>Rate (Rs) in Words</b>	<b>Extended Amount (Rs.)</b>
<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>
D101	Ganger	Hr	500			
D102	Labourer	Hr	5,000			
D103	Brick layer	Hr	500			
D104	Mason	Hr	500			
D105	Carpenter	Hr	500			
D106	Steel work Erector	Hr	500			
D107	Driver for vehicle up to 10 tons	Hr	1,000			
D108	Operator for excavator, dragline, shovel or crane	Hr	500			
D109	Operator for tractor, (tracked) with dozer blade or ripper	Hr	500			
<b>Sub Total</b>						
<p>Allow 12% percent of subtotal for Contractor's overhead, profit, etc, in accordance with Paragraph 3(b) of Day work Schedule</p> <p>Total for Day work: Labour: Rs. _____</p> <p>(Carried forward to Day work Summary): Rs. _____</p>						

## Appendix-D to Bid

### Daywork Material

4. The contractor shall be entitled to payment in respect of materials used for day work (except for materials for which the cost is included in the percentage addition to labour costs as detailed heretofore), at the basic rates entered by him in the Schedule of Day work Rates for materials together with an additional percentage payment on the basic rates to cover overhead charges and profit, as follows:
  - a) the basic rates for materials shall be calculated on the basis of the invoiced price, freight, insurance, handling expenses, damage, losses, etc., and shall provide for delivery to store for stockpiling at the site. The basic rates shall be stated in local currency but payment will be made in the currency or currencies expended upon presentation of supporting documentation;
  - b) the additional percentage payment shall be quoted by the bidder and applied to the equivalent local currency payments made under Sub-Para(a) above; and
  - c) the cost of hauling materials used on work ordered to be carried out as Day work from the store or stockpile on the site to the place where it is to be used will be paid in accordance with the terms for Labour and Constructional Plant in this Schedule.

**Appendix-D to Bid**

**II. Materials**

<b>Item No.</b>	<b>Description</b>	<b>Unit</b>	<b>Nominal Quantity</b>	<b>Rate (Rs) in Figure</b>	<b>Rate (Rs) in Words )</b>	<b>Extended Amount (Rs.)</b>
<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>
D201	Cement, ordinary Portland or equivalent in bags	M:Ton	200			
D202	Mild Steel reinforcing bar up to 16mm diameter to BS 4449 or equivalent	M:Ton	100			
D203	Fine aggregate for concrete	% cuft	400			
D204	Coarse aggregate for concrete	% cuft	400			
<b>Sub Total</b>						
<p>Allow 12% percent of subtotal for Contractor's overhead, profit, etc., in accordance with Paragraph 4(b) of Daywork Schedule</p> <p>Total for Day work: Materials: Rs. _____</p> <p>(Carried forward to Daywork Summary): Rs. _____</p>						

## **Appendix-D to Bid**

### **Day Work Constructional Plant**

5. The contractor shall be entitled to payments in respect of constructional plant already on site and employed on Day work at the basic rental rates entered by him in the Schedule of Day work Rates for constructional plant. The said rates shall be deemed to include complete allowance for depreciation, interest, indemnity and insurance, repairs, maintenance, supplies, fuel, lubricants, and other consumables, and all overhead, profit and administrative costs related to the use of such equipment. The cost of drivers, operators and assistants will be paid for separately as described under the section on Day work Labour.
6. In calculating the payment due to the Contractor for constructional plant employed on Day work, only the actual number of working hours will be eligible for payment, except that where applicable and agreed with the Engineer, the traveling time from the part of the site where the constructional plant was located when ordered by the Engineer to be employed on Day work and the time for return journey thereto shall be included for payment.
7. The basic rental rates for constructional plant employed on Day work shall be stated in Pakistani Rupees.

**Appendix-D to Bid**

**III. Constructional Plant**

Item No.	Description	Unit	Nominal Quantity	Rate (Rs.) in Figure	Rate Rs.) in Words	Extended Amount (Rs.)
1	2	3	4		5	6
D301	Excavator ,face shovel or dragline:  1.Up-to and including 1Cu.M. 2.Over 1 Cu.M to 2 Cu. M. 3.Over 2 Cu. M	Hr Hr Hr	500 400 100			
D302	Tractor (tracked) including bull or angle dozer:  1.Up-to and including 150 HP 2.Over 150 to 200 HP 3.Over 200 to 250 HP	Hr Hr Hr	500 400 200			
D303	Tractor with ripper:  1.Up-to and including 200 HP 2.Over 200 to 250 HP	Hr Hr	400 200			
<b>Subtotal</b>						
<p>Allow 12% percent of subtotal for Contractor's overhead, profit, etc, in accordance with Paragraph 3(b) of Day work Schedule</p> <p>Total for day work: Constructional Plant: Rs. _____</p> <p>(Carried forward to day work summary): Rs. _____</p>						

**Appendix-D to Bid**

**DAYWORK**

**Summary (Daywork)**

		<b>Amounts (Rs.)</b>
(i)	Total for daywork: Labour	_____
(ii)	Total for daywork: Materials	_____
(iii)	Total for daywork: Constructional Plant	_____
<b>Total for day work</b> (Carried forwarded to Summary Bill of Quantities)		

**Contractor**

**Project Director**  
**Superintending Engineer**  
**Chotiari Reservoir Project Circle Sanghar**

**Appendix-D to Bid**

**BILL OF QUANTITIES**

**SUMMARY**

<b>Bill No.</b>	<b>Description</b>	<b>Amount (Rs.)</b>
Bill No. 1:	EARTHWORKS FOR CANAL (RD-208+000 To 270+000)	
Bill No. 2:	CONSTRUCTION OF WATER COURSES (22) Nos	
Bill No. 3:	CONSTRUCTION OF DISTRICT ROAD BRIDGES (01) Nos	
	<b>Sub-Total of Bills:</b>	
	Daywork:	
	<b>Bid Price:</b>	
	<b>Amount in Words:</b>	

**Contractor**

**Project Director**  
**Superintending Engineer**  
**Chotiari Reservoir Project Circle Sanghar**

**Appendix-E to Bid**

**PROPOSED CONSTRUCTION SCHEDULE**

Pursuant to Sub-Clause 8.2 of the General Conditions of Contract, the works shall be completed on or before the date stated in Appendix-A to Bid. The bidder shall provide as Appendix-E to Bid, the Construction Schedule in the bar chart (CPM, PERT or any other to be specified herein) showing the sequence of work items and the period of time during which he proposes to complete each work item in such a manner that his proposed programme for completion of the whole of the works and parts of the works may meet procuring agency's completion targets in days noted below and counted from the date of receipt of Engineer's Notice to Commence (Attach sheets as required for the specified form of Construction Schedule):

<b>Description</b>	<b>Time for Completion</b>
1) Whole works	548 days

## **Appendix-F to Bid**

### **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.

## **Appendix-G to Bid**

### **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**

<b>Owned Purchased or Leased</b>	<b>Description of Unit (Make, Model, Year)</b>	<b>Capacity HP Rating</b>	<b>Condition</b>	<b>Present Location or Source</b>	<b>Date of Delivery at Site</b>	<b>Period of Work on Project</b>
<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>
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 6 of the Conditions of Contract shall provide description of his construction camp's facilities and staff housing requirements.

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

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

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

**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 that part of the work for which each is listed.

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

<b>Part of Works (Give Details)</b>	<b>Subcontractor (With Complete Address)</b>
<b>1</b>	<b>2</b>

**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 Quantities, expressed in Pakistani Rupees:

<b>Quarter/ Year / Period</b>	<b>Amounts (in thousands)</b>
<b>1</b>	<b>2</b>
<b>1<sup>st</sup> Quarter</b>	
<b>2<sup>nd</sup> Quarter</b>	
<b>3<sup>rd</sup> Quarter</b>	
<b>4<sup>th</sup> Quarter</b>	
<b>5<sup>th</sup> Quarter</b>	
<b>6<sup>th</sup> Quarter</b>	
<b>Bid Price</b>	

**Appendix-K to Bid**

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

(to be filled in by the bidder)

**Appendix-L to Bid**

**(INTEGRITY PACT)  
DECLARATION OF FEES, COMMISSION AND BROKERAGE ETC; PAYABLE BY  
CONTRACTORS.**

(for Contracts worth Rs. 10.00 million or more)

Contract No. \_\_\_\_\_ Dated \_\_\_\_\_

Contract Value: \_\_\_\_\_

Contract Title: \_\_\_\_\_

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

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

[name of Contractor] accepts full responsibility and strict liability 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 PA and has not taken any action or will not take any action to circumvent the above declaration, representation or warranty.

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

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

\_\_\_\_\_  
[Procuring Agency]

\_\_\_\_\_  
[Contractor]

BS-1

## 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 'Procuring Agency') 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 Procuring Agency; and

WHEREAS, the Procuring Agency 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 procuring agency, 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 procuring agency, notice of which extension(s) to the Surety is hereby waived;
- (2) that the bid security of unsuccessful bidders will be returned by the procuring agency 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 procuring agency 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 therefore, on the prescribed form presented to him for signature enter into a formal Contract with the said procuring agency 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 procuring agency 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 procuring agency, the said sum upon first written demand of the procuring agency (without cavil or argument) and without requiring the procuring agency to prove or to show grounds or reasons for such demand, notice of which shall be sent by the procuring agency by registered post duly addressed to the Surety at its address given above.

PROVIDED ALSO THAT the procuring agency 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 procuring agency 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:

1. \_\_\_\_\_

Signature \_\_\_\_\_

\_\_\_\_\_

Name \_\_\_\_\_

Corporate Secretary (Seal)

Title \_\_\_\_\_

2. \_\_\_\_\_

\_\_\_\_\_

Name, Title & Address

\_\_\_\_\_

Corporate Guarantor (Seal)

PS-1

**PERFORMANCE SECURITY  
(Bank Guarantee)**

Guarantee No. \_\_\_\_\_  
Executed on \_\_\_\_\_  
Expiry date \_\_\_\_\_

[Letter by the Guarantor to the Procuring Agency]

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

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 procuring agency) in the penal sum of the amount stated above for the payment of which sum well and truly to be made to the said procuring agency, 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 procuring agency'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 procuring agency, 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 defenses under the Contract, do hereby irrevocably and independently guarantee to pay to the procuring agency without delay upon the procuring agency's first written demand without cavil or arguments and without requiring the procuring agency to prove or to show grounds or reasons for such demand any sum or sums up to the amount stated above, against the procuring agency'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 Procuring Agency's designated Bank & Account Number.

PROVIDED ALSO THAT the procuring agency 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 procuring agency 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)

CA-1

## FORM OF CONTRACT AGREEMENT

THIS CONTRACT AGREEMENT (hereinafter called the "Agreement") made on the \_\_\_\_\_ day of \_\_\_\_\_ (month) 20\_\_\_\_ between \_\_\_\_\_ (hereafter called the "Procuring Agency") of the one part and \_\_\_\_\_ (hereafter called the "Contractor") of the other part.

WHEREAS the Procuring Agency is desirous that certain works, viz \_\_\_\_\_ should be executed by the Contractor and has accepted a bid by the Contractor for the execution and completion of such works and the remedying of any defects therein.

NOW this Agreement witnessed as follows:

1. In this Agreement words and expressions shall have the same meanings as are respectively assigned to them in the Conditions of Contract hereinafter referred to.
2. The following documents 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) Contract Data (Appendix-A to Bid);
  - (e) 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 procuring agency to the Contractor as hereinafter mentioned, the Contractor hereby covenants with the procuring agency to

execute and complete the works and remedy defects therein in conformity and in all respects with the provisions of the contract.

4. Procuring agency 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 Procuring Agency

(Seal)

(Seal)

Signed, Sealed and Delivered in the presence of:

Witness: \_\_\_\_\_

Witness: \_\_\_\_\_

\_\_\_\_\_  
(Name, Title and Address)

\_\_\_\_\_  
(Name, Title and Address)

**MG-1**

### **MOBILIZATION ADVANCE GUARANTEE**

Bank Guarantee No. \_\_\_\_\_ Date \_\_\_\_\_

WHEREAS \_\_\_\_\_ (hereinafter called the 'Procuring Agency') has entered into a  
Contract for \_\_\_\_\_

(Particulars of Contract)

with \_\_\_\_\_ (hereinafter called the "Contractor").

AND WHEREAS, the Procuring Agency has agreed to advance to the Contractor, at the Contractor's request, an amount of Rupees \_\_\_\_\_ (Rs \_\_\_\_\_ ) which amount shall be advanced to the Contractor as per provisions of the Contract.

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

AND WHEREAS, \_\_\_\_\_  
(Scheduled Bank in Pakistan)

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

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

Notice in writing of any default, of which the procuring agency shall be the sole and final judge, on the part of the Contractor, shall be given by the procuring agency 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)

\_\_\_\_\_  
Corporate Guarantor (Seal)

## INDENTURE FOR SECURED ADVANCES

(For use in cases in which is contract is for finished work and the contractor has entered into an agreement for the execution of a certain specified quantity of work in a given time).

This INDENTURE made the ..... day of .....  
..... 20..... BETWEEN (hereinafter called "the Contractor" which expression shall where the context so admits or implied be deemed to include his heirs, executors, administrators and assigns) of the one part and THE GOVERNOR OF SINDH (hereinafter called "the Government" of the other part).

WHEREAS by an agreement, dated (hereinafter called the said agreement, the contractor has agreed to perform the under-mentioned works (hereinafter referred to as the said work):-  
(Here enter (the description of the works).1

AND WHEREAS the contractor has applied to the .....  
.....for an advance to him of Rupees .....  
(Rs. .... ) on the security of materials absolutely belonging to him and brought by him to the site of the said works the subject of the said agreement for use in the construction of such of the said works as he has undertaken to execute at rates fixed for the finished work (inclusive of the cost of materials and labour and other charge) AND WHEREAS the Government has agreed to advance to the Contractor the sum of Rupees, (Rs. .... ) on the security of materials the quantities and other particulars of which are detailed in Part II of Running Account Bill (B). the said works signed by the contractor  
Fin R.Form.17.A

On ..... and on such covenants and conditions as are hereinafter contained and the Government has reserved to itself the option of marking any further advance or advances on the security of other materials brought by the Contractor to the site of the said works.

NOW THIS INDENTURE WTTNESSETH that in pursuance of the said agreement and in consideration of the sum of Rupees.....  
(Rs. ....) on or before the execution of these presents paid to the Contractor by the Government (the receipt whereof the Contractor doth hereby acknowledge) and of such further advances (if any) as may be made to him as aforesaid (all of which advances are hereinafter collectively referred to as the said amount) the Contractor doth hereby assign unto the Government the said materials by way of security for the said amount

And doth hereby covenant and agree with the Government and declare ay follow:

- (1) That the said sum of Rupees. .... RS.  
..... ) so advanced by the Government to the Contractor as aforesaid and all or any further sum or sums which may be advanced as aforesaid shall be employed by the contractor in or towards expending the execution of the said works and for no other purpose whatsoever.
- (2) That the materials detailed in the said Running Account Bill (B) which have been offered to and accepted by (he Government as security for the said amount are absolutely by the Contractors own property free from encumbrances of any kind and the Contractor will not make any application for or receive a further advance on the security of materials which are not absolutely his own property and free from encumbrances of any kind and the contractor hereby agrees, at all times, to indemnify and save harmless the

Government against all claims whatsoever to any materials in respect of which an advance has been made to him as aforesaid.

- (3) That the said materials detailed in the said Running Account Bill (B) and all other materials on the security of which any further advance or advances may hereafter be made as aforesaid (hereinafter called the said materials) shall be used by the Contractor solely in *the* execution of the said works in accordance with the directions of the Divisional Officer (hereinafter called the Divisional Officer) and in the terms of the said agreement.
- (4) That the Contractor shall make at his own cost all necessary and adequate arrangement for the proper watch, safe custody and protection against all risks of the said material and that until used in construction as aforesaid the said materials shall remain at the site of the said works in the Contractor's custody and at his own risk and on his own responsibility and shall at all times be open to inspection by (he Divisional Officer or any officer authorized by him. In the event of the said materials of any part (hereof being stolen, destroyed or damaged or becoming deteriorated in a greater degree than is due to reasonable use and wear thereof Contractor will forthwith replace the same with other materials of like quality or repair and make good the same as required by the Divisional Officer and the materials so brought to replace the said materials so repaired and made good shall also be considered as security for the said amount.
- (5) The said materials shall not on any account be removed from the site of the said works except with the written permission of the Divisional Officer or an officer authorized by him in that behalf
- (6) That the said amount shall be payable in full when or before the Contractor receives payment, from the Government of the price payable to him for the said works under the terms and provisions of the said agreement PROVIDED THAT if any intermediate payments are made to the contractor on account of work done then on the occasion of each such payment the Government will be at liberty to make a recovery from the Contractor's Bill for such payment by deducting there from in the value of the said materials (then actually used in the construction and in respect of which recovery has not been made previously the value for this purpose being determined in respect of each description of material at the rates at which the amount of the advances made under these presents were calculated.
- (7) that if the Contractor shall at any time make any default in the performance or observation in any respect of any of the terms and provisions of the said agreement or of these presents the total amount of the advance or advances that may still be owing to the Government shall immediately on the happening of such default be repayable by the Contractor to the Government together with interest thereon at twelve percent per annum from the date or respective dates of such advance or advances to the date of repayment and with all costs, charges, damages and expenses incurred by the Government in or for the recovery thereof or the enforcement of this security or otherwise by reason of (he default of the Contractor and any moneys so becoming due and payable shall constitute a debt due from the Contractor to the Government and the Contractor hereby covenants and agrees with the Government to repay and the same respectively to it accordingly.
- (8) That the Contractor hereby charges all the said materials with the repayment to the Government of the said sum of Rupees ..... (Rs. .... ) and any further sum or sums which may be advanced as aforesaid and all costs charges damages and expenses payable under these present PROVIDED ALWAYS and it is hereby agreed

and declared that not, withstanding anything in the said agreement and without prejudice to the powers contained therein if and whether the covenant for payment and repayment hereinbefore contained shall become enforceable and the money owing shall not be paid to accordingly.

Once there with the Government may at any time thereafter adopt all or any of following courses as it may deem best;

(a) Seize and utilize the said materials or any part thereof in the completion of the said works on behalf of the Contractor in accordance with the provisions in that behalf contained in the said agreement debiting the Contractor with the actual cost of effecting such completion the amount due in respect of advances under these presents and crediting the Contractor with the value of work done as he had carried it out in accordance with the said agreement and at the rates thereby provided. If the balance is against the Contractor he is to pay the same to the Government on demand.

(b) Remove and sell by public auction the seized materials or any part thereof and out of the moneys arising from the sale retain all the sums aforesaid repayable to the Government under these presents and pay over the surplus (if any) to the Contractor.

(c) Deduct all or any part of the moneys owing out of the security deposit or any sum due to the Contractor under the said agreement.

(9) That except as is expressly provided by the presents interest on the said advance shall not be payable.

(10) That in the event of any conflict between the provisions of these presents and the said agreement the provisions of these presents shall prevail and in the event of any dispute or difference arising over the construction or effect of these presents the settlement of which has not been hereinbefore expressly provided for the same shall be referred to the Superintending Engineer/Executive District Officer/Officer one grade higher to officer signed the agreement Circle whose..... decision shall be final and the provisions of the Arbitration Act 1940 for the time being in force so far as they are applicable shall apply to any such reference.

Signed, sealed and delivered by:

In the presence of

1st witness

SEAL

2nd witness

## **CONDITIONS OF CONTRACT**

The Conditions of Contract comprise two parts:

**PART I: GENERAL CONDITIONS OF CONTRACT**

(Conditions of Contract for Construction for Building and Engineering Works Designed By the Employer, Multilateral Development Bank Harmonised Edition, FIDIC, March 2006)

**PART II: PARTICULAR CONDITIONS OF CONTRACT**

*The successful bidder shall obtain a copy of the FIDIC Conditions of Contract and include as part of Contract Document. The copy can be obtained from:*

*FIDIC CASE POSTALE, CH-1215 Switzerland;*

*Tel. +41 22 799 49 00;*

*Fax; +41 22 799 49 01*

*E-mail: [fidic@fidic.org](mailto:fidic@fidic.org).*

## **PART I - GENERAL CONDITIONS OF CONTRACT**

# Conditions of Contract for **CONSTRUCTION**

FOR BUILDING AND ENGINEERING WORKS DESIGNED BY THE  
EMPLOYER

Multilateral Development Bank Harmonised Edition  
March 2006

## General Conditions

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FEDERATION INTERNATIONALE DES INGENIEURS-CONSEILS INTERNATIONAL  
FEDERATION OF CONSULTING ENGINEERS INTERNATIONALE VEREINIGUNG  
BERATENDER INGENIEURE FEDERACION INTERNACIONAL DE INGENIEROS  
CONSULTORES



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## GENERAL CONDITIONS

### GENERAL PROVISIONS

#### 1.1

##### Definitions

In the Conditions of Contract (“these Conditions”), which include Particular Conditions, Parts A and B, and these General Conditions, the following words and expressions shall have the meanings stated. Words indicating persons or parties include corporations and other legal entities, except where the context requires otherwise.

##### 1.1.1

The Contract 1.1.1.1 “Contract” means the Contract Agreement, the Letter of Acceptance, the Letter of Tender, these Conditions, the Specification, the Drawings, the Schedules, and the further documents (if any) which are listed in the Contract Agreement or in the Letter of Acceptance.

1.1.1.2 “Contract Agreement” means the contract agreement referred to in Sub- Clause 1.6 [Contract Agreement ].

1.1.1.3 “Letter of Acceptance” means the letter of formal acceptance, signed by the Employer, of the Letter of Tender, including any annexed memoranda comprising agreements between and signed by both Parties. If there is no such letter of acceptance, the expression “Letter of Acceptance” means the Contract Agreement and the date of issuing or receiving the Letter of Acceptance means the date of signing the Contract Agreement.

1.1.1.4 “Letter of Tender” means the document entitled letter of tender or letter of bid, which was completed by the Contractor and includes the signed offer to the Employer for the Works.

1.1.1.5 “Specification” means the document entitled specification, as included in the Contract, and any additions and modifications to the specification in accordance with the Contract. Such document specifies the Works.

1.1.1.6 “Drawings” means the drawings of the Works, as included in the Contract, and any additional and modified drawings issued by (or on behalf of) the Employer in accordance with the Contract.

1.1.1.7 “Schedules” means the document(s) entitled schedules, completed by the Contractor and submitted with the Letter of Tender, as included in the Contract. Such document may include the Bill of Quantities, data, lists, and schedules of rates and/or prices.

1.1.1.8 “Tender” means the Letter of Tender and all other documents which the Contractor submitted with the Letter of Tender, as included in the Contract.

1.1.1.9 “Bill of Quantities”, “Daywork Schedule” and “Schedule of Payment Currencies” mean the documents so named (if any) which are comprised in the Schedules.

1.1.1.10 “Contract Data” means the pages completed by the Employer entitled contract data which constitute Part A of the Particular Conditions.

## 1.1.2

### Parties and Persons

1.1.2.1 “Party” means the Employer or the Contractor, as the context requires.

1.1.2.2 “Employer” means the person named as employer in the Contract Data and the legal successors in title to this person.

1.1.2.3 “Contractor” means the person(s) named as contractor in the Letter of Tender accepted by the Employer and the legal successors in title to this person(s).

1.1.2.4 “Engineer” means the person appointed by the Employer to act as the Engineer for the purposes of the Contract and named in the Contract Data, or other person appointed from time to time by the Employer and notified to the Contractor under Sub-Clause 3.4 [ Replacement of the Engineer ].

1.1.2.5 “Contractor’s Representative” means the person named by the Contractor in the Contract or appointed from time to time by the Contractor under Sub-Clause 4.3 [ Contractor’s Representative ], who acts on behalf of the Contractor.

1.1.2.6 “Employer’s Personnel” means the Engineer, the assistants referred to in Sub-Clause 3.2 [ Delegation by the Engineer ] and all other staff, labour and other employees of the Engineer and of the Employer; and any other personnel notified to the Contractor, by the Employer or the Engineer, as Employer’s Personnel.

1.1.2.7 “Contractor’s Personnel” means the Contractor’s Representative and all personnel whom the Contractor utilises on Site, who may include the staff, labour and other employees of the Contractor and of each Subcontractor; and any other personnel assisting the Contractor in the execution of the Works.

1.1.2.8 “Subcontractor” means any person named in the Contract as a subcontractor, or any person appointed as a subcontractor, for a part of the Works; and the legal successors in title to each of these persons.

1.1.2.9 “DB” means the person or three persons appointed under Sub-Clause 20.2 [ Appointment of the Dispute Board ] or Sub-Clause 20.3 [ Failure to Agree on the Composition of the Dispute Board ].

1.1.2.10 “FIDIC” means the Fédération Internationale des Ingénieurs-Conseils, the international federation of consulting engineers.

1.1.2.11 “Bank” means the financing institution (if any) named in the Contract Data.

1.1.2.12 “Borrower” means the person (if any) named as the borrower in the Contract Data.

## 1.1.3

### Dates, Tests, Periods and Completion

1.1.3.1 “Base Date” means the date 28 days prior to the latest date for submission and completion of the Tender.

1.1.3.2 “Commencement Date” means the date notified under Sub-Clause 8.1 [ Commencement of Works ].

1.1.3.3 “Time for Completion” means the time for completing the Works or a Section (as the case may be) under Sub-Clause 8.2 [ Time for Completion ], as stated in the Contract

Data (with any extension under Sub-Clause 8.4 [ Extension of Time for Completion ]), calculated from the Commencement Date.

1.1.3.4 “Tests on Completion” means the tests which are specified in the Contract or agreed by both Parties or instructed as a Variation, and which are carried out under Clause 9 [ Tests on Completion ] before the Works or a Section (as the case may be) are taken over by the Employer.

1.1.3.5 “Taking-Over Certificate” means a certificate issued under Clause 10 [ Employer’s Taking Over ].

1.1.3.6 “Tests after Completion” means the tests (if any) which are specified in the Contract and which are carried out in accordance with the Specification after the Works or a Section (as the case may be) are taken over by the Employer.

1.1.3.7 “Defects Notification Period” means the period for notifying defects in the Works or a Section (as the case may be) under Sub-Clause 11.1 [ Completion of Outstanding Work and Remedying Defects ], which extends over twelve months except if otherwise stated in the Contract Data (with any extension under Sub-Clause 11.3 [Extension of Defects Notification Period ]), calculated from the date on which the Works or Section is completed as certified under Sub-Clause 10.1 [ Taking Over of the Works and Sections ].

1.1.3.8 “Performance Certificate” means the certificate issued under Sub-Clause

1.1.3.9 “day” means a calendar day and “year” means 365 days.

11.9 [ Performance Certificate ].

#### 1.1.4

##### Money and Payments

1.1.4.1 “Accepted Contract Amount” means the amount accepted in the Letter of Acceptance for the execution and completion of the Works and the remedying of any defects.

1.1.4.2 “Contract Price” means the price defined in Sub-Clause 14.1 [ The Contract Price ], and includes adjustments in accordance with the Contract.

1.1.4.3 “Cost” means all expenditure reasonably incurred (or to be incurred) by the Contractor, whether on or off the Site, including overhead and similar charges, but does not include profit.

1.1.4.4 “Final Payment Certificate” means the payment certificate issued under Sub-Clause 14.13 [ Issue of Final Payment Certificate ].

1.1.4.5 “Final Statement” means the statement defined in Sub-Clause 14.11 [ Application for Final Payment Certificate ].

1.1.4.6 “Foreign Currency” means a currency in which part (or all) of the Contract Price

is payable, but not the Local Currency.

1.1.4.7 “Interim Payment Certificate” means a payment certificate issued under Clause 14 [ Contract Price and Payment ], other than the Final Payment Certificate.

1.1.4.8 “Local Currency” means the currency of the Country.

1.1.4.9 “Payment Certificate” means a payment certificate issued under Clause 14 [ Contract Price and Payment].

1.1.4.10 “Provisional Sum” means a sum (if any) which is specified in the Contract as a provisional sum, for the execution of any part of the Works or for the supply of Plant, Materials or services under Sub-Clause 13.5 [ Provisional Sums ].

1.1.4.11 “Retention Money” means the accumulated retention moneys which the Employer retains under Sub-Clause 14.3 [ Application for Interim Payment Certificates ] and pays under Sub-Clause

1.1.4.12 “Statement” means a statement submitted by the Contractor as part of an application, under Clause 14 [ Contract Price and Payment ], for a payment certificate.

14.9 [ Payment of Retention Money ].

#### 1.1.5

##### Works and Goods

1.1.5.1 “Contractor’s Equipment” means all apparatus, machinery, vehicles and other things required for the execution and completion of the Works and the remedying of any defects. However, Contractor’s Equipment excludes Temporary Works, Employer’s Equipment (if any), Plant, Materials and any other things intended to form or forming part of the Permanent Works.

1.1.5.2 “Goods” means Contractor’s Equipment, Materials, Plant and Temporary Works, or any of them as appropriate.

1.1.5.3 “Materials” means things of all kinds (other than Plant) intended to form or forming part of the Permanent Works, including the supply-only materials (if any) to be supplied by the Contractor under the Contract.

1.1.5.4 “Permanent Works” means the permanent works to be executed by the Contractor under the Contract.

1.1.5.5 “Plant” means the apparatus, machinery and vehicles intended to form or forming part of the Permanent Works, including vehicles purchased for the Employer and relating to the construction or operation of the Works.

1.1.5.6 “Section” means a part of the Works specified in the Contract Data as a Section (if any).

1.1.5.7 “Temporary Works” means all temporary works of every kind (other than Contractor’s Equipment) required on Site for the execution and completion of the Permanent Works and the remedying of any defects.

1.1.5.8 “Works” mean the Permanent Works and the Temporary Works, or either of them as appropriate.

## 1.1.6

### Other Definitions

1.1.6.1 “Contractor’s Documents” means the calculations, computer programs and other software, drawings, manuals, models and other documents of a technical nature (if any) supplied by the Contractor under the Contract.

1.1.6.2 “Country” means the country in which the Site (or most of it) is located, where the Permanent Works are to be executed.

1.1.6.3 “Employer’s Equipment” means the apparatus, machinery and vehicles (if any) made available by the Employer for the use of the Contractor in the execution of the Works, as stated in the Specification; but does not include Plant which has not been taken over by the Employer.

1.1.6.4 “Force Majeure” is defined in Clause 19 [ Force Majeure ].

1.1.6.5 “Laws” means all national (or state) legislation, statutes, ordinances and other laws, and regulations and by-laws of any legally constituted public authority.

1.1.6.6 “Performance Security” means the security (or securities, if any) under Sub-Clause 4.2 [ Performance Security ].

1.1.6.7 “Site” means the places where the Permanent Works are to be executed, including storage and working areas, and to which Plant and Materials are to be delivered, and any other places as may be specified in the Contract as forming part of the Site..

1.1.6.8 “Unforeseeable” means not reasonably foreseeable by an experienced contractor by the Base Date.

1.1.6.9 “Variation” means any change to the Works, which is instructed or approved as a variation under Clause 13 [ Variations and Adjustments ].

## 1.2

Interpretation In the Contract, except where the context requires otherwise:

- (a) words indicating one gender include all genders;
- (b) words indicating the singular also include the plural and words indicating the plural also include the singular;
- (c) provisions including the word “agree”, “agreed” or “agreement” require the agreement to be record in writing;
- (d) “written” or “in writing” means hand-written, type-written, printed or electronically made, and resulting in a permanent record; and
- (e) the word “tender” is synonymous with “bid”, and “tenderer” with “bidder” and the words “tender documents” with “bidding documents”.

The marginal words and other headings shall not be taken into consideration in the interpretation of these Conditions.

In these Conditions, provisions including the expression “Cost plus profit” require this profit to be one-twentieth (5%) of this Cost unless otherwise indicated in the Contract Data.

### 1.3 Communications

Wherever these Conditions provide for the giving or issuing of approvals, certificates, consents, determinations, notices, requests and discharges, these communications shall be:

- (a) in writing and delivered by hand (against receipt), sent by mail or courier, or transmitted using any of the agreed systems of electronic transmission as stated in the Contract Data; and
- (b) delivered, sent or transmitted to the address for the recipient's communications as stated in the Contract Data. However:
  - (i) if the recipient gives notice of another address, communications shall thereafter be delivered accordingly; and
  - (ii) if the recipient has not stated otherwise when requesting an approval or consent, it may be sent to the address from which the request was issued.

### 1.4 Law and Language

The Contract shall be governed by the law of the country or other jurisdiction stated in the Contract Data.

The ruling language of the Contract shall be that stated in the Contract Data.

The language for communications shall be that stated in the Contract Data. If no language is stated there, the language for communications shall be the ruling language of the Contract.

### 1.5 Priority of Documents

The documents forming the Contract are to be taken as mutually explanatory of one another. For the purposes of interpretation, the priority of the documents shall be in accordance with the following sequence:

- (a) the Contract Agreement (if any), (b) the Letter of Acceptance,
- (c) the Tender,
- (d) the Particular Conditions - Part A, (e) the Particular Conditions - Part B, (f) these General Conditions,
- (g) the Specification, (h) the Drawings, and
- (i) the Schedules and any other documents forming part of the Contract.

If an ambiguity or discrepancy is found in the documents, the Engineer shall issue any necessary clarification or instruction.

## **PART II- PARTICULAR CONDITIONS OF CONTRACT**

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## **PART II - PARTICULAR CONDITIONS OF CONTRACT**

### **1.1 Definitions**

1.1.1.4 "Form of Bid" is synonymous with "Letter of Tender".

1.1.1.5 "Bid" is synonymous with "Tender".

1.1.1.10 "Contract Data" is synonymous with "Appendix-A to Bid - Special Stipulations".

The following paragraph is added:

1.1.1.11 "Programme" means the programme to be submitted by the contractor in accordance with

Sub-Clause 8.3 and any approved revisions thereto.

1.1.2.2 "Employer" is synonymous with "Procuring Agency" 1.1.2.9 "DB" is synonymous with "Committee".

1.1.3.1 Replace 28 days by 7 days in LCB and 15 days in ICB..

1.1.2.9 "DB" is synonymous with "Committee"

1.1.3.7 "Defects notification Period" is synonymous with "Defects liability Period".

1.15 Inspections and Audit by the Bank

Deleted

### **3.1 Engineer's Duties and Authority.**

The following paragraph is added after duties:

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

### **4.3 Contractor's Representative**

The following text is to be added after last line:

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

## **6.10 Records of Contractor's Personnel and 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-clause 7.9 is added in (GCC):

## **7.9 Use of Pakistani Materials and Services**

The contractor shall, so far as may be consistent with the contract, make the maximum use of materials, supplies, plant and equipment indigenous to or produced or fabricated in Pakistan and services, available in Pakistan provided such materials, supplies, plant, equipment and services shall be of required standard.

## **8.1 Commencement of Works**

The last para 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.

## **8.3 Programme**

The following text is to be added after [Commencement of Works]

The programme shall be submitted in the either form of:

- a) Bar Chart identifying the critical activities.

## **8.11 Prolonged Suspension**

Replace 84 days by 120 days.

## **13.1 Right to vary**

In the last line of Para, after the word "Variation", the word "in writing" is added.

### **13.3 Variation procedure**

In the tenth line, after the words “as soon as practicable” following is added: “and within a period not exceeding one-eighth of the completion time”

### **13.8 Adjustment for changes in cost**

This Clause is deleted in its entirety

### **14.1 The Contract Price**

Sub-para (d) is deleted.

### **14.2 Advance Payment**

The Text is deleted and replaced with following:

Advance Payment/Mobilization Advance shall be made available to the Contractor by the procuring agency on following conditions:

Mobilization Advance/Advance Payment

- (i) Mobilization advance up to 10 % of the Contract Price may be paid by the procuring agency to the Contractor on the works costing Rs2.5 million or above on following conditions:
  - a. on submission by the Contractor of a mobilization advance guarantee for the full amount of the advance in the specified form, from a Scheduled Bank in Pakistan, acceptable to the procuring agency;
  - b. contractor shall pay interest on the mobilization advance at the rate of 10% per annum on the advance; and
- (ii) This Advance including the interest shall be recovered in 5 equal installments from the 5 R.A bills and in case the number of bills is less than 5 then 1/5 of the advance inclusive of the interest thereon shall be recovered from each bill and the balance together with interest be recovered from the final bill. It may be insured that there is sufficient amount in the final bill to enable recovery of the Mobilization Advance.

### **14.5 Plants and Materials intended for Works**

Add the following paragraph as sub-clause 14.5 (d) for Secured Advance on non – perishable materials and sub-clauses (a), (b) and (c) will be applicable for plants only:

- (I) The Contractor shall be entitled to receive from the procuring agency Secured Advance against an INDENTURE BOND in Public Works Account Form No.31 (Fin. R. Form No.

2) acceptable to the procuring agency of such sum as the Engineer may consider proper in respect of non-perishable materials brought at the site but not yet incorporated in the Permanent Works provided that:

- (i) The materials are in accordance with the specifications for the permanent works;
- (ii) Such materials have been delivered to the site and are properly stored and protected against loss or damage or deterioration to the satisfaction and verification of the Engineer/Assistant Engineer but at the risk and cost of the Contractor;
- (iii) The Contractor's records of the requirements, orders, receipts and use of materials are kept in a form approved by the Engineer, and such records shall be available for inspection by the Engineer;
- (iv) The Contractor shall submit with his monthly statement the estimated value of the materials on site together with such documents as may be required by the Engineer for the purpose of valuation of materials and providing evidence of ownership and payment therefore;
- (v) Ownership of such materials shall be deemed to vest in the procuring agency and these materials shall not be removed from the site or otherwise disposed of without written permission of the procuring agency;
- (vi) The sum payable for such materials on site shall not exceed 75 % of the (i) landed cost of imported materials, or (ii) ex-factory / ex-warehouse price of locally manufactured or produced materials, or (iii) market price of stands other materials;
- (vii) Secured Advance shall not be allowed unless and until the previous advance, if any, is fully recovered;
- (viii) Detailed account of advances must be kept in part II of running account bill or a separate statement; and
- (ix) Secured Advance may be permitted only against materials/quantities anticipated to be consumed / utilized on the work within a period of 3 months from the date of issue of secured advance and in no case for full quantities of materials for the entire work/contract.

(II) Recovery of Secured Advance:

Secured Advance paid on non-perishable materials to the Contractor under the above provisions shall be effected from the monthly payments on actual consumption basis, but not later than period specified in the rules not more than three months (even if unutilized);

#### **14.8 Delayed Payment**

Second Para is replaced with following text:

In the event of the failure of the Procuring Agency to make the payment within the time stated, the procuring agency shall pay to the contractor in case of ICB contracts only, the compensation at rate of KIBOR+2% per annum in local currency and Libor+1% for foreign currency, upon all sums to be paid from the date of which the same would have been paid.

#### **15.2 Termination by Employer**

The following Para is added at the end of the sub-clause:

Provided further, that in addition to the action taken by the procuring agency against the Contractor under this Clause, the procuring agency 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.

#### **15.6 Corrupt and fraudulent Practices.**

The following text is to be added as 3rd paragraph:

Successful Contractor has to provide Integrity Pact (for contracts worth Rs.10.0 million and above).

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 procuring agency 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 procuring agency 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 15.2 & 15.5 and the payment under Sub-Clause 15.4 shall be made after having deducted the amounts due to the procuring agency under Sub-Para (a) and (c) of this Sub-Clause.

#### **16.4 Payment on Termination**

Sub-paragraph (c) is deleted.

#### **17.3 Employer's/ Procuring Agency's Risks**

Sub-Clause 17.3 (h) is deleted.

The following text is added in Clause 18.1 (GCC):

#### **18.1 General Requirements for Insurance**

The contractor shall be obliged to place all insurances relating to the contract (including, but not limited to, the insurances referred to in Clauses 18.1,18.2,18.3,18.4) with Insurance Company having at least AA rating from PACRA/JCR in favour of the Employer//Procuring Agency valid for a period 28 days after beyond the Bid Validity date.

Costs of such insurances shall be borne by the contractor.

#### **19.6 Optional Termination, Payment and release by the Employer**

Sub-clauses (c), (d) and (e) are deleted.

#### **20.6 Arbitration**

Text will be replaced as under;

Any dispute in respect of which:

- (a) the decision, of the Dispute Board has not become final and binding pursuant to sub-clause 20.2, and
- (b) amicable settlement has not been reached within the period stated in sub-clause 20.5, shall be finally settled, under the provisions of the Arbitration Act, 1940 as amended or any statutory modification/Rules of Conciliation And Arbitration PEC Islamabad or re-enactment thereof for the time being in force.

The place of arbitration shall be Karachi in Sindh Province.

# **SPECIFICATIONS**

# SPECIFICATIONS

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## **SPECIFICATIONS**

### **1. THE SCOPE OF WORK**

The Works are part of the project for water supply to Thar Coal. The Package Va involves works in Makhi Farash Link Canal Project from RD 208+000 to 265+000 including remodeling and lining of distributaries / minors originating from within this reach, as summarized below:

#### **PACKAGE VA: WORKS FROM RD 208+000 TO 265+000**

- Makhi Farash Link Canal
  - o Earth Work in Length of 57+000 RDs
- Structures
  - o Road Bridge (243+066 RDs)
  - o Water Course 22 Nrs.

**Table-SP1: LIST OF REFERENCE TO PWD SPECIFICATIONS**

Sr.No.	Description	References of Specification	Reference Book
1	Jungle clearance and removing within 100ft (light) Provisional Quantity (page NO.100 item No.4 (a)) from SCR	17.1 (a) Whichever is applicable	Schedule of Rates Volume I, Part II (Specifications for Execution of works) 1967
2	Cutting removing trees within distance of 100ft Provisional Quantity . (p-100/1-2(b) SCR 2012)	17.1 (a) Whichever is applicable	Schedule of Rates Volume I, Part II (Specifications for Execution of works) 1967
3	Uprooting strumps & removing within 100ft.from 2" to 6" grith Provisional Quantity (page No.100 item No.3)	17.1 (a) Whichever is applicable	Schedule of Rates Volume I, Part II (Specifications for Execution of works) 1967
4	ploughing 3 items (page 102 item 41)	17.1 to 17.5 Whichever is applicable	Schedule of Rates Volume I, Part II (Specifications for Execution of works) 1967
5	earth work excavation in irrigation channels drains etc. Dressed to design section grades and profiles excavated material disposed off and dressed within 50ft lead (page 1, item No.5)	17.1 to 17.5 Whichever is applicable	Schedule of Rates Volume I, Part II (Specifications for Execution of works) 1967
6	Extra for wet earth Provisional Quantity (page No.4, item No.15)	17.1 to 17.5 Whichever is applicable	Schedule of Rates Volume I, Part II (Specifications for Execution of works) 1967
7	Remanding of earth work (b) Upto 50' (page No.2 item No.9(b))	17.1 to 17.5 Whichever is applicable	Schedule of Rates Volume I, Part II (Specifications for Execution of works) 1967
8	Borrow pit excavation undressed lead upto 100ft (a) ordinary soil, (page No.1, item 3a)	17.1 to 17.5 Whichever is applicable	Schedule of Rates Volume I, Part II (Specifications for Execution of works) 1967
9	Extra for every 50ft additional lead or part therof. (a) For earth work (soft, ordinary, hard and v.hard) item No.8(a) page No.2	17.1 to 17.5 Whichever is applicable	Schedule of Rates Volume I, Part II (Specifications for Execution of works) 1967
10	Carriage of 100 cft/5 tons of all materials like stone, aggregate. Spawl, coal, lime, surki etc B.G rail fasteningpoints and crossing bridge girders. Pipes sheets rail, MS bars etc or 1000 Nos.bricks 10"x5"x3" or 1000 Nos. tiles 12"x6"x2" or 150 cft timber 100 mouds of fuel wood by truck or any other means owned by the contractor 2 miles. (Page No. 1/1-1 schedule of carriage)	16	Schedule of Rates Volume I, Part II (Specifications for Execution of works) 1967
11	Earth work compaction soft ordinary hard soil (b) laying earth work in 6" layers leveling dressing & watering for compaction etc complete. (page No.4, item No.13(b))	17.1 to 17.5 Whichever is applicable	Schedule of Rates Volume I, Part II (Specifications for Execution of works) 1967
12	Earth work compaction by sheep feet roller and power roller with optimum moisture content (a) for 85 modified AASHO density (Page No. 2 item 7c highways schedule)	17.1 to 17.5 Whichever is applicable	Schedule of Rates Volume I, Part II (Specifications for Execution of works) 1967
13	Dressing and levelling of earth work to design section etc complete (ordinary or hard soil). S I No.11 (b) p-3	17.1 to 17.5 Whichever is applicable	Schedule of Rates Volume I, Part II (Specifications for Execution of works) 1967
14	Formation dressing and preparing sub-grade (ch;12 p-74 item no.1) a) In Bed b) On slope	28.1 to 28.3 Whichever is applicable	Schedule of Rates Volume I, Part II (Specifications for Execution of works) 1967
15	Cement plaster 1-1/2" thick ratio 1:6 (ch: 12 p-74 item-1) a) In Bed b) On slope	28.1 to 28.3 Whichever is applicable	Schedule of Rates Volume I, Part II (Specifications for Execution of works) 1967
16	Cement concrete lining ratio 1:2:4 (ch: 4 p-18 item-11) a) In Bed b) On slope	28.1 to 28.3 Whichever is applicable	Schedule of Rates Volume I, Part II (Specifications for Execution of works) 1967

17	Errerction and removal of centering for RCC or C.C	20.1	Schedule of Rates Volume I, Part II (Specifications for Execution of works) 1967
	a) Horizontal (Bed)		
	b) Vertical (slope)		
18	Filling expansion joints 1" wide with bitumen sand and saw dust. (R.A).	20.1 (26)	Schedule of Rates Volume I, Part II (Specifications for Execution of works) 1967
19	Elastomatic sealant (R.A)	20.1 (26)	Schedule of Rates Volume I, Part II (Specifications for Execution of works) 1967
20	Excavation in foundation of buildings, bridges and other structure lie dag belling, dressing, refilling around the structures with excavated earth watering and ramming lead upto one chain and lift upto 5ft (in ordinary soil) (1/18 (b) P-4)	17.1 to 17.5 Whichever is applicable	Schedule of Rates Volume I, Part II (Specifications for Execution of works) 1967
21	Preparing watering and ramming surface for laying	20.1	Schedule of Rates Volume I, Part II (Specifications for Execution of works) 1967
	(a) Horizontal floor		
	(b) Glacis & crest		
	(c) Inverted filter (4/18 P-17)		
22	C.C plain including placing, compacting, finishing and curing complete (including screening and washing of stone aggregate without shuttering). Ratio 1:4:8 (4/5 (i) P-15)	20.1	Schedule of Rates Volume I, Part II (Specifications for Execution of works) 1967
23	C.C plain including placing, compacting, finishing and curing complete (including screening and washing of stone aggregate without shuttering). Ratio 1:2:4 (4/5 (f) P-15)	20.1	Schedule of Rates Volume I, Part II (Specifications for Execution of works) 1967
24	Precast cement concrete solid or face block (1:2:4) i/c cost of templates (4/9 P-16)	20.4	Schedule of Rates Volume I, Part II (Specifications for Execution of works) 1967
25	Erecting and fixing in position precast cement concrete or stone slab in roof or lintels etc. lift upto 20ft i/c all charge (4/6 (c) P-16)	20.4	Schedule of Rates Volume I, Part II (Specifications for Execution of works) 1967
26	R.C.C work in all labour and material except the cost of steel reinforcement and its labour for bending and binding which will be paid separately. This rate also i/c all kind of forms, moulds, lifting, shuttering, curing, rendering and finishing the exposed surface.(i/c screening and washing of shingle)	20.4	Schedule of Rates Volume I, Part II (Specifications for Execution of works) 1967
	(a) RCC work in roof slabs, beams, column, rafts, lintels and other structural members laid in situ or pre-cast laid in position complete in all respects.		
	(i) Ratio 1:2:4, 90lbs cement, 2cft sand, 4cft shingle 1/4" to 1/2" gauge. (4/6 (a)(1) p-16)		
27	fabrication of mild steel r/f for cement concrete ilc cutting, bending, laying in position, making joints 2nd fastening ilc cost of binding wire.(also include removal of rust from bars) (b) using deformed bars grade 60. (4/8 (b) p-16)	20.4	Schedule of Rates Volume I, Part II (Specifications for Execution of works) 1967
28	plain galvanized iron sheet flashing of 22 gauge.	Chapter 10 Iron Work	Schedule of Rates Volume I, Part I (Specifications for Materials of Construction) 1964
29	supply and fixing embedding F.L pipe 4" dia perforated with holes of 1/8" dia cast iron pipe in gauge well at require depth as direct	Chapter 10 Iron Work	Schedule of Rates Volume I, Part I (Specifications for Materials of Construction) 1964

30	supply and fixing embedding G.L pipe 4"dia perforated with holes of 1/8" dia @ 1/2"c/c surrounded with granted shingle of required size & 1ft depth around in its full length one end cut with 1:1 slope and upon to water side and other closed (N) rate	Chapter 10 Iron Work	Schedule of Rates Volume I, Part I (Specifications for Materials of Construction) 1964
31	providing and construction of expansion joints with 9"wide PVC waterstop M.S dowels and filling the joints with pre-modeled joint filter and elastic joint sealer as per drawing details, specification and as directed by the engineer.	20.1 (27)	Schedule of Rates Volume I, Part II (Specifications for Execution of works) 1967
32	fixing enamelled iron guages flush area masonry i/c cost of hooks.	Chapter 10 Iron Work	Schedule of Rates Volume I, Part I (Specifications for Materials of Construction) 1964
33	Supply and fixing temeucature boards of marble slab for hydraulic gate of size 2"x 4": duly careed as directed in fancy pillar of required size and place etc complete i/c cost of the pillar.		
34	designing fabrication manufacturing and erection of radial gates of MS sheet 8 mm.girders, channel angles of required size with operational device viz trusses such beams winches steel wire rope platform etc paining oil 1g i/c cortage of fabricated manufactured component from site of work etc. complete with one floor warranty period of operation.	Chapter 10 Iron Work	Schedule of Rates Volume I, Part I (Specifications for Materials of Construction) 1964
35	Formation dressing and preparing sub-grade on slope.	28.1 to 28.3 Whichever is applicable	Schedule of Rates Volume I, Part II (Specifications for Execution of works) 1967
36	stone pitching i/c sub-base with hammer dressed stone laid in courses i/c carriage of material with in 3 chains	22.2 to 22.4 Whichever is applicable	Schedule of Rates Volume I, Part II (Specifications for Execution of works) 1967
37	stone filling dry hand packed as filing behind retaining walls or in pitching and apron.	22.14	Schedule of Rates Volume I, Part II (Specifications for Execution of works) 1967
38	boring for tube well in all water bearing soils from ground level upto 100ft: or 30.50 meter depth i/c sinking and with drawing of casing pipe (e) 200 mm (8"dia).(S.I No.1 (e) p.No.41 PHE)	Chapter 37 Installation of Tube wells	This Specification
39	Supply and fixing M.S bail plug (S.I No.8b p.No.43 PHE)	Chapter 37 Installation of Tube wells	This Specification
40	Supplying & fixing local make coir strainers of approved quality complete (b) for 150mm (6"dia). (S.I No.10 (b) p.No.44 PHE)	Chapter 37 Installation of Tube wells	This Specification
41	Supplying & installing M.S blind pipe 3/16"(5mm) thick of best and approved quality and make i/c necessary socket etc complete. (S.I No.11 (b) p.No.44 PHE)	Chapter 37 Installation of Tube wells	This Specification

42	Full hire charges of the pumping set per day inclusive of the wage of driver and assistant fuel or electric energy plate forms required for placing pumps etc at lower depth with suction and delivery pipe for pumping out water found at various depth from trenches i/c the cost of erection and dismantling after completion of the job. (i) Hire charges of pumping set of 12 to 25 HP pumping out water (ten pumps will remain stand by)	Job / No Specification	This Specification
43	note:- For working the pump beyond 8 hours the following payment shall be made. The hire of the pumping set itself being for 24 hours. (i) for pumping set of upto P-Hour 12 to 25 H.P	Job / No Specification	This Specification
44	Provision of sheet piling rig on site and removing on completion L.S	29.1 to 29.3 Whichever is applicable	Schedule of Rates Volume I, Part II (Specifications for Execution of works) 1967
45	sheet piling/ Arcelor Mittal wt-66.1 kg per meter of single pile.	29.1 to 29.3 Whichever is applicable	Schedule of Rates Volume I, Part II (Specifications for Execution of works) 1967
46	construction of pre-stressed concrete 268ft bridge "AA" loading 4ft footpath on one side and 24ft road way with 8"curb on other side including soil investigation, loading of test piles.prepration of designing making , drawing and designing firm pilling work complete in all respect of construction of pre-stressed girders in all respect loading of girder in position aixl fixing fiber bearing pads of approved quality complete in all respect. construction of deck slab, foot path, curb railing included providing expansion of testing of bridge structure as per satisfaction of the engineers.	20.4 / Pre-Stressing	Schedule of Rates Volume I, Part II (Specifications for Execution of works) 1967
47	preparing sub base course by supplying and spreading stone metal 1-1/2"-2" in gauge of approved quality from. Approve quantity in require thickness of 6" of 6" in two layer 3" each to proper camber and grades including hand packing filling voids with 20 cft pit/canal sand Non plastic quarry fine of approved quality and gauge from approved source watering and compacting to achieve 98-100% density as per modified AASHO specification.	Chapter 28 Roads	Pakistan Public Works Department Specifications For Building And Road Works 1973
48	laying brick on edging including supply of 9x4-1/2x3" . 1st class burnt bricks from klin to site of work excavation for laing edging with small side parallel to road .rate include all cost of material T&P upto site of work etc complete.	21.1 to 21.4 Whichever is applicable	Schedule of Rates Volume I, Part II (Specifications for Execution of works) 1967
49	preparing base course including supplying and spreading stone metal of approved quality properly graded to max size 1-1/2 in required thickness to proper camber and grade including supplying and spreading 15 cft screening and non plastic quarry fine filling depression with stone metal after initial rolling including watering and compaction the same so as to achieve 100% density as per modified AASHO specification. Rate includes providing and using tremplates.camber plates, screens form as directed.(rate include all cost of material T&P and carriage upto 3 chains) (p-4/1-10)	Chapter 28 Roads	Pakistan Public Works Department Specifications For Building And Road Works 1973

50	providing 3 coats of the surface dressing on new of existing surface with (40+25+14)=79 lbs of bitumen per %sft of 80/100 penetration from NOR Karachi and (5.5+2.75+15)=9.75 cft. Crush basin size 3/4-1/2, 1/2-3/8, & 3/8-1/6 inches respectively including rolling with power roller etc complete (each coat will be provided and rolled separately)	Chapter 28 Roads	Pakistan Public Works Department Specifications For Building And Road Works 1973
51	cement concrete plain i/c finishing and curing complete i/c screening and eashing of stone aggregate without shuttering. Ratio 1:3:6 (P-16 item no. 5 h)	20.1	Schedule of Rates Volume I, Part II (Specifications for Execution of works) 1967
52	Pacca brick work in foundation and plinth in (a) cement sand mortar ratio 1:4 (sr .4 c page no.20)	21.1 to 21.4 Whichever is applicable	Schedule of Rates Volume I, Part II (Specifications for Execution of works) 1967
53	pacca brick work other than building.(p no.22 item no 7 i©)	21.1 to 21.5 Whichever is applicable	Schedule of Rates Volume I, Part II (Specifications for Execution of works) 1967
54	cement plaster upto ratio 1:4 upto 12' height 3/4" thick. (S.R.G 2012 S.No. 11 (c) P.No.52)	25.1 to 25.6 Whichever is applicable	Schedule of Rates Volume I, Part II (Specifications for Execution of works) 1967
55	providing , laying RCC pipe & collar of class "C" and fixing in trenches i/c cutting, fitting and jointing with maxphait composition and cement mortar (1:1) i/c testing with water to head of 45 meter or 150 ft (12"dia) S.I.No.3 (e) p.No.16 PHE	Chapter .14 pipes	Schedule of Rates Volume I, Part I (Specifications for Materials of Construction) 1964
56	filling and compacting soil, earth and boulder behind retaining walls (i/c excavation of soil and lead upto 50ft) S.I.No.23 P.No.4	17.1 to 17.5 Whichever is applicable	Schedule of Rates Volume I, Part II (Specifications for Execution of works) 1967
57	construction of groynes double upto 10ft height average lead one mile.	30.1	Schedule of Rates Volume I, Part II (Specifications for Execution of works) 1967
58	carriage of pilchi sarkanda or farash or brush wood by boat or by road (lead 03 miles)	30.1	Schedule of Rates Volume I, Part II (Specifications for Execution of works) 1967
59	pointing flush on stone work (b) cement sand mortar ratio 1:3 S.I.No.20(b) p.No.52	25.8	Schedule of Rates Volume I, Part II (Specifications for Execution of works) 1967
60	providing , laying RCC pipe & collar of class "A" and fixing in trenches i/c cutting, fitting and jointing with maxphait composition and cement mortar (1:1) i/c testing with water to head of 4.5 meter or 15 ft PHE P-15 item No.1(g)	Chapter 37 Installation of Tube wells	Schedule of Rates Volume I, Part II (Specifications for Execution of works) 1967
61	Cartage of RCC pipes any class ASTM/restressed with collar by mechanical transport i/c loading unloading and stacking at site. (PHEW Sch:P-1 item no.2 (f))	Chapter 37 Installation of Tube wells	Schedule of Rates Volume I, Part II (Specifications for Execution of works) 1967
62	Designing fabrication/manufacturing & erection of double screw vertical gate of MS sheets 8mm, girders, channel angles of required size with operational device and platform etc painting only i/c cartage of fabricated/manufactured components from W/shop to site of work etc complete with one year period of operation (Market rate)	Chapter 10 Iron Work	Schedule of Rates Volume I, Part I (Specifications for Materials of Construction) 1964
63	Earth work compaction by sheep feet roller and power roller with optimum moisture content (a) for 95% modified AASHO density (Page No. 2/1-4(a))	17.1 to 17.5 Whichever is applicable	Schedule of Rates Volume I, Part II (Specifications for Execution of works) 1967
64	Erection and removal and centering for RCC or plain CC work of Deodar Wood (2nd class) (ii)Vertical (4/19 a(ii) p-17)	20.4	Schedule of Rates Volume I, Part II (Specifications for Execution of works) 1967

## **2. SITE DATA**

### **2.1 Location and Access**

Makhi Farash Link Canal Project (Package-Va) starts from RD 208+000 and ends at RD 265+000 near Khipro. The project is located in District Sanghar, in province of Sindh.

The project area is surrounded by the irrigated land comprises of silty sand and clay. The project site is partial lined canal and partial unconstructed. The Lower Nara Canal is perennial earthen canal.

### **2.2 Climate**

The climate of Sindh Province is arid and hot. However, winter months of November to January are mildly cold.

The climate here is "desert." There is virtually no rainfall all year long in Sanghar. This climate is considered to be BWh according to the Köppen-Geiger climate classification. The average annual temperature is 27.3 °C in Sanghar. About 215 mm of precipitation falls annually. June is the warmest month of the year. The temperature in June averages 37.0 °C. January is the coldest month, with temperatures averaging 15.0 °C.

## **3. GENERAL REQUIREMENTS**

### **3.1 Drawings**

#### **3.1.1 Engineer's Drawings**

The Tender Drawings included in the Tender Documents and which will form part of the Drawings to be used for the construction of the Works, show the work to be carried out in accordance with the Contract in sufficient detail for the Contractor to fully plan his activities.

The Engineer may issue, The Tender Drawings mentioned as above as construction drawings and any additional construction drawings when required for further details, clarifications or modifications.

The Contractor shall be required to perform the work in accordance with such further drawings and specifications at the applicable rates tendered in the priced Bill of Quantities for such work or work of a similar nature. Although the Drawings may be prepared to scale, work shall be based upon dimensions shown on the Drawings and not on dimensions scaled from the Drawings. The Drawings when read in conjunction with the specifications and instructions that may be issued from time to time by the Engineer, will show sufficient dimensions, specific details and typical details to define the various features of the work but the details necessary for

the construction of any part of the work may have to be deduced from several Drawings. Revision of any drawing details considered essential shall be provided by the Engineer prior to carrying out of the specific works.

Two (2) full size prints of the Drawings mentioned above and one PDF soft copy will be issued by the Engineer to the Contractor in accordance with the construction programme required under the provisions of these Specifications Section 3.4.2 – Contractor's Construction Programme.

On receipt of these Drawings, the Contractor shall check them carefully and advise the Engineer in writing of any discrepancies, errors or omissions and full instructions will be furnished to the Contractor should any discrepancies, errors or omissions be found.

### **3.1.2 Contractor's Drawings**

Based on Engineer's construction drawings Contractor shall prepare working drawings based on actual survey and site conditions showing further details and sections.

The working drawings and shop drawings required to be submitted to the Engineer for approval in accordance with Specification, shall consist of one printable soft copy, three prints and copies of design calculations, specification and parts catalogues in duplicate. All drawings submitted for approval shall be signed, checked and approved by the Contractor prior to submission. The drawings shall be signed by a competent professional engineer in the relevant discipline responsible for the design and shall be submitted in accordance with provision of these Specifications' Section 3.2 - Submittal Procedures.

Each drawing submitted by the Contractor shall be in ISO paper size A3.

Within thirty (30) days after receiving such designs, design calculations, parts catalogues, specifications and detailed drawings, the Engineer shall signify his approval or request modifications. The Contractor shall modify the designs and drawings as may be required by the Engineer.

The work shall be constructed in accordance with the approved drawings, and a copy of such drawings shall be kept on the Site at all times until the completion of the Contract. All drawings on which changes are made shall have the revisions clearly marked.

Construction, fabrication or manufacture of any portion of the Works shall not commence until the design and drawings have been approved and thereafter no change shall be made to any drawings so approved without the permission of the Engineer. Permission to make such changes shall be requested by sending one (1) soft copy and two print of each revised drawing for approval, explaining the reason for such a change.

Drawings showing the proposed method of construction and other drawings additional to those referred to herein above required by the Technical Specifications shall also be submitted by the Contractor to the Engineer for approval.

Any additional drawings, which the Contractor requires to interpret the Drawings to construct the Works or in compliance with this Sub-Section shall be prepared by the Contractor, and all costs shall be borne by the Contractor. No separate payment will be made for working, shop and lift drawings submitted by the Contractor.

### **3.1.3 Availability of CAD Drawing Files**

After award and upon request, the electronic "Computer-Aided Drafting and Design (CADD)" drawing files will only be made available to the Contractor for use in preparation of Contractor's drawings and construction data related to the referenced contract subject to the following terms and conditions.

Data contained on these electronic files shall not be used for any purpose other than as a convenience in the preparation of Contractors construction drawings and data for the referenced project. Any other use or reuse shall be at the sole risk of the Contractor and without liability or legal exposure to the Client. The Contractor shall make no claim and waives to the fullest extent permitted by law, any claim or cause of action of any nature against the Client, its agents or sub consultants that may arise out of or in connection with the use of these electronic files.

The Contractor shall, to the fullest extent permitted by law, indemnify and hold the Client harmless against all damages, liabilities or costs, including reasonable attorney's fees and defence costs, arising out of or resulting from the use of these electronic files.

These electronic CADD drawing files are not construction documents. Differences may exist between the CADD files and the corresponding construction documents. The Client makes no representation regarding the accuracy or completeness of the electronic CADD files, nor does it make representation to the compatibility of these files with the Contractors hardware or software. In the event that a conflict arises between the signed and sealed construction documents prepared by the Client and the furnished CADD files, the signed and sealed construction documents shall govern. The Contractor is responsible for determining if any conflict exists. Use of these CADD files does not relieve the Contractor of duty to fully comply with the contract documents, including and without limitation, the need to check, confirm and coordinate the work of all contractors for the project.

If the Contractor uses, duplicates and / or modifies these electronic CADD files for use in producing construction drawings and data related to this contract, all previous indicia of ownership (seals, logos, signatures, initials and dates) shall be removed.

## **3.2 Submittal Procedures**

### **3.2.1 Scope**

The Contractor is required to submit various documents and materials for Engineer's review,

approval and information in accordance with this Section and other Sections of the Specifications. Requirements of this Section apply to, and are a component part of, each Section of the Specifications.

### **3.2.2 Submittals General**

Standard approved transmittal form shall be used to transmit each submittal.

Submittal description may include drawings, diagrams, layouts, schematics, descriptive literature, illustrations, schedules, performance and test data, and similar materials to be furnished by the Contractor explaining in detail specific portions of the work required by the contract.

The following items are descriptions of data to be submitted for the Project. The requirements to actually furnish the applicable items will be called out in each Specification.

#### **Preconstruction Submittals**

Submittals required prior to the start of the next major phase of the construction on a multi-phase contract. Schedules or tabular list of data or tabular list including location, features, or other pertinent information regarding products, materials, equipment, or components to be used in the work, submitted prior to contract notice to proceed or next major phase of construction.

#### **Shop Drawings**

Submittals which graphically show relationship of various components of the work, schematic diagrams of systems, layout of particular elements, connections, and other relational aspects of the work.

#### **Product Data**

Data composed of catalogue, brochures, circulars, Specifications and product data, and printed information in sufficient detail and scope to verify compliance with requirements of the contract documents.

#### **Samples**

Samples, including both fabricated and unfabricated physical examples of materials, products, and units of work as complete units or as portions of units of work.

#### **Design Data**

Design calculations, mix design analyses, or other data, written in nature, and pertaining to a part of the work.

#### **Test Reports**

Written reports of a manufacturer's findings of his product during field inspections, attesting that the products are installed in accordance with the manufacturer's installation instructions, shop drawings, or other manufacturer's requirements. Written reports by the Contractor or his subcontractors including daily logs reporting on the progress of daily activities or attesting that the work has been installed in accordance with the contract plans and Specifications.

### **Certificates**

A document, required of the Contractor, or through the Contractor by way of a supplier, installer or manufacturer, the purpose of which is to further the quality or orderly progression of a portion of the work by documenting procedures, acceptability of methods or personnel, qualifications, or other verification of quality.

Statements signed by responsible officials of a manufacturer of a product, system, or material attesting that the product, system or material meet specified requirements. Statements must be dated after the award of this contract, name the project, and list the specific requirements which it is intended to address.

### **Manufacturer's Instructions**

Pre-printed material describing installation of a product, system, or material, including special notices and material safety data sheets, if any concerning impedances, hazards, and safety precautions.

### **Manufacturer's Field Reports**

A written report, which includes the findings of a test, made at the job site, in the vicinity of the job site, or on a sample taken from the job site, on a portion of the work, during or after installation. Report must be signed by an authorized official of a testing laboratory or agency and must state the test results; and indicate whether the material, product, or system has passed or failed the test.

### **Operation and Maintenance Data**

Data intended to be incorporated in an operations and maintenance manual.

### **Execution Records**

Records of execution, construction and installation.

### **Closeout Submittals**

Special requirements necessary to properly close out a construction contract. For example, as-built record drawings, manufacturer's help and product lines necessary to maintain and install equipment. Also, submittal requirements necessary to properly close out a major phase of construction on a multi-phase contract.

### **3.2.3 Certificates and Mill Test Data**

Before delivery of materials to the site, the Contractor shall submit to the Engineer, for his approval, certificates of Origin specifying physical and / or chemical characteristics of each material, and each constituent, which shall conform with those contained in the Specifications or other Standards acceptable to the Engineer. All such certificates of compliance with relevant standards shall accompany each shipment of all materials to be used in the Permanent Works.

Before delivery to the Site, or during the course of work, the Engineer may call for any test considered necessary for acceptance of the materials or for control of their use. All such tests

shall be performed at the expense of the Contractor. The materials that will be used in the Permanent Works for which certificate shall be provided include:

**Cement Concrete Works:**

- Cement
- Admixtures
- Curing compound
- Reinforcing steel

**Building Works**

- Paints
- Pipe fillings
- Electrical

The Contractor shall also submit appropriate mill analysis and laboratory test data of samples tested by the supplier. Mill analysis and test data shall be representative of materials furnished for the Permanent Works. The frequency of sampling and testing by the supplier shall conform with applicable standards.

**3.2.4 Submittal of Results of tests performed by the Contractor**

The Contractor shall furnish:

- Daily reports and monthly summaries of aggregate plant gradation test results on aggregate produced.
- Monthly calibration certificates for the weighing and dispensing devices on batching and mixing plants.

**3.2.5 Submittal of Construction details**

The Contractor shall submit his detailed proposals for the following for advance approval by the Engineer:

- Layout of lifts.
- Concrete placement sequences including special measures for dealing with concreting in hot weather and during nights.
- All formwork.
- Reinforcing bar details showing bar shapes, embedment and splice lengths.

Work shall not commence before such an approval is received by the Contractor.

**3.2.6 Submittal of Concreting Records**

The Contractor shall submit daily returns in respect of all concrete placed during the previous day, in a form to be agreed with the Engineer.

The returns shall include but not necessarily be restricted to:

- in respect of each concrete mix design:
- the number of batches mixed,
- the number of batches and the total volume of concrete placed,
- the number of batches wasted or rejected, and
- the weights of all cement, aggregates, water and additives used;
- in respect of each location in the Permanent Works:
- the position of the placement (e.g. structure, bay or lift reference number),
- the concrete mixes placed, and
- the total volume of concrete placed and the number of batches of each mix used.

In addition, the Contractor shall maintain an accurate and up-to-date record showing dates, times, weather and temperature conditions when each part of the Permanent Works was concreted. The record shall be available for inspection by the Engineer at all times.

### **3.2.7 Engineer's Review**

#### **(a) Review Notations**

Engineer will review submittals and provide pertinent notation within 30 calendar days after date of submission. Submittals will be returned to the Contractor with the following notations:

- (i) Submittals marked "approved" authorize the Contractor to proceed with the work covered.
- (ii) Submittals marked "approved as noted" authorize the Contractor to proceed with the work covered provided he takes no exception to the corrections. Notes shall be incorporated prior to submission of the final submittal.
- (iii) Submittals marked "return for correction" require the Contractor to make the necessary corrections and revisions and to re-submit them for approval in the same routine as before, prior to proceeding with any of the work depicted by the submittal.
- (iv) Submittals marked "not approved" or "disapproved" indicate noncompliance with the contract requirements and shall be re-submitted with appropriate changes. No item of requiring a submittal shall be accomplished until the submittals are approved or approved as noted.
- (v) Contractor shall make corrections required by the Engineer. If the Contractor considers any correction or notation on the returned submittals to constitute a change to the Tender Drawings or the Technical Specifications; notice as required under the Clauses 13 and 20 of Conditions of Contract shall be given to the Engineer. Approval of the submittals 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. Contractor shall be responsible for the dimensions and design of connection details and construction of work. Failure to point out deviations may result in the Engineer requiring

rejection and removal of such work at the Contractor's expense.

- (vi) If changes are necessary to approved submittals, the Contractor shall make such revisions and submission of the submittals in accordance with the procedures above. No item of work requiring a submittal change shall be accomplished until the changed submittals are approved.

**(b) Sample Approval**

Furnish, for the approval of the Engineer, samples required by the Technical Specifications or by the Engineer. Shipping charges shall be paid by the Contractor. Materials or equipment requiring sample approval shall not be delivered to the site or used in the work until approved in writing by the Engineer. Each sample shall have a label indicating:

- (a) Name of project
- (b) Name of Contractor
- (c) Material or equipment
- (d) Place of origin
- (e) Name of producer and brand
- (f) Specification section to which samples applies
- (g) Samples of furnished material shall have additional markings that will identify them under the finished schedules.

Contractor shall submit to the Engineer two samples of materials where samples are requested. Transmit to the Engineer with each sample a letter, original and two copies, containing the above information. Approval of a sample shall be only for the characteristics or use named in such approval and shall not be construed to change or modify any contract requirements. Before submitting samples, the Contractor shall assure that the materials or equipment will be available in quantities required in the project. No change or substitution will be permitted after a sample has been approved.

Materials and equipment incorporated in the work shall match the approved samples. If requested, approved samples, including those which may be damaged in testing, will be returned to the Contractor, at his expense, upon completion of the contract. Samples not approved will also be returned to the Contractor at its expense, if so requested. Failure of any materials to pass the specified tests will be sufficient cause for refusal to consider, under this contract, any further samples of the same brand or make of that material. Engineer reserves the right to disapprove any material or equipment which previously has proved unsatisfactory in service.

Variations from contract requirements shall be specifically pointed out in transmittal letters. Failure to point out deviations may result in the Engineer requiring rejection and removal of such work at no additional cost to the Employer.

Samples of various materials or equipment delivered on the site or in place may be taken by the Engineer for testing. Samples failing to meet contract requirements will automatically void

previous approvals. Contractor shall replace such materials or equipment to meet contract requirements.

Approval of the Contractor's samples by the Engineer shall not relieve the Contractor of his responsibilities under the Contract.

### **3.2.8 Status Report on Materials Orders**

Within 30 calendar days after notice to proceed, submit, for approval by the Engineer, an initial material status report on all materials orders. This report will be updated and re-submitted every 30 calendar days as the status on material orders changes.

Report shall list, in chronological order by need date, materials orders necessary for completion of the contract. The following information will be required for each material order listed:

- (a) Material name, supplier, and invoice number.
- (b) Bar chart line item or CPM activity number affected by the order.
- (c) Delivery date needed to allow directly and indirectly related work to be completed within the contract performance period.
- (d) Current delivery date agreed on by supplier.
- (e) When item 'd' exceeds item 'c', the effect that delayed delivery date will have on contract completion date.
- (f) When item 'd' exceeds item 'c', a summary of efforts made by the Contractor to expedite the delayed delivery date to bring it in line with the needed delivery date, including efforts made to place the order or subcontract with other suppliers.

### **3.3 Non-conformity**

During construction, after each assessment or measurement of quality, cases of non-conformity identified by the Engineer or by the Contractor's quality control supervisors or by the personnel in charge of execution will be divided into the following four categories:

- NC.1 This category covers minor defects which will be repaired immediately, then recorded on standard follow-up documents.
- NC.2 This category covers defects which can be repaired according to a pre-established procedure. The repairs will be carried out immediately and recorded on special documents.
- NC.3 This category covers defects which cannot be repaired according to a pre-established procedure. The decision to repair, modify or rebuild or remanufacture the item shall be proposed by the Contractor for the Engineer's approval.
- NC.4 This category covers major defects on critical items. The Contractor shall propose a solution for the Engineer's approval.

### **3.4 Project Schedule**

#### **3.4.1 Commencement, Execution and Completion of Works**

The Contractor shall commence work under the Contract in accordance with Sub-Clause 8.1 of the Conditions of Contract.

Pursuant to Sub-Clause 8.2 of the Conditions of Contract, the Contractor shall execute for mandatory completion of the different sections of the Works listed in the table below within the number of days specified herein under taken from the day of issue of the Engineer's written order to commence the Works:

	<b>Location and Description of Works to be Executed by the Contractor</b>	<b>Days to Complete the Work from Date of Engineer's Order to Commence the Works</b>
A	RIVER TRAINING WORKS	365 days
B	REPAIRS TO INSPECTION BUNGLOW KATIAR	180 days

#### **3.4.2 Contractor's Construction Programme**

In accordance with Sub-Clause 8.3 of the Conditions of Contract, the Contractor shall submit a revision of the construction programme attached to the Tender for approval.

Whenever the Contractor proposes to change the Construction Programme he shall immediately advise the Engineer in writing and if the Engineer considers the change is a major one the Contractor shall submit a revised programme for approval. If such a change in the construction programme affects the Engineer's design and drawings programme, the Employer will not be responsible for the consequences of the late issue of any drawings which are attributable to that change.

If the Contractor falls behind the approved construction programme he shall, within fourteen (14) days of the date of such default, submit a revision of the Construction Programme showing the proposed measure to complete the Permanent Works on time, for approval. When requested by the Engineer, the Contractor shall promptly furnish a detailed sub-programme of the Construction Programme for particular sections of the Permanent Works.

### **3.5 Setting Out of Works**

Pursuant to Sub-Clause 4.7 of the Conditions of Contract, the Contractor shall be solely responsible for the correct setting out of the Works and shall employ experienced qualified surveyors acceptable to the Engineer for this purpose.

The Engineer will establish free of charge to the Contractor necessary reference marks to define datum lines and the reduce levels of suitably located reference bench-marks to enable the Contractor to set out the Permanent Works. Any reference marks damaged as the result of action by the Contractor will be replaced by the Engineer at the expense for the Contractor.

The Contractor shall furnish all materials, labour and equipment including stakes, templates, patterns, platforms and special labour that may be required in setting out any part of the Works.

Separate payment will not be made for complying with the provisions of this Clause and all costs shall be deemed to be included in the various rates and lump sums tendered in the priced Bill of Quantities.

The Engineer may make checks as the Work progresses to verify lines or lines and grades established by the Contractor and to determine the conformance of the work as it progresses with the requirement of the Technical Specifications and the Drawings. Such checking by the Engineer shall not relieve the Contractor of his responsibility to perform all work in accordance with the Drawings and the Technical Specifications and the lines and grades given therein.

### **3.6 Safety Precautions**

The Contractor shall comply with any Safety instruction given by the Engineer. In the performance of the Works, the Contractor shall exercise every reasonable precaution to protect form injury persons or property. The Contractor shall erect and maintain all necessary temporary fencing, barricades, barriers, signs and lights and provide firm alarm, fire extinguishing and fire-fighting services at strategic points on the Site. The Contractor shall adopt and enforce such rules and regulations as may be necessary, desirable or proper to safeguard the public and all persons engaged in the work and its supervision.

### **3.7 Temporary Works**

The Contractor shall arrange an area of land at the Site at his own resources and cost within which the Contractor shall accommodate his work force and set up all services and facilities required for the construction of the Work on Site.

The Contractor's proposals for the details of erection and construction of all Temporary Works shall be in accordance with the proposals submitted with the Tender and approved in the Letter of Acceptance or with such modifications as approved from time to time.

Temporary Works shall include but not be limited to the work Contractors caps, temporary bridges, culverts or crossings, Contractor's offices and accommodation, a site office for Engineer's staff, temporary fences, sanitary facilities, fixed construction facilities including but not limited to workshops, compressed air stations, electric power, water supply,

telecommunications and construction and maintenance of access roads required for the execution of the Works and clean-up of the Site on completion.

The Contractor shall submit for approval drawings and full particulars of all Temporary Works, which he intends to construct at least thirty (30) days before he desires to commence constructing such works. Approval of any such proposals from the Contractor shall not relieve the Contractor of any of his responsibility for the sufficiency of the Temporary Works for their intended purpose. The Contractor shall also obtain any necessary approval from local statutory or other Government authorities before commencing construction. Such work shall not be started without prior approval.

Construction facilities shall be maintained in good order and shall not be demolished, removed from the Site or otherwise disposed of without prior approval.

No house, office, store, workshop or other habitable building will be permitted underneath or within 10ft of the nearest point in plan of the un-insulated overhead conductor of low or medium voltage of an electricity supply main.

On completion of the Works, all Temporary Works whether existing or constructed by the Contractor, unless otherwise specified or directed shall be removed from the Site. The Contractor shall make safe all areas affected by Temporary Works and reinstate natural drainage. The Contractor shall finish, reinstate, clean up and relinquish parts of the site at the end of the Maintenance Period or such earlier times as directed. Buildings and facilities removed from the Site will remain the Contractor's property.

Separate payment will not be made for Temporary Works and complying with the provisions of this Section unless included in Bill of Quantities as such.

### **3.8 Road Access to the Site**

#### **3.8.1 Practicability of Use**

The Contractor shall ascertain for himself the practicability of using the existing roads for access.

#### **3.8.2 Protection and Strengthening of Existing Facilities**

The highways, roads and bridges have widely varying load limits, and the Contractor shall be responsible for determining the load limits existing at and during Contract period and ensuring that his Constructional Plant does not exceed such limits. Before moving any heavy construction traffic onto highways, roads and bridges, the Contractor shall make suitable arrangements with the appropriate Government authorities and obtain their approval for the passage of such traffic. Pursuant to Clause 4.15 of the Conditions of Contract where the authorities require and specify any special protection or strengthening of highways, roads or bridges, the Contractor shall submit to the Engineer his proposals for such work after their approval by the authority concerned and shall carry out this work to the satisfaction of the

Engineer. Separate payment will not be made for any special protection or strengthening required by Government authorities and carried out at the direction of the Engineer. All costs payment shall be deemed to be included in the rates and lump sum prices in the priced Bill of Quantities.

### **3.8.3 Use of Bituminous Sealed Roads**

The Contractor shall not travel tracked vehicles or plant on any bituminous sealed road surface. Rubber typed vehicles conforming to applicable load restrictions will be permitted to use bituminous sealed roads.

### **3.8.4 Additional Roads**

All additional roads required by the Contractor as access and haul roads on the Site shall be provided by the Contractor.

### **3.8.5 Temporary Access and Haul Roads**

The Contractor shall design, construct and maintain all temporary access and haul roads (including associated drainage and stream crossing facilities) to the various working sites and designated borrow and disposal areas and quarry sites as required for the Works.

The temporary access and haul roads may be constructed at times to suit the Contractor's construction program.

The Contractor shall submit for approval drawings, design and full particulars of all temporary access roads, which he intends to construct at least thirty (30) days before he desires to commence constructing such temporary access roads. Approval of any such proposals by the Engineer shall not relieve the Contractor of any of his responsibility under this Contract.

### **3.8.6 Heavy Construction Traffic**

The Contractor's heavy construction traffic or tracked equipment shall not traverse any public roads or bridges, unless the Contractor has made arrangements with the Authorities concerned and the approval of the Engineer to such arrangements has been obtained.

### **3.8.7 Maintenance of Roads**

The Contractor shall be wholly responsible for the maintenance of all temporary access and haul roads constructed by him or as specified in this Contract.

In maintaining these roads the Contractor shall:

- (a) Keep clear and in good working order at all times all road structures, bridges, culverts, drains and other waterways;
- (b) Patch potholes with approved materials, keep the road surface in good repair and perform any grading and necessary resurfacing;

- (c) Maintain all fender posts, guide posts, guard posts, fencing, signs, signposts and other roadside structures;
- (d) Take reasonable and necessary measures to minimize nuisance from dust created while or in carrying out the Works.

### **3.8.8 Use of Roads by Others**

During the period of the Contract, the Employer will be engaged on other works in the vicinity of the Works covered by the Technical Specifications, and the Contractor shall allow the Engineer or persons authorized by the Engineer free use of all temporary access and haul roads.

## **3.9 First Aid and Medical Facilities**

### **3.9.1 General**

The Contractor shall in all respects be fully responsible for ensuring necessary first-aid services to his employees and employees of his subcontractors, including transport for injured personnel to hospital or other appropriate accommodation as and when required.

### **3.9.2 Staff**

To enable the fulfilment of his obligations under this Section, the Contractor shall engage qualified resident first-aid staff, provide and maintain an Ambulance to move serious patients or victims of an accident to nearby Hospital. The Contractor shall designate one or more approved competent licensed Doctors, whom shall at all times be in readiness to answer calls to supply medical and minor surgical services.

Separate payment will not be made for first-aid and medical facilities provided by the Contractor for his employees and the employees of his subcontractors. The facility shall be also available for the use of Engineer's staff.

## **3.10 Living Facilities, Camp Amenities and Recreation Facilities**

### **3.10.1 Location of Construction Camp**

The Contractor shall arrange land at his own resources and cost, to be used for the contractor's office, plant, storage, construction of quarters for his own staff and camps for workmen and for other camp amenities for his employees.

### **3.10.2 Contractor's Staff Quarters and Camps**

The Contractor shall ensure that his area is at all times kept in a clean and sanitary condition, and shall provide and maintain sanitary conveniences for the use of persons employed on the

Works to the extent and in the manner and at such places as shall be approved by the Engineer and by any local or other Government authority concerned, and all employees of the Contractor and his subcontractors shall be obliged to use these conveniences. Any employee found violating this requirement shall be liable to immediate termination of employment and to the refusal of further employment on the Works.

### **3.10.3 Removal of Buildings and Facilities**

The Contractor, upon completion of the works, shall dismantle and remove all buildings complete including the facilities as stated in this Sub-Section and temporary structures erected by him as part of his construction camp, and fill in all excavated areas as directed, remove all refuse, debris and other objectionable materials and leave the camp area in a clean and sightly condition to the satisfaction of the Engineer.

Separate payment will not be made for complying with the requirements of this Sub-Section.

### **3.11 Site Security**

The Contractor shall be responsible for the security of the works for the duration of the Contract and shall provide and maintain continuously an adequate security force to fulfil these obligations. The duties of the Contractor's security force shall include, but not be limited to, maintenance of order on the Site, provision of all lighting, fencing, guards, flagmen, and all other measures necessary for the protection of the Works within the camp and elsewhere on the Site, all material delivered to the Site, the public, and all persons employed in connection with the Works, continuously throughout working and non-working periods, including nights, days of rest and holidays, for the duration of the Contract.

## **4. TESTING OF MATERIALS AND WORKS**

The Contractors test programme shall be suitably documented by the Contractor to assure that the required materials and components testing is properly performed. The test programme shall address pertinent test pre-requisites, such as test instrumentation selection and calibration, acceptance criteria, documentation of test results, and evaluation of test results by qualified personnel. All tests shall be conducted with information to Engineer and in the presence of Engineer's representative.

The Contractor shall carryout following quality control field laboratory tests with specified frequency. The tests shall be conducted at Contractor's field laboratory or laboratories approval by Engineer.

### **4.1 Testing of Cement Concrete Work**

The following tests shall be conducted cement concrete work:

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#### **TABLE SP-2: FREQUENCY OF TESTS OF CEMENT CONCRETE WORKS**

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<b>Test Designation</b>	<b>Frequency</b>
<b>Tests on Fine Aggregate</b>	
ASTM C40: Test method for organic impurities in fine aggregates for concrete	Each two weeks or per 100 cubic yards of concrete whichever is more frequent
ASTM C136: Method for sieve analysis of fine and coarse aggregates	Each two weeks or per 100 cubic yards of concrete whichever is more frequent
<b>Tests on Coarse Aggregate</b>	
ASTM C127: Test method for specific gravity and absorption of coarse aggregate	Each month or 200 cubic meter whichever is more frequent
ASTM C88: Test method for soundness of aggregates by use of sodium sulphate or magnesium sulphate	Each month or 200 cubic meter whichever is more frequent
ASTM C131: Test method for resistance to degradation of small-size coarse aggregate by abrasion and impact in the Los Angeles machine	Each month or 200 cubic meter whichever is more frequent
ASTM C117: Test method for materials finer than 0.075mm (No. 200) sieve in mineral admixtures by washing	Each two weeks or per 100 cubic yards of concrete whichever is more frequent
ASTM C142: Test method for clay lumps & friable particles in aggregates	Each two weeks or per 100 cubic yards of concrete whichever is more frequent
ASTM C136: Method for sieve analysis of fine and coarse aggregates	Each two weeks or per 100 cubic yards of concrete whichever is more frequent
<b>Testing on Cement Concrete</b>	
ASTM C143: Test method for slump of Portland cement concrete	Every batch 3 test
ASTM C39: Test method for compressive strength of cylindrical concrete specimens	Every 50 cubic year of concrete

#### 4.2 Testing of Earthfill, Stones and Bedding Material

The following tests shall be carried out for quality control of earthfill, stone bedding material works:

**TABLE-SP3: TEST FREQUENCIES OF EARTHFILL, STONES AND BEDDING MATERIALS**

<b>Test</b>	<b>Frequency of Test</b>		
	<b>Impervious Fill</b>	<b>Sub-base Bedding</b>	<b>Riprap, Stone Pitching, Stone</b>

			<b>Apron</b>
<b>Gradation</b>	(i) 1 test for every 2000m <sup>3</sup> of fill or  (ii) at least one test for every shift of compaction, whichever is grater	(i) 1 test for every 500m <sup>3</sup> of fill or  (ii) at least one test for every shift of compaction, whichever is grater	10 tests
<b>Sodium Sulphate Soundness</b>	-	10 tests	1 test per 25,000 cubic yard
<b>Liquid limit and plastic limit</b>	1 test for every 2000m <sup>3</sup> of fill or	-	-
<b>Los Angeles Abrasion</b>		10 tests	1 test per 25,000 cubic yard
<b>Specific Gravity / Water Absorption</b>	10 tests	10 tests	1 test per 25,000 cubic yard
<b>Filed Density Test</b>	(i) 1 test for every 500m <sup>3</sup> of fill or	-	-
	(ii) At least one test for every shift of compaction, whichever is grater		
<b>Compaction Test in Laboratory</b>	One test for every 5 field density tests	-	-

## 5. CARE AND HANDLING OF WATER

### 5.1 Scope of Work

The Contractor shall be responsible for care and handing of water slurring construction period. The works to be done under care and handling of water, consist of the following:

- Protecting all works from damage by river flows, groundwater, rains and surface runoff during the entire construction period.

- Dewatering foundations and care of water to maintain all excavations and surfaces dry free of water as required for the proper construction of the works.

The Contractor shall furnish all labour, equipment and materials for constructing and maintaining all necessary cofferdams, bunds, channels diversion, sumps, pumps and other temporary protection. All such temporary protection and diversion works shall be removed or left and graded and so as not to interfere in anyway with the operation or usefulness of the completed works.

## **5.2 Dewatering**

Except where otherwise specified, shown on the Drawings or approved by the Engineer, the Contractor shall maintain all foundations and other Permanent Works areas well drained and free of water of any origin, including groundwater, seepage, precipitation, and runoff or from construction uses.

Except where otherwise approved by the Engineer, the Contractor shall drain, dewater and keep dry all areas of construction that are below the river or the groundwater elevation, and shall ensure that all excavated surfaces are maintained in a safe and stable condition.

All embankments whether Permanent Works or Temporary Works, shall be placed in the dry, with the exception of such parts of the Contractor's Diversion Scheme as are designed to be placed in water and have received the Engineer's approval for that method of placing.

The work to be performed by the Contractor in connection with dewatering shall include, but not necessarily be limited to, the following:

- The supply, installation, operation, maintenance and subsequent removal of all pumps, pumping stations, pipework and other equipment, including sufficient standby equipment, for the dewatering of the works areas and maintaining those areas free of water as required. Should deep well pumps be deployed, they shall be placed at least 30 m beyond the limits of any completed Permanent Works, except flexible aprons.
- The construction, maintenance and subsequent removal of any temporary sumps, lagoons, chambers, flumes, cofferdams, protective bunds or dykes and the like. All temporary sumps and lagoons shall be placed at least 20 m beyond the limits of any Permanent Works.
- The construction, maintenance and subsequent backfilling of such temporary drains or ditches as are required to efficiently carry all water to sumps or other collection or disposal locations.
- The supply, installation, maintenance, operation and subsequent removal of dewatering wells and/or well points.

Subject to the Engineer's approval, which shall not be unreasonably withheld, the Contractor may deploy any appropriate part of the Permanent Works as part of his drainage and dewatering arrangements.

## **6. MEASUREMENT AND PAYMENT**

### **6.1 Measurement and Payment - General**

The measurement for payment and the coverage of tendered rates various items of works in Bill of Quantities shall in general be made as specified in Specifications For Materials Of Construction-1964 and Specifications For Execution Of Works-1967 prepared by West Pakistan Standing Rates Committee except otherwise specified in various sub-sections of this Section.

### **6.2 General Requirements**

#### **6.2.1 Measurement and Payment**

No separate payment will be made for complying with all provisions of the Section: General Requirement of these Specifications except where otherwise detailed in the Bill of Quantities. The cost of complying with provision of General Requirements shall be deemed to be included in other items of works of the Bill of Quantities.

### **6.3 Care and Handling of Water**

#### **6.3.1 Measurement and Payment**

No separate payment will be made for complying with all provisions of this Section: Care and Handling of Water of these specifications except where otherwise detailed in the Bill of Quantities. The cost of complying with provision of the Care and Handling of Water shall be deemed to be included in other items of works of the Bill of Quantities.

### **6.4 Carriage of Materials**

#### **6.4.1 Measurement and Payment**

No separate payment will be made for loading, carriage, unloading and stacking of materials from source to specified site to be used in the Construction or stacking of various items of works. The cost of loading, transportation, unloading, processing and sorting, handling, demurrage, wharfage, toll taxes, duties, levies of materials etc. shall be deemed to be included in the relevant items of supply and / or construction of works.

The Contractor is responsible for making assessment about haulage of distances, adequacy and acceptability of materials from sources. The Employer is not responsible for any information provided about material sources in Employers documents. The Contractor shall propose for approval his own sources for supply of materials meeting the specified requirements.

### **6.5 Jungle Clearance and Removing within 100ft**

#### **(a) Light Jungle**

**(b) Thick Jungle**

**6.5.1 Measurement**

Measurement for Payment, of Jungle Clearance and Removing within 100ft of the area of permanent structures and embankments will be made of the horizontal projection of the areas actually cleared within the limits of excavation for the permanent works but excluding clearing for temporary access or haul roads, construction facilities and other temporary works, quarries and borrow areas. All costs of disposal shall be deemed to have been included in the unit price of Jungle Clearance and Removing with in 100ft.

**6.5.2 Payment**

Payment for Jungle clearance and removing within 100ft of site will be made at the rate per thousand (1,000) square feet tendered therefor in the priced Bill of Quantities.

Payment will be made for costs associated with furnishing plant, labour, materials and equipment, disposal and performing all operations necessary for clearing as specified.

The cost of clearing areas other than the area of permanent structures shall be deemed to be included in the rates tendered in the priced Bill of Quantities for the various items of the Works. No separate Payment shall be made for clearing areas other than area of permanent structures and embankment.

**6.6 Excavation**

**6.6.1 Measurement**

Unless specified otherwise, all excavation will be measured using vertical or horizontal cross-sections, whichever are the more appropriate for the particular application, and the average-end-area method utilising original ground lines obtained from the agreed ground level surveys and the lines and grades shown on the Drawings.

No measurement or payment will be made for excavation for the Contractor's temporary roads and for other Temporary Works for the Contractor's own use.

Measurement will not be made for excavation for any structure or feature that is paid for as a lump sum.

Neither Excess Excavation nor backfill of Excess Excavation will be measured for payment.

Earthwork Excavation under any Schedule shall be measured as the number of thousand (1,000) cubic feet in the relevant material, as identified by the Engineer, acceptably excavated for the Permanent Works in accordance with the Drawings.

## **6.7 Borrow Pit Excavation**

### **6.7.1 Measurement**

The borrow pit excavation shall be measured as the volume of embankment fill acceptably compacted in earthwork.

### **6.7.2 Payment**

Payment will be made for the number of thousand (1,000) cubic feet measured as above at the unit price for the Item. In the payment of excavation there will be no classification of material irrespective of it is rock or soil.

The unit prices for Borrow Pit Excavation shall be deemed to cover all costs of excavating and 100feet lead of the excavated material, including clearing, grubbing, stripping, ripping, excavating, trimming, loading, hauling, spreading and disposal in fill areas, embankments, topsoiling and all other work related to the Item.

## **6.8 Earthwork Excavation in Irrigation Channels and Structural Foundations**

### **6.8.1 Measurement**

Earthwork Excavation under any Schedule shall be measured as the number of thousand (1,000) cubic feet in the relevant material, as identified by the Engineer, acceptably excavated for the Permanent Works in accordance with the Drawings.

No separate payment shall be made for disposing, placing excavated material in spoil tips and embankments, nor for associated works such as spreading, compacting and topsoiling. The cost of such work shall be deemed to be included in the relevant excavation item.

### **6.8.2 Payment**

Payment will be made for the number of thousand (1,000) cubic feet measured as above at the unit price for the Item.

The unit prices for Earthwork Excavation in Irrigation Channels and Structural Foundations shall be deemed to cover all costs of excavating and disposing of the excavated material, including ripping, excavating, trimming, loading, hauling, spreading and disposal in stockpiles, spoil tips and spoil embankments, topsoiling and all other work related to the Item.

## **6.9 Earthwork Compaction**

### **6.9.1 Measurement**

The volumes of the fill materials, acceptably placed within the profiles shown on the Drawings or directed by the Engineer, shall be measured. Measurement shall be made using horizontal or vertical cross sections, whichever are the more appropriate for the particular application, and the average-end-area method utilising the lines and grades shown on the Drawings or as directed by the Engineer. If vertical sections are used for structures curved in plan, measurement will be based on radial cross sections. The agreed foundation levels shall be used for the measurement with no adjustment for any foundation settlement that may occur during construction. No deduction will be made for the measured volumes for excavation within the general profiles of the fills for drains and trenches for other purpose.

### **6.9.2 Payment**

Payment will be made for the number of thousand (1,000) cubic feet measured as above at the unit price for the respective Item.

The unit prices for Earthwork Compaction shall be deemed to cover all costs of placing the fill materials including spreading, watering, compacting, testing, controlling and protecting, and all other work related to the Item.

### **6.10 Surface Protection Fills**

- **Stone Filling Dry Hand Packed**
- **Stone Pitching on Slopes including Sub-base**
- **Dismantling stone pitching top layer relaying it after making good damaged slopes**
- **Supply of quarried stone**
- **Stone Apron**

#### **6.10.1 Measurement**

The volumes of the stones and sub-base material, conforming to the different specified Zones, acceptably placed within the profiles shown on the Drawings or directed by the Engineer, shall be measured. Measurement shall be made using horizontal or vertical cross sections, whichever are the more appropriate for the particular application, and the average-end-area method utilising the lines and grades shown on the Drawings or as directed by the Engineer. If vertical sections are used for structures curved in plan, measurement will be based on radial cross sections. The agreed foundation levels shall be used for the measurement with no adjustment for any foundation settlement that may occur during construction.

#### **6.10.2 Payment**

Payment will be made for the number of hundred (100) cubic feet measured as above at the unit price for the respective Item.

The unit prices for stones and sub-base shall be deemed to cover all costs of supplying and placing the materials including selecting, acquiring, excavating, processing, hauling, placing testing, controlling and all other work related to the Item.

## **6.11 Plain Cement Concrete**

### **6.11.1 Measurement**

Measurement shall be made of the volume of concrete acceptably placed in the Permanent Works within the lines and grades shown on the Drawings or as otherwise directed or approved by the Engineer. Where concrete is placed upon foundations, measurement shall be made to the foundation lines and grades shown on the Drawings or as otherwise directed and approved by the Engineer.

No deductions shall be made for rounded or bevelled edges or for space occupied by reinforcing steel and accessories. No deduction shall be made for voids, piping, electrical conduits or any other embedded items which are each less than 1 Sq.ft in cross-section or less than 5 cu.ft in volume. No measurement shall be made for concrete that is wasted for any reason or that is rejected.

### **6.11.2 Payment**

Payment for plain cement concrete will be made for the number of 100 cubic feet measured as above at the unit price tendered therefor. The unit prices for the concrete shall be deemed to cover all costs of concrete including cement, admixtures, formwork and jointing material. The unit prices shall also include furnishing all ingredients, batching, mixing, cooling, transporting, placing, curing and protecting, finishing and repairing, and all other work related to the Item for which separate payment is not provided.

## **6.12 Reinforcement Cement Concrete**

### **6.12.1 Measurement**

Measurement shall be made of the volume of concrete acceptably placed in the Permanent Works within the lines and grades shown on the Drawings or as otherwise directed or approved by the Engineer. Where concrete is placed upon foundations, measurement shall be made to the foundation lines and grades shown on the Drawings or as otherwise directed and approved by the Engineer.

No deductions shall be made for rounded or bevelled edges or for space occupied by reinforcing steel and accessories. No deduction shall be made for voids, piping, electrical conduits or any other embedded items which are each less than 1 Sq.ft in cross-section or less than 5 cu.ft in volume. No measurement shall be made for concrete that is wasted for any reason or that is rejected.

### **6.12.2 Payment**

Payment for reinforcement cement concrete will be made for the number of cubic feet measured as above at the unit price tendered therefor. The unit prices for the concrete shall be deemed to cover all costs of concrete including cement, admixtures, formwork and jointing material. The unit prices shall also include furnishing all ingredients, batching, mixing, cooling, transporting, placing, curing and protecting, finishing and repairing, and all other work related to the Item for which separate payment is not provided.

### **6.13 Supply and Fabrication of Mild Steel Reinforcement**

#### **6.13.1 Measurement**

Reinforcing steel bars shall be measured as the net weight of reinforcing steel bars in Hundred Weight (CWT) acceptably placed in the Permanent Works. The net weight of reinforcing steel bars shall be calculated as the lengths of bars placed in accordance with approved Drawings or bar schedules multiplied by the appropriate nominal weight per unit length. The nominal weights per unit length are as follows:

BAR SIZE	NOMINAL WEIGHT	
	Lbs./ft.	kg/m
2	0.1670	0.2485
3	0.3759	0.5595
4	0.6680	0.9941
5	1.0429	1.5521
6	1.5019	2.2352
7	2.0439	3.0418
8	2.6699	3.9734
9	3.3999	5.0598
10	4.3028	6.4036
11	5.3128	7.9067

Laps in reinforcing steel which are for the convenience of the Contractor shall not be measured.

Tie wire, chairs, spacers, supports, bracings and other means of holding reinforcement in position shall not be measured.

#### **6.13.2 Payment**

Payment will be made for the number of Hundred Weight (CWT) as measured above at the unit price for the respective Item.

The unit price for reinforcing steel shall be deemed to cover all costs of reinforcing steel including preparing detailed reinforcement drawings and schedules and supplying, cutting, bending and fixing the reinforcing steel, wastage and all other work related to the Item.

### **6.14 Formation Dressing and Preparing Subgrade**

### **6.14.1 Measurement**

Measurement for payment of formation dressing and preparing subgrade shall be made of the slope area actually dressed within the limits as shown in drawings or as directed by the Engineer.

### **6.14.2 Payment**

Payment for formation dressing and preparing subgrade will be made at the rate per hundred (100) square feet tendered therefor in the priced Bill of Quantities.

Payment will cover the cost associated with furnishing, labour, materials and equipment, disposal and performing all operations necessary for formation dressing and preparing subgrade.

## **6.15 Brickwork**

### **6.15.1 Measurement**

The unit of measurement shall be running feet. No deduction shall be made for openings having a superficial length of one foot or less.

### **6.15.2 Payment**

The unit rate for bricks shall include the cost of bricks mortar or any other material required and the cost of labour required for carrying out brick work, cutting bricks whenever required, curing and protecting, providing using and removing scaffolding, shuttering, centring staging, ladders, supports and other tools and plants required for carrying brickwork as per specifications.

## **6.16 Galvanized Iron Sheet**

### **6.16.1 Measurement**

The payment and measurement of this item shall be in square feet or as specified in the unit of the mentioned item.

### **6.16.2 Payment**

Payment for galvanized iron sheet will be made at the rate per square feet tendered therefor in the price of bill of quantities.

## **6.17 Pipe (All Types)**

- 4" Dia Perforated
- G.I Pipe 4" dia Perforated
- Coir Strainer Pipe
- MS Blind Pipe  $\frac{3}{4}$  Inch (5mm) thick
- RCC Pipe (All types)

### **6.17.1 Measurement**

Measurement shall be made in running feet for all type of pipes.

### **6.17.2 Payment**

Payment for above mentioned different items comprising the pipes will be made at the tendered rates quoted in the Bill of Quantities.

The rates for providing and installing of different items of pipes shall be deemed to cover all costs of providing, installing, constructing with required fittings like bends etc. as required and included in pipe length (with no additional payment), testing and commissioning, and all other work related to the Item.

The rates shall also be deemed to also include for weld joints, flanges, bolts, nuts, washers, lead, oakum, gaskets, sealing compounds, solder, coatings, rubber, collar, fastenings for holding pipe in place, excavation, backfilling, wall plates or other items required.

The payment and measurement of this item shall be in running feet or as specified in the unit of the mentioned item.

## **6.18 PVC Waterstop**

### **6.18.1 Measurement**

Waterstops shall be measured as the net length in running feet of waterstop shown on the Drawings and acceptably installed in the Permanent Works. The measurement shall be of the centreline length. At angled joints or junctions in a waterstop, the centreline length of each branch shall be measured up to the point of intersection of the centrelines.

Waterstops placed in construction joints which are for the convenience of the Contractor shall not be measured.

### **6.18.2 Payment**

The payment will be made for the number of running feet measured as above at the unit price for the respective Item.

The unit rates for waterstops shall be deemed to cover all costs of waterstops including supplying, fixing and jointing and all other work related to the Item. No additional payment shall be made for forming joints in waterstops.

## **6.19 Temeuclature Boards**

### **6.19.1 Measurement**

The measurement shall be made for size fitting, fixture as job of boards installed as directed by the Engineer. The payment and measurement of this item shall be done as complete of the mentioned job or as specified in the unit of the item.

### **6.19.2 Payment**

Payment shall be made at the rate quoted in priced Bill of Quantities. Unit of measurement shall be Job.

## **6.20 Gates (All Types)**

- Radial Gates
- Vertical Gate of MS Sheets 8mm

### **6.20.1 Measurement**

The measurement of this item shall be in square feet of the required thickness of MS sheet or as specified in the unit of the mentioned item.

### **6.20.2 Payment**

The payment of gates measured as above shall be deemed to include the cost of supply, transportation to site, storage, testing, supply of operating and maintenance manual. The cost shall be deemed to include all accessories required for the installation of the equipment. The unit of measurement shall be square feet.

## **6.21 M.S Bail Plug**

### **6.21.1 Measurement**

The measurement of this item shall be in each number or as specified in the unit of the mentioned item.

### **6.21.2 Payment**

The payment for MS Bail Plug will be made at the rate per each number tendered therefor in the price bill of quantities. The unit of measurement shall be number.

## **6.22 Pumping Set (Hire)**

### **6.22.1 Measurement**

The measurement of this item shall be for 8 hours of the day inclusive all charges of operator, fuel and oil expenditures or as specified in the unit of the mentioned item.

### **6.22.2 Payment**

The payment shall be made in number of days (08 hours).

## **6.23 Pump Beyond 8 Hours (Hire)**

### **6.23.1 Measurement and Payment**

The measurement and payment should be on pump running log book at hourly basis of all pumps with all charges of operator, fuel and oil expenditures or as specified in unit of the mentioned item.

# GOVERNMENT OF SINDH



## IRRIGATION DEPARTMENT

CHOTIARI RESERVOIR (I) DIVISION SANGHAR

### BIDDING DOCUMENT

#### VOLUME – 1

- INVITATION FOR BIDS
- INSTRUCTIONS TO BIDDERS
- BIDDING DATA
- FORM OF BID AND APPENDICES TO BID
- CONDITIONS OF CONTRACT
- SPECIFICATIONS

**NAME OF WORK:** MAKHI FARASH LINK CANAL PROJECT  
(CHOTIARI PHASE-II) FOR WATER SUPPLY  
TO THAR COAL

**PACKAGE Vb:** WORKS FROM RD 265+000 TO 314+030

**EMPLOYER:** SINDH IRRIGATION DEPARTMENT THROUGH  
CHOTIARI RESERVOIR (I) DIVISION SANGHAR

**Issued to:** \_\_\_\_\_

**Amount of Document Fee Rs. 3,000/-**

**DR No. & Date:** \_\_\_\_\_

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## NOTICE INVITING TENDERS

**Date:** \_\_\_\_\_

**Federal/ Provincial/ Local Government Funds/ Loan / Credit No.** \_\_\_\_\_

**Bid Reference No.** \_\_\_\_\_

1. The Irrigation Department, Government of Sindh (the "Procuring Agency") has received funds from the Planning & Development Department, Government of Sindh towards the cost of **MAKHI FARASH LINK CANAL PROJECT (CHOTIARI PHASE-II)** and it is intended that part of the proceeds of the funds will be applied to eligible payments under the contract for the -----  
-----

Bidding is open to all the Pre-qualified bidders.

Bidding is open to all prequalified bidders.

2. Procuring agency invites sealed bids from the prequalified bidders for above specified description of works.
3. Prequalified Bidders may obtain any further information from the Office of the procuring agency, up to date 28.01.2019 and time 12:00 hours, at the address given below:
4. A complete set of bidding documents in English may be purchased by prequalified bidder on submission of a written application to the office given below and upon payment of a non-refundable fee of Rs. 3,000/- (Rupees Five Thousand Rupees only).
5. All bids must be accompanied by a bid security of 3% of the Bid amount. All bids must be delivered to the address below address at or before 12:00 hours, on 28.01.2019 (Date). Bids will be opened at 13:00 hours on the same day, in the presence of bidder's representatives who choose to attend at the same address.
6. Procuring agency reserves right to annul the bidding process and reject all bids or proposals, as per SPP Rules 2010.

The address referred to above is:

**Project Director/  
Superintending Engineer**  
Chotiari Reservoir Project Circle Sanghar  
Telephone:

## 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 Procuring agency as defined in the bidding data hereinafter called “the procuring agency” wishes to receive bids for the construction and completion of works as described in these bidding documents, and summarized in the bidding data hereinafter referred to as the “Works”.

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 Procuring agency has received/allocated/ applied for loan/ grant/ Federal/ Provincial/Local Government funds from the source(s) indicated in the bidding data in various currencies towards the cost of the project /scheme specified in the bidding data, and it is intended that part of the proceeds of this loan/grant/funds will be applied to eligible payments under the contract for which these bidding documents are issued.

#### IB.3 Eligible Bidders

This Invitation for Bids is open to all Prequalified bidders / Firms who are prequalified by Project Director / Superintending Engineer Chotiari Reservoir Project Circle Sanghar vide Notification No Supdt:/PD/CRPC/28 dated 08.01.2019.

Firms and individuals, national or international, may be allowed to bid for any project where international competitive bidding is feasible. Any conditions for participation shall be limited to those that are essential to ensure the bidder’s capability to fulfill the contract in question.

- (a) Bidders may be excluded if;
  - (i) as a matter of law or official regulations, commercial relations are prohibited with the bidder’s country by the federal government in case of ICB, or
  - (ii) a firm is blacklisted/ debarred by the procuring agency and the matter has been reported to the Authority, subject to Rule 30 of Sindh Public Procurement Rules 2013.
- (b) Government-owned enterprises or institutions may participate only if they can establish that they are;

- (i) legally and financially autonomous, and
- (ii) operate under commercial law.

Provided that where government-owned universities or research centers in the country are of a unique and exceptional nature and their participation is critical to project implementation, they may be allowed to participate; and Bidders shall include all those contractors who are registered or incorporated in Pakistan, irrespective of the nationality of their owners and professional staff, or

- (c) Bidders are:
  - (i) pre-qualified with procuring agency for particular project/scheme;
  - (ii) registered with Pakistan Engineering Council in particular category and discipline,
  - (iii) registered with relevant tax authorities (income/sales tax, wherever applicable)

#### **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 procuring agency 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 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 procuring agency 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 procuring agency, 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 (SPP RULE 21)**

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.

- a. Instructions to Bidders.
- b. Bidding Data.
- c. General Conditions of Contract, Part-I (GCC).
- d. Particular Conditions of Contract, Part-II (SCC)
- e. Specifications.
- f. Form of Bid and Appendices to Bid.
- g. Bill of Quantities (Appendix-D to Bid).
- h. Form of Bid Security.
- i. Form of Contract Agreement.
- j. Forms of Performance Security, Mobilization Advance Guarantee, Integrity Pact and Indenture bond for secured advance.
- k. 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 BD will be rejected.

### **IB.8 Clarification of Bidding Documents (SPP RULE 23(1)):**

Any interested bidder requiring any clarification(s) in respect of the bidding documents may notify the procuring agency in writing at the procuring agency's address indicated in the Invitation for Bids/NIT. Procuring agency will respond to any request for clarification provided they are received at least five (05) calendar days prior to the date of opening of bid.

Provided that any clarification in response to query by any bidder; shall be communicated to all parties who have obtained bidding documents.

### **IB.9 Addendum/Modification of Bidding Documents:**

9.1 At any time prior to the deadline for submission of bids, the procuring agency may, for any reason, whether at his own initiative or in response to a clarification requested by a interested 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 IB 7.1 hereof and shall be communicated in writing to all bidders. Interested bidders shall acknowledge receipt of each addendum in writing to the procuring agency.

- 9.3 To afford bidders reasonable time in which to take an addendum into account in preparing their bids, the procuring agency may extend the deadline for submission of bids in accordance with 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 procuring agency shall be in the language stipulated in the bidding data and Particular Conditions of the 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 authorization on the letterhead of the bidding firm, 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 along with average annual construction turnover;
  - (ii) Financial predictions for the current year and the following two 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) 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;
- (b) the bid, and in case of a successful bid, the Form of Contract Agreement shall be signed by the authorized partner so as to be legally binding on all partners;
- (c) the partner-in-charge shall always be duly authorized to deal with the procuring agency 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 (a) above as well as in the Form of Bid and in the Form of Contract Agreement (in case of a successful bid);
- (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 partners without prior written consent of the procuring agency;
- (f) submission of an alternative Letter of Intent to execute a Joint Venture Agreement shall be mandatory.

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 sub- clause IB 1.2 hereof.

#### **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 IB 1.1 hereof, based on the unit rates or prices submitted by the bidder or percentage quoted above or below on the rates of Composite

Schedule of Rates (CSR), as the case may be.

- 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 procuring agency when executed and shall be deemed to be covered by rates and prices for other items in the Bill of Quantities. In case of Composite Schedule of Rates, if the bidder fails to mention the percentage above or below, it shall be deemed to be at par with the rates of Composite Schedule of Rates.
- 12.3 The bid price submitted by the contractor shall include all rates and prices including the taxes. All duties, taxes and other levies payable by the contractor under the contract, or for any other cause during the currency of the execution of the work or otherwise specified in the contract as on the date seven days prior to the deadline for submission of bids.

Additional / reduced duties, taxes and levies due to subsequent additions or changes in legislation shall be reimbursed / deducted as per Sub-Clause 13.7 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 13.7 of GCC. 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. Adjustment in prices quoted by bidders shall be allowed as per Sub-Para 4(ii) of Section C of Instructions to bidders and bidding data.

### **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 procuring agency'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 the bid.
- 13.2 The rates of exchange to be used by the bidder for currency conversion shall be the selling rates published and authorized by the State Bank of Pakistan prevailing on the date, 07 (seven) 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 from the date of opening of bid specified in clause IB.23.
- 14.2 In exceptional circumstances, prior to expiry of the original, the procuring agency may request the bidders to extend the period of validity for a specified additional period, which shall not be for more than one third of the original period of bid validity. The request and the responses thereto, shall be made in writing. A bidder may refuse the request without the forfeiture of the bid security. In case, a bidder agreed to the request, shall not be required or permitted to modify the bid, but will be required to extend the validity of the 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 the 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 deposit at call, 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 in favour of the procuring agency, which should commensurate with the bid validity period. The bank guarantee for bid security shall be acceptable in the manner as provided at Annexure BS-1
- 15.3 Any bid not accompanied by an acceptable bid security shall be rejected by the procuring agency as non-responsive.
- 15.4 Bid security shall be released to the unsuccessful bidders once the contract has been signed with the successful bidder or the validity period has expired.
- 15.5 The bid security of the successful bidder shall 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 except as provided in sub- clause IB 22.1;
  - (b) if the bidder does not accept the correction of his bid price pursuant to sub-clause IB 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/Bids**

- 16.1 Each bidder shall submit only one bid either by himself, or as a member of a joint venture, until and unless they have been requested or permitted for alternative bid, then he has to purchase separate bidding documents and alternate bid shall be treated as separate bid.
- 16.2 Alternate proposals are allowed only for procurement of works where technical complexity is involved and more than one designs or technical solutions are being offered. Two stage two envelope bidding procedure will be appropriate when alternate proposal is required.
- 16.3 Alternate bid(s) shall contain (a) relevant design calculations; (b) technical specifications; (c) proposed construction methodology; and (d) any other relevant details / conditions, provided that the total sum entered on the Form of Bid shall be that which represents complete compliance with the bidding documents.

#### **IB.17 Pre-Bid Meeting**

- 17.1 Procuring agency may, on his own motion or at the request of any bidder, 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, shall be communicated to all bidders. All bidders or their authorized representatives shall be invited to attend such a pre-bid meeting at their own expense.
- 17.2 The bidders are requested to submit questions, if any, in writing so as to reach the Procuring agency 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 bidders. Any modification of the bidding documents listed in sub- clause IB 7.1 hereof, which may become necessary as a result of the pre-bid meeting shall be made by the procuring agency 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 Alteration is not to be made neither 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 without alterations and shall provide an original copy along with photocopies as per the requirement of the procuring agency specified in the bidding data. The original as well as copies of the document shall be clearly marked as "ORIGINAL" and „COPY", as the case may be. If there is any discrepancy between original and copy (ies) then 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(s) duly authorized to sign on behalf of the bidder pursuant to sub- clause IB 11.1(a) hereof. All pages of the bid shall be initialed and stamped by the person(s) signing the bid.
- 18.6 The bid shall contain no alterations, omissions or additions, except to comply with instructions issued by the procuring agency, or as are necessary to correct errors made by the bidder. Such corrections shall be initialed by the person(s) signing the bid.
- 18.7 Bidders shall indicate in the space provided in the Form of Bid their full and proper postal 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 two COPIES of the bid shall be separately sealed and put in separate envelope and marked as such.
  - (b) The envelopes containing the ORIGINAL and COPIES shall be put in one sealed envelope and addressed as given in sub – clause IB 19.2 hereof.
- 19.2 The inner and outer envelopes shall:
- (a) be addressed to the procuring agency 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 IB 19.2 hereof, the inner envelope shall indicate the name and postal 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 procuring agency 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 procuring agency at the address specified not 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 shall 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 Procuring Agency may, at its discretion, extend the deadline for submission of bids by issuing an amendment in accordance with IB 09. In such case, all rights and obligations of the procuring agency and the bidders shall remain the same as mentioned in the original deadline.

**IB.21 Late Bids**

- (a) any bid received by the procuring agency after the deadline for submission of bids prescribed in to clause IB 20 shall be returned unopened to such bidder.
- (b) delays in the mail, 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 submit the bid in time.

**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 procuring agency 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 to sub - clauses IB 22.1 and IB 27.2.
-

- 22.4 Withdrawal of a bid during the interval between the deadlines 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 Procuring agency 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 or their representatives who are in attendance shall sign an attendance sheet.
- 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 Procuring agency shall read aloud the name of the bidder, total bid price and price of any Alternate Proposal(s), if any, discounts, bid modifications, substitution and withdrawals, the presence or absence of bid security, and such other details as the procuring agency may consider appropriate, and total amount of each bid, and of any alternative bids if they have been requested or permitted, shall be read aloud and recorded when opened.
- 23.4 Procuring Agency shall prepare minutes of the bid opening, including the information disclosed to those present in accordance with the sub-clause IB.23.3.

### **IB.24 Process to be Confidential. (SPP Rule 53)**

- 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 in accordance with the requirements of Rule 45, which states that Procuring agencies shall announce the results of bid evaluation in the form of a report giving reasons for acceptance or rejection of bids. The report shall be hoisted on website of authority and that of procuring agency if it website exists and intimated to all bidders at least seven (7) days prior to the award of contract. The announcement to all bidders will include table(s) comprising read out prices, discounted prices, price adjustments made, final evaluated prices and recommendations against all the bids evaluated. Any effort by a bidder to influence the procuring agency'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 as per Rule 31; however mere fact of lodging a complaint shall not warrant suspension of the procurement process.

### **IB.25 Clarification of Bid (SPP Rule 43)**

- 25.1 To assist in the examination, evaluation and comparison of bids, the procuring agency

may, at its discretion, ask any bidder for clarification of the 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 procuring agency 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 procuring agency will determine whether the bidder fulfills all codal requirements of eligibility criteria given in the tender notice such as registration with tax authorities, registration with PEC (where applicable), turnover statement, experience statement, and any other condition mentioned in the NIT and bidding document. If the bidder does not fulfill any of these conditions, it shall not be evaluated further.
- 26.2 Once found to be fulfilling the eligibility criteria, as mentioned in sub- clause 26.1, the bids of eligible bidders will be evaluated for technical responsiveness as per specification and criteria given in the bidding documents. Technical and financial evaluations may be carried out in accordance with single stage-single one envelope, single stage-two envelopes, two stage or two stage-two envelopes bidding procedures, depending on the selection procedure adopted by the procuring agency.
- 26.3 A bid will be considered technically responsive if it (i) has been properly signed; (ii) is accompanied by the required bid security; and (iii) 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 procuring agency'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.
- 26.4 If a bid has major deviations to the commercial requirements and technical specifications will be considered technically non responsive. As a general rule, major deviations are those that if accepted, would not fulfill the purposes for which the bid is requested, or would prevent a fair comparison or affect the ranking of the bids that are compliant with the bidding documents.

#### **(A). Major (material) Deviations include:-**

- (i) has been not properly signed;
- (ii) is not accompanied by the bid security of required amount and manner;
- (iii) stipulating price adjustment when fixed price bids were called for;
- (iv) failing to respond to specifications;
- (v) failing to comply with Mile-stones/Critical dates provided in Bidding Documents;
- (vi) sub-contracting contrary to the Conditions of Contract specified in Bidding Documents;

- (vii) refusing to bear important responsibilities and liabilities allocated in the Bidding Documents, such as performance guarantees and insurance coverage;
- (viii) taking exception to critical provisions such as applicable law, taxes and duties and dispute resolution procedures;
- (ix) a material deviation or reservation is one :
  - (a) which affect in any substantial way the scope, quality or performance of the works;
  - (b) adoption/rectification whereof would affect unfairly the competitive position of other bidders presenting substantially responsive bids.

### **(B) Minor Deviations**

Bids that offer deviations acceptable to the Procuring Agency and which can be assigned a monetary value may be considered substantially responsive at least as to the issue of fairness. This value would however be added as an adjustment for evaluation purposes only during the detailed evaluation process.

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

### **IB.27 Correction of Errors before Financial Evaluation**

- 27.1 Bids determined to be substantially responsive will be checked by the procuring agency for any arithmetic errors. Errors will be corrected by the procuring agency 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 procuring agency 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 procuring agency in accordance with the above procedure for the correction of errors and with the concurrence of the bidders. The amount thus corrected shall be considered as binding upon the bidder. If the bidder does not accept the corrected bid price, his bid will be rejected, and the bid security shall be forfeited in accordance with sub- clause IB 15.6(b) hereof.

### **IB.28 Financial Evaluation and Comparison of Bids**

- 28.1 The procuring agency 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 procuring agency 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 (if any), for contingencies in the Summary Bill of Quantities, but including competitively priced Day work; 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.

If the bid of the successful bidder is seriously unbalanced in relation to the procuring agency's estimate of the cost of work to be performed under the contract, the procuring agency 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 procuring agency 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 procuring agency against financial loss in the event of default of the successful bidder under the contract.

- 28.5 Bidders may be excluded if involved in **“Corrupt and Fraudulent Practices”** means either one or any combination of the practices given below SPP Rule2(q);
- (i) **“Coercive Practice”** means any impairing or harming, or threatening to impair or harm, directly or indirectly, any party or the property of the party to influence the actions of a party to achieve a wrongful gain or to cause a wrongful loss to another party;
  - (ii) **“Collusive Practice”** means any arrangement between two or more parties to the procurement process or contract execution, designed to achieve with or without the knowledge of the procuring agency to establish prices at artificial, noncompetitive levels for any wrongful gain;
  - (iii) **“Corrupt Practice”** means the offering, giving, receiving or soliciting, directly or indirectly, of anything of value to influence the acts of another party for wrongful gain;
  - (iv) **“Fraudulent Practice”** means any act or omission, including a misrepresentation, that knowingly or recklessly misleads, or attempts to mislead, a party to obtain a financial or other benefit or to avoid an obligation;
  - (v) **“Obstructive Practice”** means harming or threatening to harm, directly or indirectly, persons or their property to influence their participation in a procurement process, or affect the execution of a contract or deliberately destroying, falsifying, altering or concealing of evidence material to the investigation or making false statements before investigators in order to

materially impede an investigation into allegations of a corrupt, fraudulent, coercive or collusive practice; or threatening, harassing or intimidating any party to prevent it from disclosing its knowledge of matters relevant to the investigation or from pursuing the investigation, or acts intended to materially impede the exercise of inspection and audit rights provided for under the Rules.

#### **28.6 Evaluation Report (SPP Rule 45)**

After the completion of evaluation process, as described in clauses IB 27 and IB 28, the procuring agency shall announce the results of bid evaluation in the form of report (available on the website of the authority) giving reasons for acceptance and rejection of bid. The report shall be hoisted on website of the authority and that of procuring agencies if its website exists and intimated to all bidders at least seven (7) days prior to the award of contract.

### **F. AWARD OF CONTRACT**

#### **IB.29 Award (SPP Rule 49)**

29.1 Subject to clauses IB 30 and IB 34 and provision of the rule: The procuring agency shall 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, but not necessarily the lowest submitted price, within the original or extended period of bid validity. Provided that such bidder has been determined to be eligible in accordance with the provisions of clause IB 03 and qualify pursuant to sub-clause IB 29.2

29.2 Procuring agency, at any stage of the bid evaluation, having credible reasons for or having *prima facie* evidence of any deficiency(ies) in contractor's capacities, may require the contractor to provide information concerning their professional, technical, financial, legal or managerial competence whether already pre-qualified or not for the said project.

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

#### **IB.30 Procuring Agency's Right to reject all Bids or Annul/Cancellation the Bidding Process (SPP Rule 25)**

Notwithstanding clause IB 29 and provision of the rule: (1) A procuring agency reserves may cancel the bidding process at any time prior to the acceptance of a bid or proposal; (2) The procuring agency shall incur no liability towards bidders solely by virtue of its invoking sub –rule (1); (3) Intimation of the cancellation of bidding process shall be given promptly to all bidders and bid security shall be returned along with such intimation; (4) The procuring agency shall, upon request by any of the bidders, communicate to such bidder, grounds for cancellation of the bidding process, but is not required to justify such grounds.

**IB.31. Notification/Publication of the Award of Contract (SPP Rule 25).**

- 31.1 Prior to expiry of the period of bid validity, including extension, prescribed by the procuring agency, the procuring agency shall notify the successful bidder in writing (“Letter of Acceptance”) that his bid has been accepted. This letter shall mention the sum which the procuring agency will pay to 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, procuring agency may hold meetings to 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 procuring agency and the bidder till signing of the formal Contract Agreement.
- 31.4 Upon furnishing by the successful bidder of a Performance Security and signing of the contract, the procuring agency will promptly notify the name of the successful bidder to all bidders and return their bid securities accordingly.
- 31.5 Within seven days of the award of contract, procuring agency shall publish on the website of the Authority and on its own website, if such a website exists, the results of the bidding process, identify the bid through procurement identifying numbers, and the following information:
- (1) Evaluation Report;
  - (2) Form of Contract and letter of Award;
  - (3) Bill of Quantities or Schedule of Requirement.
- 31.6 Debriefing (SPP Rule 51).
- (a) A bidder may ask the procuring agency for reasons for non-acceptance of his bid and may request for a debriefing meeting and procuring agency shall give him the reasons for such non acceptance, either in writing or by holding a debriefing meeting with such a bidder.
  - (b) The requesting bidder shall bear all the costs of attending such a debriefing.

**IB.32 Performance Security (SPP Rule 39)**

- 32.1 The successful bidder shall furnish to the procuring agency a Performance Security in the form of pay order or demand draft or bank guarantee, 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.
- 32.3 Validity of performance security shall extend at least ninety days beyond the date of completion of contract, or as mentioned in the bidding data to cover defects liability

period or maintenance period subject to final acceptance by the procuring agency.

**IB.33 Signing of Contract Agreement (SPP Rule 39)**

33.1 Within 14 days from the date of furnishing of acceptable Performance Security under the Conditions of Contract, the procuring agency 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 procuring agency and the successful bidder shall be executed within 14 days of the receipt of the Contract Agreement by the successful bidder from the procuring agency.

33.3 A procurement contract shall come into force when the procuring agency requires signs contract, the date on which the signatures of both the procuring agency and the successful bidder are affixed to the written contract. Such affixing of signatures shall take place within the time prescribed in the bidding documents

Provided that the procuring agency may reduce the maximum time limit for signing of contract, as and when required, and shall be mentioned in the bidding documents.

33.4 Stamp Duty.

The formal Agreement between the Procuring Agency and the successful bidder shall be duly stamped at rate of 0.35% of bid price (updated from time to time) stated in Letter of Acceptance and shall be paid by the successful bidder.

**IB.34 General Performance of the Bidders**

Procuring agency may in case of consistent poor performance of the contractor and his failure to remedy the underperforming contract may take such action as may be deemed appropriate under the circumstances of the case including the rescinding the contract and/or black listing of such contractor and debarring him from participation in future bidding process.

**IB.35 Integrity Pact (SPP Rule 89)**

The bidder shall sign and stamp the Integrity Pact provided at Appendix-L to the bidding documents for all Provincial/Local 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.

**IB.37 Arbitration (SPP Rule 34)**

Any dispute that is not amicably resolved shall be finally settled, unless otherwise specified in the Contract, under the Arbitration Act 1940 updated from time to time and would be held anywhere in the Province of Sindh at the discretion of procuring agency.

## BIDDING DATA

Instructions to Bidders

Clause Reference

**1.1 Name and address of the procuring agency:**

Irrigation Department, Government of Sindh, through  
Project Director/ SE,  
Chotiari Reservoir Project Circle, Sanghar,  
Camp Office at Left Bank Barrage Colony Hyderabad  
Tel. +92 022 9210074  
Fax. +92 22-9210089

**1.2 Name of the Project and Summary of the works:**

**MAKHI FARASH LINK CANAL PROJECT (CHOTIARI PHASE-II) FOR WATER SUPPLY TO THAR COAL  
PACKAGE VB: WORKS FROM RD 265+000 TO 314+030**

**Summary of Works**

The Works are part of the project for water supply to Thar Coal. The Package Vb involves works in Makhi Farash Link Canal Project from RD 265+000 TO 314+030 including remodeling and lining of distributaries / minors originating from within this reach, as summarized below:

**PACKAGE VB: WORKS FROM RD 265+000 TO 314+030**

- Makhi Farash Link Canal
  - o Earth Work in Length of 31+500 RDs
  - o CC lining of Makhi Farash Link Canal (RDs 296+50 to 314+030)
- Structures
  - o Road Bridge (297+551 RDs)
  - o Water Course 20 Nrs.

2.1 Name of the Borrower/Source of Financing/Funding Agency/Funding Source;  
Federal Government PSDP Scheme for the year 2015-16

8.1 Time limit for clarification:

Not later than 5 working days prior to last date of submission

10.1 Bid language:

English

11.1 (a) Prequalification Information to be updated (where applicable):

1. Company Profile

2. General Experience Record

(i) Details of Contracts of Similar Nature and Complexity completed over the last 05 years

- (ii) Projects of similar nature and complexity in hand.
- (iii) Projects executed in similar geographical conditions in last five (5) years.

3(A) Personnel Capabilities

Firms/ Contractors should provide the names of suitably qualified personnel to meet the specified requirements

3(B) Curriculum Vitae (CV) for Proposed Experts

4. Firm/ Contractor shall provide adequate information to demonstrate clearly that it has the capability to meet the requirements for the key equipment whether owned/ leased/ rented

- a. Equipment Capabilities (owned by the contractor/ firm)
- b. Equipment Capabilities (leased/ rented by the contractor/ firm)

5 Financial Resources

- a. Banker's Information:
- b. Financial Status: Summarize actual assets and liabilities in Pak Rupees for the previous three years.
- c. Source of Financing: Contractor/ firm shall provide documentary evidence for funding the project for which the prequalification is being undertaken.

11.1 (b) Furnish Technical Proposal

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

13.1 Bidders to quote entirely in Pakistani Rupee.

14.1 Period of Bid Validity:

90 days

15.1 Amount of Bid Security:

The amount of Bid Security in Pakistan Rupees shall be minimum 2% of the Bid Price in the form of Pay Order in the name of the procuring agency or an unconditional Bank Guarantee from any scheduled Bank of Pakistan.

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

As indicated in the Notice Inviting Tenders.

18.4 Number of copies of the bid to be completed and returned:

The bidder has to complete and submit one original and two copies.

19.2 (a) Procuring Agency's address for the purpose of bid submission:

Office of the Project Director/  
Superintending Engineer  
Chotiari Reservoir Project Circle Sanghar  
Left Bank Barrage Colony,  
Hyderabad

(b) Name and Identification Number of the Contract:  
**MAKHI FARASH LINK CANAL PROJECT (CHOTIARI PHASE-II) FOR  
WATER SUPPLY TO THAR COAL  
PACKAGE Vb: WORKS FROM RD 265+000 TO 314+030**

20.1 (a) Deadline for submission of bids:

Time 14:00 hours and Date \_\_\_\_\_

(b) Venue, time, and date of bid opening:

14:30 hours and Date \_\_\_\_\_  
Office of the Project Director/  
Superintending Engineer  
Chotiari Reservoir Project Circle Sanghar  
Left Bank Barrage Colony,  
Hyderabad

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

The performance security shall be in the form of unconditional Bank Guarantee from a schedule Bank of Pakistan as per standard form provided for an amount of 5% of the Contract Price.

32.3 Stamp duty

0.35% of bid price (as per applicable law) shall be paid by the successful bidder as stamp duty.

## FORM OF BID

Bid Reference No. \_\_\_\_\_

Name of Contract/Work: **MAKHI FARASH LINK CANAL PROJECT (CHOTIARI PHASE-II) FOR WATER SUPPLY TO THAR COAL PACKAGE Vb: WORKS FROM 265+000 TO 314+030**

To:

Project Director  
Superintending Engineer  
Chotiari Reservoir Project Circle Sanghar

1. Having examined the bidding documents including Instructions to Bidders, Bidding Data, and Conditions of Contract, Specifications, Drawings and Bill of Quantities and Addenda Nos. \_\_\_\_\_ for the execution of the above-named work, we/I, the undersigned, offer to execute and complete the work 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/I 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/I submit herewith a bid security in the amount of Rupees (Rs. \_\_\_\_\_) drawn in your favour or made payable to procuring agency and valid for a period of days \_\_\_\_\_ beginning from the date, bid is opened.
4. We/I 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/I agree to abide by this bid for the period of \_\_\_\_\_ days from the date fixed for opening 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.
9. We undertake, if our/my bid is accepted, to execute the Performance Security referred to in Clause 10 of Conditions of Contract for the due performance of the Contract.
10. We confirm, if our bid is accepted, that all partners of the joint venture shall be

liable jointly and severally for the execution of the Contract and the composition or the constitution of the joint venture shall not be altered without the prior consent of the procuring agency.

In the capacity of \_\_\_\_\_ duly authorized to sign Bids for and on behalf of

Dated this \_\_\_\_\_ day of \_\_\_\_\_ 20

Signature: \_\_\_\_\_

---

(Name of Bidder in Block Capitals)

(Seal)

Address: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Witness:

Signature: \_\_\_\_\_

Name: \_\_\_\_\_

Address: \_\_\_\_\_

Occupation: \_\_\_\_\_

**Appendix-A to Bid**

**CONTRACT DATA**

<b>S. No.</b>	<b>Conditions of Contract</b>	<b>Clause</b>	<b>Data</b>
1.	Engineer representing Consulting Firm hired by the procuring agency to issue variation in case of emergency.	3.1	Up to 2% of the contract price stated in the Letter of Acceptance.
2.	Amount of Performance Security	4.2	5% of Contract Price stated in the Letter of Acceptance.
3.	Time for Furnishing Programs	8.3	Within 14 days from the date of receipt of Engineers Notice to Commence, this shall be issued within fourteen (14) days after signing of Contract Agreement.
4.	Minimum amount of Third Party Insurance	18.3	With 42 days from the date of receipt of Letter of Acceptance
5.	Time for Commencement	8.1	Within 14 days from the date of receipt of Engineer's Notice to Commence, this shall be issued within fourteen (14) days after signing of Contract Agreements
6.	Time for Completion (works & sections)	8.2 & 10.2	548 days from the date of receipt of Engineer's Notice to Commence.
7.	Amount of Liquidity Damages/Delay Damages / Penalties	8.7	0.05% of Contract Price as damages per day 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	11.1	365 days from the effective date of Taking Over Certificate.
9.	Percentage of Retention Money	14.2	10% of the amount of Interim / Running Payment Certificate.
10.	Limit of Retention Money	14.2	5% of Contract Price stated in the Letter of Acceptance.
11	Minimum amount of Interim/Running Payment Certificates	14.2	Rs. 12 Million
12	Time of Payment from delivery of Engineer's Interim/ Running Payment Certificate to the procuring agency	14.7	30 days in case of local currency or 42 days in case of foreign funded projects.
13.	Mobilization Advance.	14.2	10% of Contract Price stated in the Letter of Acceptance.

**Appendix-B to Bid**

**FOREIGN CURRENCY REQUIREMENTS**

1. The bidder may indicate herein below his requirements of foreign currency (if any), with reference to various inputs to the works.
2. Foreign Currency Requirement as percentage of the bid price excluding Provisional Sums \_\_\_\_\_%.
3. Table of Exchange Rates

Unit of Currency	Equivalent in Pak. Rupees
Australian Dollar	-----
Euro	-----
Japanese Yen	-----
U.K. Pound	-----
U.S. Dollars	-----
-----	-----
-----	-----

**NOT USED**

**Appendix-C to Bid**

**PRICE ADJUSTMENT UNDER CLAUSE 13.8  
OF CONDITIONS OF CONTRACT**

**A. Weightages or coefficients are used for price adjustment.**

The source of indices and the weightages or coefficients for use in the adjustment formula under Clause 13.8 shall be as follows:

Cost Element	Description	Weight ages	Applicable index
1	2	3	4
(i)	Fixed Portion	0.350	
(ii)	Local Labor		Government of Pakistan (GoP) Federal Bureau of Statistics (FBS) Monthly Statistical Bulletin.
(iii)	Cement – in bags	-	“ “ “
(iv)	Reinforcing Steel	-	“ “ “
(v)	High Speed Diesel (HSD)	-	“ “ “
(vi)	Bricks	-	“ “ “
(vii)	Bitumen	-	“ “ “
(viii)			
	Total	1.000	

**Notes:**

- Indices for “(i)” to “(iv)” are taken from the Government of Pakistan Federal Bureau of Statistics, Monthly Statistical Bulletin. The base cost indices or prices shall be those applying 15 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.
- Any fluctuation in the indices or prices of materials other than those given above shall not be subject to adjustment of the Contract Price.
- Fixed portion shown here is for typical road project, procuring agency to determine the weight age of Fixed Portion considering only those cost elements having cost impact of seven (7) percent or more on his specific project.

**B. When Escalation is allowed on the materials only.**

Price adjustment on following items shall be allowed:

<b>Cost Element</b>	<b>Description</b>	<b>Weight ages</b>	<b>Applicable index</b>
<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>
i	Cement – in bags	-	Government of Pakistan (GoP) Federal Bureau of Statistics (FBS) Monthly Statistical Bulletin.
ii	Reinforcing Steel		“ “ “ “
iii	Bricks		“ “ “ “
iv	Bitumen		“ “ “ “
v	Wood (Composite item)		“ “ “ “
	Total		“ “ “ “

**Notes:**

1. Indices are taken from the Government of Pakistan Federal Bureau of Statistics, Monthly Statistical Bulletin. The base cost indices or prices shall be those applying 15 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.

**Appendix-D to Bid**

**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 (in case of item not mentioned in Bill of Quantities).
3. The rates and prices entered in the priced Bill of Quantities shall, except insofar as it is otherwise provided under the Contract include supply of material, carriage, all costs of contractor's plant, labour, supervision, 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 14 days prior to deadline for submission of Bids in case of ICB/NCB respectively, 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 and shall not be paid separately.
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 summarized 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 13.5 of Part I, General Conditions of Contract.
8. Bidder shall price the Bill of Quantities in Pakistani Rupees only.
9. The bidder must fill Part C: Day Work Schedule

**B. WORK ITEMS**

The Bill of Quantities contains the following Bills and Items:

SUMMARY		
Bill #	Description	Amount (Rs)
1	EARTHWORKS FOR CANAL (RD-265+000 TO 314+000)	
2	C.C. LINING OF MFLC FROM RD-296+500 TO 299+500 & 307+000 TO 314+000 (10 RDS)	
3	CONSTRUCTION OF WATER COURSES (20) NOS	
4	CONSTRUCTION OF DISTRICT ROAD BRIDGES (01) NOS	

BILL OF QUANTITY					
BILL NO -1: EARTHWORK FOR CANAL					
Sr. No.	Description of Items	Unit	Quantity	Rate (Rs)	Amount (Rs.)
1	Jungle clearance and removing within 100ft (light) Provisional Quantity (S.I No-4a, P-95).	%0 Sft	14,700,000.00	75.63	1,111,761.00
2	Cutting and Removing Trees within a distance 100ft (b) from 2.6 ft to 6ft Girth RD-208 to314 (Wherever necessary) RD-208 to 314 (Both Sides) (P-95 I-2(b) SCR: 2012)				
	(a) Upto 2.5 feet girth.	No	500.00	535.43	267,715.00
	(b) From 2.6 feet to 6.0 feet girth.	No	500.00	1,043.63	521,815.00
3	Earth work excavation in irrigation channels drains etc.Dressed to design section grades and profiles exczved material disposed off and dreessed within 50ft lead (S.I No-5a, P-1)	%0 Cft	44,655,052.29	2,420.00	108,065,226.53
4	Rehandling of earth work (b) Upto 50' 3 leads (S.I No-9b, P-2)	%0 Cft	96,499,538.00	1,058.75	102,168,885.86
5	Extra for wet earth Provisional Quantity (S.I No-15, P-3)	%0 Cft	13,396,516.00	1,058.75	14,183,561.32
6	Borrow pit excavation undressed lead upto 100ft (a) ordinary soil, (S.I No-3a, P-1)	%0 Cft	120,925.75	2,117.50	256,060.28
7	Extra for every 50ft additional lead or part therof. (a) For earth work (soft, ordinary, hard and v.hard) (3 Leads 100.78*3=302.34) (S.I No-8a, P-2)	%0 Cft	120,926	302.34	36,561
8	Earth work compaction soft ordinary hard soil (b) laying earth work in 6" layers leveling dressing & watering for compaction etc complete. (S.I No-13b, P-3)	%0Cft	16,018,247.72	354.00	5,670,459.69
9	Earth work compaction by sheep feet roller and power roller with optimum moisture content (a) for 85 % modified AASHO density (S.I No-7c, P-2 HWay)	%0Cft	16,018,247.72	1,445.58	23,155,658.54
				<b>Total</b>	<b>255,437,704</b>

BILL OF QUANTITY					
BILL NO.2: C.C. LINING OF MFLC FROM RD-296+500 TO 299+500 & 307+000 TO 314+030 (10 RDs)					
Sr. No.	Description of Items	Unit	Quantity	Rate (Rs)	Amount (Rs.)
1	Formation, Dressing and preparing sub-grade. (P-74, I-1 SCR-2012)				
	(a) in Bed =	% Sft	624,368	326.70	2,039,809
	Shoulder =	% Sft	30,090	326.70	98,304
	(b) Slopes =	% Sft	361,080	453.75	1,638,401
2	Stone Crushed Graded 1-1/2" (P-4, I-76 Sch: 2011, V-III, Part-III)	%Cft	400,307	2,200	8,806,760
3	Supplying and placing the fine filters. (P-57, I-3 Sch: 2012, PHE)	%Cft	21,001.31	5,367	1,127,140
4	Cement Plaster 1-1/2" 1:6 ratio (P-74, I-5 SCR-2012)				
	(a) in Bed =	%Sft	624,368	1,800.12	11,239,364.24
	Shoulder =	%Sft	30,090	1,800.12	541,656.11
	(b) Slopes =	%Sft	361,080	2,011.87	7,264,460.20
5	C.C. Lining Ratio 1:2:4 (P-75, I-11 SCR-2012)				
	(a) in Bed =	%Cft	262,234	13,789.32	36,160,333.67
	Shoulder =	%Cft	12,638	13,789.32	1,742,666.68
	(b) Slopes =	%Cft	151,654	14,227.95	21,577,198.38
6	Erection and removal of centering for RCC or plain cement concrete works of Partal wood (2nd-class). (P-17, I-19(b)(ii).	% Sft	993,873	3,127.41	31,082,474.21
7	Bitumen Coating to Plastered or Concrete Surface (P-9, I-9 SCR-2012)	% Sft	42,630	778.09	331,699.77
8	Reinforced cement concrete Ratio (1:2:4)	Cft	3,060	337.00	1,031,220.00
9	Reinforcing Steel Grade-60	Cwt	191.25	5,001.76	956,586.60
10	Stone filling dry hand packed as filling behind retaining walls or in pitching and aprons. (P-31,I-16,CSR-2012)	% Cft	77,086.80	2,684.00	2,069,009.71
				TOTAL RS.	<b>127,707,083</b>
				ADD CARTAGE	55,094,257
				<b>G.TOTAL</b>	<b>182,801,340</b>

<b>BILL OF QUANTITY</b>					
<b>BILL NO -3 : CONSTRUCTION OF WATER COURSES/OUTLET STRUCTURES (20 Nrs.)</b>					
<b>Sr. No.</b>	<b>Description of Items</b>	<b>Unit</b>	<b>Quantity</b>	<b>Rate (Rs)</b>	<b>Amount (Rs.)</b>
1	Excavation in foundation of buildings, bridges and other structures i/c dagbelling, dressing, refilling around the structure with excavated earth watering and ramming lead upto one chain and lift upto 5ft (In ordinary soil) (1/18 (b) P-4)	%0 Cft	47,588.40	3,176.25	151,152.66
2	Cement concrete plain including placing, compacting, finishing, and curing complete (including screening and washing of stone aggregate) without shuttering. Ratio: 1:3:6. Volume-III, Part-II, I-5(i), P-16	%Cft	3,772.50	12,595.00	475,146.38
3	Pacca brick work in foundation in plinth in: (a) Cement sand mortar. 1:4 (S.I-14(c), P-19)	%Cft	9,037.27	12,501.41	1,129,786.18
4	Pacca brick work other than building including striking of joints upto 20 feet height in: (a) Cement sand mortar. 1:2 (S.I-71(a), P-22)	%Cft	15,796.79	14,201.00	2,243,302.37
5	Cement plaster 1:4 upto 12" height. (c) 3/4" thick. (S.I-11 (c), P-51)	%Sft	13,940.48	3,015.76	420,411.42
6	Providing, Laying R.C.C pipe and collars Class "A" and fixing in trench to required depth & fixing in position including cutting, fitting & jointing with maxphalt composition & cement mortar 1: 1 and testing with water pressure jto a head of 4.5 meter or 15 feet above the top of the highest pipe & refilling with excavated staff. (S.I-A1 P-15 PHE)				
	(c) 6" dia	Rft	120.00	142.00	17,040.00
	(d) 9" dia	Rft	200.00	142.00	28,400.00
	(e) 12" dia	Rft	280.00	246.00	68,880.00
	(g) 18" dia	Rft	160.00	351.00	56,160.00
	(k) 30" dia	Rft	40.00	789.00	31,560.00
7	Filling and compacting soil and boulder behind retaining walls (i/c excavation of soil and lead upto 50ft (S.I.23, P-4)	% 0 Cft	28,200.00	2,722.00	76,760.40
				<b>Total</b>	<b>4,698,599</b>
				<b>Cartage</b>	<b>1,038,206</b>
				<b>Total</b>	<b>5,736,805</b>

<b>BILL OF QUANTITY</b>					
<b>BILL NO -4 : CONSTRUCTION OF ROAD BRIDGES</b>					
<b>S. No.</b>	<b>Description</b>	<b>Unit</b>	<b>Quantity</b>	<b>Rate (Rs)</b>	<b>Amount (Rs)</b>
1	Structural Excavation in Common Material (NHA Sindh CSR-2014 -Sanghar-Item- 107a)	CM	148.24	361.08	53,528.17
2	Lean Concrete (NHA Sindh CSR-2014 -Sanghar-Item- 401f)	CM	12.73	6,609.11	84,106.16
3	Concrete Class 'C' On Ground (NHA Sindh CSR-2014 -Sanghar-Item- 401 cii)	CM	9.62	11,000.01	105,804.58
4	Reinforced cement concrete Class A-3 (Under Ground) (NHA Sindh CSR-2014 -Sanghar-Item- 401 a3i)	CM	233.85	11,196.06	2,618,236.04
5	Reinforced cement concrete Class A-3 (On Ground) (NHA Sindh CSR-2014 -Sanghar-Item- 401 a3ii)	CM	40.09	12,056.11	483,312.28
6	Reinforced cement concrete Class A-3 (Elevated) (NHA Sindh CSR-2014 -Sanghar-Item- 401 a3iii)	CM	306.87	12,467.43	3,825,826.23
7	Precast kerbs in concrete class A-1 of Size 450 X 150 mm Incl Bedding and Haunching (NHA Sindh CSR-2014 -Sanghar-Item- 601 dii)	M	67.36	1,112.30	74,921.76
8	Reinforcement as per AASHTO CM1 Grade 60 (NHA Sindh CSR-2014 -Sanghar-Item- 404 b)	Ton	64.11	115,614.06	7,411,628.59
9	Elastomeric Bearing Pad (according to Size and Thickness) (NHA Sindh CSR-2014 -Sanghar-Item- 406 e)	Cu.cm	226,314.00	1.97	445,838.58
10	Cast In place Piles Upto 1.00 Meter Dia in Normal Soil (Boring Only) (NHA Sindh CSR-2014 -Sanghar-Item- 407d1)	RM	414.53	5,585.15	2,315,200.99
11	Pile Load Test Up to 120 Tons (NHA Sindh CSR-2014 -Sanghar-Item- 407h)	Each	1.00	319,308.48	319,308.48
12	Pre-Stressing Wire Strand 3/8"-1/2" Dia Complete In All Respect. (NHA Sindh CSR-2014 -Sanghar-Item- 405a)	Ton	2.99	224,729.48	672,190.12
13	Launching Of Girder (NHA Sindh CSR-2014 -Sanghar-Item- 405b)	Ton	224.70	1,311.50	294,690.72
14	Steel Expansion Joints (Local) (NHA Sindh CSR-2014 -Sanghar-Item- 406ci)	Kg	1,093.07	264.67	289,303.72
15	Neoprene Rubber Joint Filler 12 Mm Thick With Bitumastic Joint Seal (NHA Sindh CSR-2014 -Sanghar-Item- 406b)	Sqm	8.22	1,521.87	12,512.69
16	Concrete Beam Guardrail (Incl.Reinforcement) (NHA Sindh CSR-2014 -Sanghar-Item- 605a)	CM	6.37	24,452.33	155,769.37
17	Concrete Post Guardrail (Incl.Reinforcement) (NHA Sindh CSR-2014 -Sanghar-Item- 605c)	CM	2.48	22,636.43	56,078.36

18	Supply and installing PVC blind pipe Class B of approved design quality and make Including necessary sockets etc. complete (PHE Rates Page 44, Item 12-b CSR 2012)	RM	85.64	587.63	50,327.35
<b>APPROACH ROADS</b>					
<b>Embankment</b>					
19	Compaction of Natural Ground (NHA Sindh CSR-2014 -Sanghar-Item- 104)	SM	12,724.58	27.68	352,216.48
20	Formation of Embankment From Borrow Excavation in Common Material (NHA Sindh CSR-2014 -Sanghar-Item- 108c)	CM	22,980.16	447.49	10,283,393.83
<b>Sub-Base</b>					
21	Granular Sub Base (NHA Sindh CSR-2014 -Sanghar-Item- 201)	CM	423.78	2,009.41	851,552.91
<b>Base Course</b>					
22	Aggregate Base Course (NHA Sindh CSR-2014 -Sanghar-Item- 202)	CM	423.78	2,334.89	989,485.66
<b>Tripple Surface Treatment.</b>					
23	Tripple Surface Treatment. (NHA Sindh CSR-2014 -Sanghar-Item- 304c)	SM	3,273.90	566.23	1,853,782.24
<b>Brick on End Edging</b>					
24	Brick on End Edging (NHA Sindh CSR-2014 -Sanghar-Item- 603)	Rm	975.31	81.41	79,400.18
<b>Total</b>					<b>33,678,415</b>
<b>G.Total For 1Nos</b>					<b>33,678,415</b>

## **C. Daywork Schedule**

### **General**

1. Reference is made to Sub-Clause 13.6 of the General Conditions of Contract. Work shall not be executed on a day work basis except by written order of the Engineer. Bidders shall enter basic rates for day work items in the Schedules, which rates shall apply to any quantity of day work ordered by the Engineer. Nominal quantities have been indicated against each item of day work, and the extended total for day work shall be carried forward to the bid price.

### **Day work Labour**

2. In calculating payments due to the contractor for the execution of day work, the actual time of classes of labour directly doing the day work ordered by the Engineer and for which they are competent to perform will be measured excluding meal breaks and rest periods. The time of gangers (charge hands) actually doing work with the gang will also be measured but not the time of foreman or other supervisory personnel.
3. The contractor shall be entitled to payment in respect of the total time that labour is employed on day work, calculated at the basic rates entered by him in the Schedule of day work Rates for labour together with an additional percentage, payment on basic rates representing the contractor's profit, overheads, etc., as described below:
  - a) the basic rates for labour shall cover all direct costs to the contractor, including (but not limited to) the amount of wages paid to such labour, transportation time, overtime, subsistence allowances and any sums paid to or on behalf of such labour for social benefits in accordance with Pakistan law. The basic rates will be payable in local currency only; and
  - b) the additional percentage payment to be quoted by the bidder and applied to costs incurred under (a) above shall be deemed to cover the contractor's profit, overheads, superintendence, liabilities and insurances and allowances to labour timekeeping and clerical and office work; the use of consumable stores, water, lighting and power; the use and repair of staging's, scaffolding, workshops and stores, portable power tools, manual plant and tools; supervision by the contractor's staff, foremen and other supervisory personnel; and charges incidental to the foregoing.

**Appendix-D to Bid**

**SCHEDULE OF DAYWORK RATES**

**I. Labour**

<b>Item No.</b>	<b>Description</b>	<b>Unit</b>	<b>Nominal Quantity</b>	<b>Rate (Rs) in Figure</b>	<b>Rate (Rs) in Words</b>	<b>Extended Amount (Rs.)</b>
<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>
D101	Ganger	Hr	500			
D102	Labourer	Hr	5,000			
D103	Brick layer	Hr	500			
D104	Mason	Hr	500			
D105	Carpenter	Hr	500			
D106	Steel work Erector	Hr	500			
D107	Driver for vehicle up to 10 tons	Hr	1,000			
D108	Operator for excavator, dragline, shovel or crane	Hr	500			
D109	Operator for tractor, (tracked) with dozer blade or ripper	Hr	500			
<b>Sub Total</b>						
<p>Allow 12% percent of subtotal for Contractor's overhead, profit, etc, in accordance with Paragraph 3(b) of Day work Schedule</p> <p>Total for Day work: Labour: Rs. _____</p> <p>(Carried forward to Day work Summary): Rs. _____</p>						

## **Appendix-D to Bid**

### **Daywork Material**

4. The contractor shall be entitled to payment in respect of materials used for day work (except for materials for which the cost is included in the percentage addition to labour costs as detailed heretofore), at the basic rates entered by him in the Schedule of Day work Rates for materials together with an additional percentage payment on the basic rates to cover overhead charges and profit, as follows:
  - a) the basic rates for materials shall be calculated on the basis of the invoiced price, freight, insurance, handling expenses, damage, losses, etc., and shall provide for delivery to store for stockpiling at the site. The basic rates shall be stated in local currency but payment will be made in the currency or currencies expended upon presentation of supporting documentation;
  - b) the additional percentage payment shall be quoted by the bidder and applied to the equivalent local currency payments made under Sub-Para(a) above; and
  - c) the cost of hauling materials used on work ordered to be carried out as Day work from the store or stockpile on the site to the place where it is to be used will be paid in accordance with the terms for Labour and Constructional Plant in this Schedule.

**Appendix-D to Bid**

**II. Materials**

Item No.	Description	Unit	Nominal Quantity	Rate (Rs) in Figure	Rate (Rs) in Words )	Extended Amount (Rs.)
1	2	3	4	5	6	7
D201	Cement, ordinary Portland or equivalent in bags	M:Ton	200			
D202	Mild Steel reinforcing bar up to 16mm diameter to BS 4449 or equivalent	M:Ton	100			
D203	Fine aggregate for concrete	% cuft	400			
D204	Coarse aggregate for concrete	% cuft	400			
<b>Sub Total</b>						
<p>Allow 12% percent of subtotal for Contractor's overhead, profit, etc., in accordance with Paragraph 4(b) of Daywork Schedule</p> <p>Total for Day work: Materials: Rs. _____</p> <p>(Carried forward to Daywork Summary): Rs. _____</p>						

## **Appendix-D to Bid**

### **Day Work Constructional Plant**

5. The contractor shall be entitled to payments in respect of constructional plant already on site and employed on Day work at the basic rental rates entered by him in the Schedule of Day work Rates for constructional plant. The said rates shall be deemed to include complete allowance for depreciation, interest, indemnity and insurance, repairs, maintenance, supplies, fuel, lubricants, and other consumables, and all overhead, profit and administrative costs related to the use of such equipment. The cost of drivers, operators and assistants will be paid for separately as described under the section on Day work Labour.
6. In calculating the payment due to the Contractor for constructional plant employed on Day work, only the actual number of working hours will be eligible for payment, except that where applicable and agreed with the Engineer, the traveling time from the part of the site where the constructional plant was located when ordered by the Engineer to be employed on Day work and the time for return journey thereto shall be included for payment.
7. The basic rental rates for constructional plant employed on Day work shall be stated in Pakistani Rupees.

**Appendix-D to Bid**

**III. Constructional Plant**

Item No.	Description	Unit	Nominal Quantity	Rate (Rs.) in Figure	Rate Rs.) in Words	Extended Amount (Rs.)
1	2	3	4		5	6
D301	Excavator ,face shovel or dragline:  1.Up-to and including 1Cu.M. 2.Over 1 Cu.M to 2 Cu. M. 3.Over 2 Cu. M	Hr Hr Hr	500 400 100			
D302	Tractor (tracked) including bull or angle dozer:  1.Up-to and including 150 HP 2.Over 150 to 200 HP 3.Over 200 to 250 HP	Hr Hr Hr	500 400 200			
D303	Tractor with ripper:  1.Up-to and including 200 HP 2.Over 200 to 250 HP	Hr Hr	400 200			
<b>Subtotal</b>						
<p>Allow 12% percent of subtotal for Contractor's overhead, profit, etc, in accordance with Paragraph 3(b) of Day work Schedule</p> <p>Total for day work: Constructional Plant: Rs. _____</p> <p>(Carried forward to day work summary): Rs. _____</p>						

**Appendix-D to Bid**

**DAYWORK**

**Summary (Daywork)**

		<b>Amounts (Rs.)</b>
(i)	Total for daywork: Labour	_____
(ii)	Total for daywork: Materials	_____
(iii)	Total for daywork: Constructional Plant	_____
<b>Total for day work</b> (Carried forwarded to Summary Bill of Quantities)		

**Contractor**

**Project Director**  
**Superintending Engineer**  
**Chotiari Reservoir Project Circle Sanghar**

**Appendix-D to Bid**

**BILL OF QUANTITIES**

**SUMMARY**

<b>Bill No.</b>	<b>Description</b>	<b>Amount (Rs.)</b>
Bill No. 1:	EARTHWORKS FOR CANAL (RD-265+000 TO 314+000)	
Bill No. 2:	C.C. LINING OF MFLC FROM RD-296+500 TO 299+500 & 307+000 TO 314+000 (10 RDS)	
Bill No. 3:	CONSTRUCTION OF WATER COURSES (20) NOS	
Bill No. 4:	CONSTRUCTION OF DISTRICT ROAD BRIDGES (01) NOS	
	<b>Sub-Total of Bills:</b>	
	Daywork:	
	<b>Bid Price:</b>	
	<b>Amount in Words:</b>	

**Contractor**

**Project Director**  
**Superintending Engineer**  
**Chotiari Reservoir Project Circle Sanghar**

**Appendix-E to Bid**

**PROPOSED CONSTRUCTION SCHEDULE**

Pursuant to Sub-Clause 8.2 of the General Conditions of Contract, the works shall be completed on or before the date stated in Appendix-A to Bid. The bidder shall provide as Appendix-E to Bid, the Construction Schedule in the bar chart (CPM, PERT or any other to be specified herein) showing the sequence of work items and the period of time during which he proposes to complete each work item in such a manner that his proposed programme for completion of the whole of the works and parts of the works may meet procuring agency's completion targets in days noted below and counted from the date of receipt of Engineer's Notice to Commence (Attach sheets as required for the specified form of Construction Schedule):

<b>Description</b>	<b>Time for Completion</b>
1) Whole works	548 days

## **Appendix-F to Bid**

### **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.

## **Appendix-G to Bid**

### **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**

<b>Owned Purchased or Leased</b>	<b>Description of Unit (Make, Model, Year)</b>	<b>Capacity HP Rating</b>	<b>Condition</b>	<b>Present Location or Source</b>	<b>Date of Delivery at Site</b>	<b>Period of Work on Project</b>
<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>
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 6 of the Conditions of Contract shall provide description of his construction camp's facilities and staff housing requirements.

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

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

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

**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 that part of the work for which each is listed.

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

<b>Part of Works (Give Details)</b>	<b>Subcontractor (With Complete Address)</b>
<b>1</b>	<b>2</b>

**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 Quantities, expressed in Pakistani Rupees:

<b>Quarter/ Year / Period</b>	<b>Amounts (in thousands)</b>
<b>1</b>	<b>2</b>
<b>1<sup>st</sup> Quarter</b>	
<b>2<sup>nd</sup> Quarter</b>	
<b>3<sup>rd</sup> Quarter</b>	
<b>4<sup>th</sup> Quarter</b>	
<b>5<sup>th</sup> Quarter</b>	
<b>6<sup>th</sup> Quarter</b>	
<b>Bid Price</b>	

**Appendix-K to Bid**

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

(to be filled in by the bidder)

**Appendix-L to Bid**

**(INTEGRITY PACT)  
DECLARATION OF FEES, COMMISSION AND BROKERAGE ETC; PAYABLE BY  
CONTRACTORS.**

(for Contracts worth Rs. 10.00 million or more)

Contract No. \_\_\_\_\_ Dated \_\_\_\_\_

Contract Value: \_\_\_\_\_

Contract Title: \_\_\_\_\_

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

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

[name of Contractor] accepts full responsibility and strict liability 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 PA and has not taken any action or will not take any action to circumvent the above declaration, representation or warranty.

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

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

\_\_\_\_\_  
[Procuring Agency]

\_\_\_\_\_  
[Contractor]

BS-1

## 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 'Procuring Agency') 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 Procuring Agency; and

WHEREAS, the Procuring Agency 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 procuring agency, 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 procuring agency, notice of which extension(s) to the Surety is hereby waived;
- (2) that the bid security of unsuccessful bidders will be returned by the procuring agency 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 procuring agency 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 therefore, on the prescribed form presented to him for signature enter into a formal Contract with the said procuring agency 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 procuring agency 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 procuring agency, the said sum upon first written demand of the procuring agency (without cavil or argument) and without requiring the procuring agency to prove or to show grounds or reasons for such demand, notice of which shall be sent by the procuring agency by registered post duly addressed to the Surety at its address given above.

PROVIDED ALSO THAT the procuring agency 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 procuring agency 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:

1. \_\_\_\_\_

Signature \_\_\_\_\_

\_\_\_\_\_

Name \_\_\_\_\_

Corporate Secretary (Seal)

Title \_\_\_\_\_

2. \_\_\_\_\_

\_\_\_\_\_

Name, Title & Address

\_\_\_\_\_

Corporate Guarantor (Seal)

PS-1

**PERFORMANCE SECURITY  
(Bank Guarantee)**

Guarantee No. \_\_\_\_\_  
Executed on \_\_\_\_\_  
Expiry date \_\_\_\_\_

[Letter by the Guarantor to the Procuring Agency]

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

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 procuring agency) in the penal sum of the amount stated above for the payment of which sum well and truly to be made to the said procuring agency, 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 procuring agency'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 procuring agency, 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 defenses under the Contract, do hereby irrevocably and independently guarantee to pay to the procuring agency without delay upon the procuring agency's first written demand without cavil or arguments and without requiring the procuring agency to prove or to show grounds or reasons for such demand any sum or sums up to the amount stated above, against the procuring agency'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 Procuring Agency's designated Bank & Account Number.

PROVIDED ALSO THAT the procuring agency 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 procuring agency 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)

CA-1

## FORM OF CONTRACT AGREEMENT

THIS CONTRACT AGREEMENT (hereinafter called the "Agreement") made on the \_\_\_\_\_ day of \_\_\_\_\_ (month) 20\_\_\_\_ between \_\_\_\_\_ (hereafter called the "Procuring Agency") of the one part and \_\_\_\_\_ (hereafter called the "Contractor") of the other part.

WHEREAS the Procuring Agency is desirous that certain works, viz \_\_\_\_\_ should be executed by the Contractor and has accepted a bid by the Contractor for the execution and completion of such works and the remedying of any defects therein.

NOW this Agreement witnessed as follows:

1. In this Agreement words and expressions shall have the same meanings as are respectively assigned to them in the Conditions of Contract hereinafter referred to.
2. The following documents 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) Contract Data (Appendix-A to Bid);
  - (e) 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 procuring agency to the Contractor as hereinafter mentioned, the Contractor hereby covenants with the procuring agency to

execute and complete the works and remedy defects therein in conformity and in all respects with the provisions of the contract.

4. Procuring agency 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 Procuring Agency

(Seal)

(Seal)

Signed, Sealed and Delivered in the presence of:

Witness: \_\_\_\_\_

Witness: \_\_\_\_\_

\_\_\_\_\_  
(Name, Title and Address)

\_\_\_\_\_  
(Name, Title and Address)

**MG-1**

### **MOBILIZATION ADVANCE GUARANTEE**

Bank Guarantee No. \_\_\_\_\_ Date \_\_\_\_\_

WHEREAS \_\_\_\_\_ (hereinafter called the 'Procuring Agency') has entered into a  
Contract for \_\_\_\_\_

(Particulars of Contract)

with \_\_\_\_\_ (hereinafter called the "Contractor").

AND WHEREAS, the Procuring Agency has agreed to advance to the Contractor, at the Contractor's request, an amount of Rupees \_\_\_\_\_ (Rs \_\_\_\_\_ ) which amount shall be advanced to the Contractor as per provisions of the Contract.

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

AND WHEREAS, \_\_\_\_\_  
(Scheduled Bank in Pakistan)

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

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

Notice in writing of any default, of which the procuring agency shall be the sole and final judge, on the part of the Contractor, shall be given by the procuring agency 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)

\_\_\_\_\_  
Corporate Guarantor (Seal)

## INDENTURE FOR SECURED ADVANCES

(For use in cases in which is contract is for finished work and the contractor has entered into an agreement for the execution of a certain specified quantity of work in a given time).

This INDENTURE made the ..... day of .....  
..... 20..... BETWEEN (hereinafter called "the Contractor" which expression shall where the context so admits or implied be deemed to include his heirs, executors, administrators and assigns) of the one part and THE GOVERNOR OF SINDH (hereinafter called "the Government" of the other part).

WHEREAS by an agreement, dated (hereinafter called the said agreement, the contractor has agreed to perform the under-mentioned works (hereinafter referred to as the said work):-  
(Here enter (the description of the works).1

AND WHEREAS the contractor has applied to the .....  
.....for an advance to him of Rupees .....  
(Rs. .... ) on the security of materials absolutely belonging to him and brought by him to the site of the said works the subject of the said agreement for use in the construction of such of the said works as he has undertaken to execute at rates fixed for the finished work (inclusive of the cost of materials and labour and other charge) AND WHEREAS the Government has agreed to advance to the Contractor the sum of Rupees, (Rs. .... ) on the security of materials the quantities and other particulars of which are detailed in Part II of Running Account Bill (B). the said works signed by the contractor  
Fin R.Form.17.A

On ..... and on such covenants and conditions as are hereinafter contained and the Government has reserved to itself the option of marking any further advance or advances on the security of other materials brought by the Contractor to the site of the said works.

NOW THIS INDENTURE WTTNESSETH that in pursuance of the said agreement and in consideration of the sum of Rupees.....  
(Rs. ....) on or before the execution of these presents paid to the Contractor by the Government (the receipt whereof the Contractor doth hereby acknowledge) and of such further advances (if any) as may be made to him as aforesaid (all of which advances are hereinafter collectively referred to as the said amount) the Contractor doth hereby assign unto the Government the said materials by way of security for the said amount

And doth hereby covenant and agree with the Government and declare ay follow:

- (1) That the said sum of Rupees. .... RS.  
..... ) so advanced by the Government to the Contractor as aforesaid and all or any further sum or sums which may be advanced as aforesaid shall be employed by the contractor in or towards expending the execution of the said works and for no other purpose whatsoever.
- (2) That the materials detailed in the said Running Account Bill (B) which have been offered to and accepted by (he Government as security for the said amount are absolutely by the Contractors own property free from encumbrances of any kind and the Contractor will not make any application for or receive a further advance on the security of materials which are not absolutely his own property and free from encumbrances of any kind and the contractor hereby agrees, at all times, to indemnify and save harmless the

Government against all claims whatsoever to any materials in respect of which an advance has been made to him as aforesaid.

- (3) That the said materials detailed in the said Running Account Bill (B) and all other materials on the security of which any further advance or advances may hereafter be made as aforesaid (hereinafter called the said materials) shall be used by the Contractor solely in *the* execution of the said works in accordance with the directions of the Divisional Officer (hereinafter called the Divisional Officer) and in the terms of the said agreement.
- (4) That the Contractor shall make at his own cost all necessary and adequate arrangement for the proper watch, safe custody and protection against all risks of the said material and that until used in construction as aforesaid the said materials shall remain at the site of the said works in the Contractor's custody and at his own risk and on his own responsibility and shall at all times be open to inspection by (he Divisional Officer or any officer authorized by him. In the event of the said materials of any part (hereof being stolen, destroyed or damaged or becoming deteriorated in a greater degree than is due to reasonable use and wear thereof Contractor will forthwith replace the same with other materials of like quality or repair and make good the same as required by the Divisional Officer and the materials so brought to replace the said materials so repaired and made good shall also be considered as security for the said amount.
- (5) The said materials shall not on any account be removed from the site of the said works except with the written permission of the Divisional Officer or an officer authorized by him in that behalf
- (6) That the said amount shall be payable in full when or before the Contractor receives payment, from the Government of the price payable to him for the said works under the terms and provisions of the said agreement PROVIDED THAT if any intermediate payments are made to the contractor on account of work done then on the occasion of each such payment the Government will be at liberty to make a recovery from the Contractor's Bill for such payment by deducting there from in the value of the said materials (then actually used in the construction and in respect of which recovery has not been made previously the value for this purpose being determined in respect of each description of material at the rates at which the amount of the advances made under these presents were calculated.
- (7) that if the Contractor shall at any time make any default in the performance or observation in any respect of any of the terms and provisions of the said agreement or of these presents the total amount of the advance or advances that may still be owing to the Government shall immediately on the happening of such default be repayable by the Contractor to the Government together with interest thereon at twelve percent per annum from the date or respective dates of such advance or advances to the date of repayment and with all costs, charges, damages and expenses incurred by the Government in or for the recovery thereof or the enforcement of this security or otherwise by reason of (he default of the Contractor and any moneys so becoming due and payable shall constitute a debt due from the Contractor to the Government and the Contractor hereby covenants and agrees with the Government to repay and the same respectively to it accordingly.
- (8) That the Contractor hereby charges all the said materials with the repayment to the Government of the said sum of Rupees ..... (Rs. .... ) and any further sum or sums which may be advanced as aforesaid and all costs charges damages and expenses payable under these present PROVIDED ALWAYS and it is hereby agreed

and declared that not, withstanding anything in the said agreement and without prejudice to the powers contained therein if and whether the covenant for payment and repayment hereinbefore contained shall become enforceable and the money owing shall not be paid to accordingly.

Once there with the Government may at any time thereafter adopt all or any of following courses as it may deem best;

(a) Seize and utilize the said materials or any part thereof in the completion of the said works on behalf of the Contractor in accordance with the provisions in that behalf contained in the said agreement debiting the Contractor with the actual cost of effecting such completion the amount due in respect of advances under these presents and crediting the Contractor with the value of work done as he had carried it out in accordance with the said agreement and at the rates thereby provided. If the balance is against the Contractor he is to pay the same to the Government on demand.

(b) Remove and sell by public auction the seized materials or any part thereof and out of the moneys arising from the sale retain all the sums aforesaid repayable to the Government under these presents and pay over the surplus (if any) to the Contractor.

(c) Deduct all or any part of the moneys owing out of the security deposit or any sum due to the Contractor under the said agreement.

(9) That except as is expressly provided by the presents interest on the said advance shall not be payable.

(10) That in the event of any conflict between the provisions of these presents and the said agreement the provisions of these presents shall prevail and in the event of any dispute or difference arising over the construction or effect of these presents the settlement of which has not been hereinbefore expressly provided for the same shall be referred to the Superintending Engineer/Executive District Officer/Officer one grade higher to officer signed the agreement Circle whose..... decision shall be final and the provisions of the Arbitration Act 1940 for the time being in force so far as they are applicable shall apply to any such reference.

Signed, sealed and delivered by:

In the presence of

1st witness

SEAL

2nd witness

## **CONDITIONS OF CONTRACT**

The Conditions of Contract comprise two parts:

**PART I: GENERAL CONDITIONS OF CONTRACT**

(Conditions of Contract for Construction for Building and Engineering Works Designed By the Employer, Multilateral Development Bank Harmonised Edition, FIDIC, March 2006)

**PART II: PARTICULAR CONDITIONS OF CONTRACT**

*The successful bidder shall obtain a copy of the FIDIC Conditions of Contract and include as part of Contract Document. The copy can be obtained from:*

*FIDIC CASE POSTALE, CH-1215 Switzerland;*

*Tel. +41 22 799 49 00;*

*Fax; +41 22 799 49 01*

*E-mail: [fidic@fidic.org](mailto:fidic@fidic.org).*

## **PART I - GENERAL CONDITIONS OF CONTRACT**

## **Conditions of Contract for CONSTRUCTION**

**FOR BUILDING AND ENGINEERING WORKS DESIGNED BY THE  
EMPLOYER**

Multilateral Development Bank Harmonised Edition  
March 2006

### **General Conditions**

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FEDERATION INTERNATIONALE DES INGENIEURS-CONSEILS INTERNATIONAL  
FEDERATION OF CONSULTING ENGINEERS INTERNATIONALE VEREINIGUNG  
BERATENDER INGENIEURE FEDERACION INTERNACIONAL DE INGENIEROS  
CONSULTORES



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## GENERAL CONDITIONS

### GENERAL PROVISIONS

#### 1.1

##### Definitions

In the Conditions of Contract (“these Conditions”), which include Particular Conditions, Parts A and B, and these General Conditions, the following words and expressions shall have the meanings stated. Words indicating persons or parties include corporations and other legal entities, except where the context requires otherwise.

##### 1.1.1

The Contract 1.1.1.1 “Contract” means the Contract Agreement, the Letter of Acceptance, the Letter of Tender, these Conditions, the Specification, the Drawings, the Schedules, and the further documents (if any) which are listed in the Contract Agreement or in the Letter of Acceptance.

1.1.1.2 “Contract Agreement” means the contract agreement referred to in Sub- Clause 1.6 [Contract Agreement].

1.1.1.3 “Letter of Acceptance” means the letter of formal acceptance, signed by the Employer, of the Letter of Tender, including any annexed memoranda comprising agreements between and signed by both Parties. If there is no such letter of acceptance, the expression “Letter of Acceptance” means the Contract Agreement and the date of issuing or receiving the Letter of Acceptance means the date of signing the Contract Agreement.

1.1.1.4 “Letter of Tender” means the document entitled letter of tender or letter of bid, which was completed by the Contractor and includes the signed offer to the Employer for the Works.

1.1.1.5 “Specification” means the document entitled specification, as included in the Contract, and any additions and modifications to the specification in accordance with the Contract. Such document specifies the Works.

1.1.1.6 “Drawings” means the drawings of the Works, as included in the Contract, and any additional and modified drawings issued by (or on behalf of) the Employer in accordance with the Contract.

1.1.1.7 “Schedules” means the document(s) entitled schedules, completed by the Contractor and submitted with the Letter of Tender, as included in the Contract. Such document may include the Bill of Quantities, data, lists, and schedules of rates and/or prices.

1.1.1.8 “Tender” means the Letter of Tender and all other documents which the Contractor submitted with the Letter of Tender, as included in the Contract.

1.1.1.9 “Bill of Quantities”, “Daywork Schedule” and “Schedule of Payment Currencies” mean the documents so named (if any) which are comprised in the Schedules.

1.1.1.10 “Contract Data” means the pages completed by the Employer entitled contract data which constitute Part A of the Particular Conditions.

## 1.1.2

### Parties and Persons

1.1.2.1 “Party” means the Employer or the Contractor, as the context requires.

1.1.2.2 “Employer” means the person named as employer in the Contract Data and the legal successors in title to this person.

1.1.2.3 “Contractor” means the person(s) named as contractor in the Letter of Tender accepted by the Employer and the legal successors in title to this person(s).

1.1.2.4 “Engineer” means the person appointed by the Employer to act as the Engineer for the purposes of the Contract and named in the Contract Data, or other person appointed from time to time by the Employer and notified to the Contractor under Sub-Clause 3.4 [ Replacement of the Engineer ].

1.1.2.5 “Contractor’s Representative” means the person named by the Contractor in the Contract or appointed from time to time by the Contractor under Sub-Clause 4.3 [ Contractor’s Representative ], who acts on behalf of the Contractor.

1.1.2.6 “Employer’s Personnel” means the Engineer, the assistants referred to in Sub-Clause 3.2 [ Delegation by the Engineer ] and all other staff, labour and other employees of the Engineer and of the Employer; and any other personnel notified to the Contractor, by the Employer or the Engineer, as Employer’s Personnel.

1.1.2.7 “Contractor’s Personnel” means the Contractor’s Representative and all personnel whom the Contractor utilises on Site, who may include the staff, labour and other employees of the Contractor and of each Subcontractor; and any other personnel assisting the Contractor in the execution of the Works.

1.1.2.8 “Subcontractor” means any person named in the Contract as a subcontractor, or any person appointed as a subcontractor, for a part of the Works; and the legal successors in title to each of these persons.

1.1.2.9 “DB” means the person or three persons appointed under Sub-Clause 20.2 [ Appointment of the Dispute Board ] or Sub-Clause 20.3 [ Failure to Agree on the Composition of the Dispute Board ].

1.1.2.10 “FIDIC” means the Fédération Internationale des Ingénieurs-Conseils, the international federation of consulting engineers.

1.1.2.11 “Bank” means the financing institution (if any) named in the Contract Data.

1.1.2.12 “Borrower” means the person (if any) named as the borrower in the Contract Data.

## 1.1.3

### Dates, Tests, Periods and Completion

1.1.3.1 “Base Date” means the date 28 days prior to the latest date for submission and completion of the Tender.

1.1.3.2 “Commencement Date” means the date notified under Sub-Clause 8.1 [ Commencement of Works ].

1.1.3.3 “Time for Completion” means the time for completing the Works or a Section (as the case may be) under Sub-Clause 8.2 [ Time for Completion ], as stated in the Contract

Data (with any extension under Sub-Clause 8.4 [ Extension of Time for Completion ]), calculated from the Commencement Date.

1.1.3.4 “Tests on Completion” means the tests which are specified in the Contract or agreed by both Parties or instructed as a Variation, and which are carried out under Clause 9 [ Tests on Completion ] before the Works or a Section (as the case may be) are taken over by the Employer.

1.1.3.5 “Taking-Over Certificate” means a certificate issued under Clause 10 [ Employer’s Taking Over ].

1.1.3.6 “Tests after Completion” means the tests (if any) which are specified in the Contract and which are carried out in accordance with the Specification after the Works or a Section (as the case may be) are taken over by the Employer.

1.1.3.7 “Defects Notification Period” means the period for notifying defects in the Works or a Section (as the case may be) under Sub-Clause 11.1 [ Completion of Outstanding Work and Remedying Defects ], which extends over twelve months except if otherwise stated in the Contract Data (with any extension under Sub-Clause 11.3 [Extension of Defects Notification Period ]), calculated from the date on which the Works or Section is completed as certified under Sub-Clause 10.1 [ Taking Over of the Works and Sections ].

1.1.3.8 “Performance Certificate” means the certificate issued under Sub-Clause

1.1.3.9 “day” means a calendar day and “year” means 365 days.

11.9 [ Performance Certificate ].

#### 1.1.4

##### Money and Payments

1.1.4.1 “Accepted Contract Amount” means the amount accepted in the Letter of Acceptance for the execution and completion of the Works and the remedying of any defects.

1.1.4.2 “Contract Price” means the price defined in Sub-Clause 14.1 [ The Contract Price ], and includes adjustments in accordance with the Contract.

1.1.4.3 “Cost” means all expenditure reasonably incurred (or to be incurred) by the Contractor, whether on or off the Site, including overhead and similar charges, but does not include profit.

1.1.4.4 “Final Payment Certificate” means the payment certificate issued under Sub-Clause 14.13 [ Issue of Final Payment Certificate ].

1.1.4.5 “Final Statement” means the statement defined in Sub-Clause 14.11 [ Application for Final Payment Certificate ].

1.1.4.6 “Foreign Currency” means a currency in which part (or all) of the Contract Price

is payable, but not the Local Currency.

1.1.4.7 “Interim Payment Certificate” means a payment certificate issued under Clause 14 [ Contract Price and Payment ], other than the Final Payment Certificate.

1.1.4.8 “Local Currency” means the currency of the Country.

1.1.4.9 “Payment Certificate” means a payment certificate issued under Clause 14 [ Contract Price and Payment].

1.1.4.10 “Provisional Sum” means a sum (if any) which is specified in the Contract as a provisional sum, for the execution of any part of the Works or for the supply of Plant, Materials or services under Sub-Clause 13.5 [ Provisional Sums ].

1.1.4.11 “Retention Money” means the accumulated retention moneys which the Employer retains under Sub-Clause 14.3 [ Application for Interim Payment Certificates ] and pays under Sub-Clause

1.1.4.12 “Statement” means a statement submitted by the Contractor as part of an application, under Clause 14 [ Contract Price and Payment ], for a payment certificate.

14.9 [ Payment of Retention Money ].

#### 1.1.5

##### Works and Goods

1.1.5.1 “Contractor’s Equipment” means all apparatus, machinery, vehicles and other things required for the execution and completion of the Works and the remedying of any defects. However, Contractor’s Equipment excludes Temporary Works, Employer’s Equipment (if any), Plant, Materials and any other things intended to form or forming part of the Permanent Works.

1.1.5.2 “Goods” means Contractor’s Equipment, Materials, Plant and Temporary Works, or any of them as appropriate.

1.1.5.3 “Materials” means things of all kinds (other than Plant) intended to form or forming part of the Permanent Works, including the supply-only materials (if any) to be supplied by the Contractor under the Contract.

1.1.5.4 “Permanent Works” means the permanent works to be executed by the Contractor under the Contract.

1.1.5.5 “Plant” means the apparatus, machinery and vehicles intended to form or forming part of the Permanent Works, including vehicles purchased for the Employer and relating to the construction or operation of the Works.

1.1.5.6 “Section” means a part of the Works specified in the Contract Data as a Section (if any).

1.1.5.7 “Temporary Works” means all temporary works of every kind (other than Contractor’s Equipment) required on Site for the execution and completion of the Permanent Works and the remedying of any defects.

1.1.5.8 “Works” mean the Permanent Works and the Temporary Works, or either of them as appropriate.

### 1.1.6

#### Other Definitions

1.1.6.1 “Contractor’s Documents” means the calculations, computer programs and other software, drawings, manuals, models and other documents of a technical nature (if any) supplied by the Contractor under the Contract.

1.1.6.2 “Country” means the country in which the Site (or most of it) is located, where the Permanent Works are to be executed.

1.1.6.3 “Employer’s Equipment” means the apparatus, machinery and vehicles (if any) made available by the Employer for the use of the Contractor in the execution of the Works, as stated in the Specification; but does not include Plant which has not been taken over by the Employer.

1.1.6.4 “Force Majeure” is defined in Clause 19 [ Force Majeure ].

1.1.6.5 “Laws” means all national (or state) legislation, statutes, ordinances and other laws, and regulations and by-laws of any legally constituted public authority.

1.1.6.6 “Performance Security” means the security (or securities, if any) under Sub-Clause 4.2 [ Performance Security ].

1.1.6.7 “Site” means the places where the Permanent Works are to be executed, including storage and working areas, and to which Plant and Materials are to be delivered, and any other places as may be specified in the Contract as forming part of the Site..

1.1.6.8 “Unforeseeable” means not reasonably foreseeable by an experienced contractor by the Base Date.

1.1.6.9 “Variation” means any change to the Works, which is instructed or approved as a variation under Clause 13 [ Variations and Adjustments ].

### 1.2

Interpretation In the Contract, except where the context requires otherwise:

- (a) words indicating one gender include all genders;
- (b) words indicating the singular also include the plural and words indicating the plural also include the singular;
- (c) provisions including the word “agree”, “agreed” or “agreement” require the agreement to be record in writing;
- (d) “written” or “in writing” means hand-written, type-written, printed or electronically made, and resulting in a permanent record; and
- (e) the word “tender” is synonymous with “bid”, and “tenderer” with “bidder” and the words “tender documents” with “bidding documents”.

The marginal words and other headings shall not be taken into consideration in the interpretation of these Conditions.

In these Conditions, provisions including the expression “Cost plus profit” require this profit to be one-twentieth (5%) of this Cost unless otherwise indicated in the Contract Data.

### 1.3 Communications

Wherever these Conditions provide for the giving or issuing of approvals, certificates, consents, determinations, notices, requests and discharges, these communications shall be:

- (a) in writing and delivered by hand (against receipt), sent by mail or courier, or transmitted using any of the agreed systems of electronic transmission as stated in the Contract Data; and
- (b) delivered, sent or transmitted to the address for the recipient's communications as stated in the Contract Data. However:
  - (i) if the recipient gives notice of another address, communications shall thereafter be delivered accordingly; and
  - (ii) if the recipient has not stated otherwise when requesting an approval or consent, it may be sent to the address from which the request was issued.

### 1.4 Law and Language

The Contract shall be governed by the law of the country or other jurisdiction stated in the Contract Data.

The ruling language of the Contract shall be that stated in the Contract Data.

The language for communications shall be that stated in the Contract Data. If no language is stated there, the language for communications shall be the ruling language of the Contract.

### 1.5 Priority of Documents

The documents forming the Contract are to be taken as mutually explanatory of one another. For the purposes of interpretation, the priority of the documents shall be in accordance with the following sequence:

- (a) the Contract Agreement (if any), (b) the Letter of Acceptance,
- (c) the Tender,
- (d) the Particular Conditions - Part A, (e) the Particular Conditions - Part B, (f) these General Conditions,
- (g) the Specification, (h) the Drawings, and
- (i) the Schedules and any other documents forming part of the Contract.

If an ambiguity or discrepancy is found in the documents, the Engineer shall issue any necessary clarification or instruction.

## **PART II- PARTICULAR CONDITIONS OF CONTRACT**

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## **PART II - PARTICULAR CONDITIONS OF CONTRACT**

### **1.1 Definitions**

1.1.1.4 "Form of Bid" is synonymous with "Letter of Tender".

1.1.1.5 "Bid" is synonymous with "Tender".

1.1.1.10 "Contract Data" is synonymous with "Appendix-A to Bid - Special Stipulations".

The following paragraph is added:

1.1.1.11 "Programme" means the programme to be submitted by the contractor in accordance with

Sub-Clause 8.3 and any approved revisions thereto.

1.12.2 "Employer" is synonymous with "Procuring Agency" 1.1.2.9 "DB" is synonymous with "Committee".

1.1.3.1 Replace 28 days by 7 days in LCB and 15 days in ICB..

1.1.2.9 "DB" is synonymous with "Committee"

1.1.3.7 "Defects notification Period" is synonymous with "Defects liability Period".

1.15 Inspections and Audit by the Bank

Deleted

### **3.1 Engineer's Duties and Authority.**

The following paragraph is added after duties:

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

### **4.3 Contractor's Representative**

The following text is to be added after last line:

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

## **6.10 Records of Contractor's Personnel and 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-clause 7.9 is added in (GCC):

## **7.9 Use of Pakistani Materials and Services**

The contractor shall, so far as may be consistent with the contract, make the maximum use of materials, supplies, plant and equipment indigenous to or produced or fabricated in Pakistan and services, available in Pakistan provided such materials, supplies, plant, equipment and services shall be of required standard.

## **8.1 Commencement of Works**

The last para 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.

## **8.3 Programme**

The following text is to be added after [Commencement of Works]

The programme shall be submitted in the either form of:

- a) Bar Chart identifying the critical activities.

## **8.11 Prolonged Suspension**

Replace 84 days by 120 days.

## **13.1 Right to vary**

In the last line of Para, after the word "Variation", the word "in writing" is added.

### **13.3 Variation procedure**

In the tenth line, after the words “as soon as practicable” following is added: “and within a period not exceeding one-eighth of the completion time”

### **13.8 Adjustment for changes in cost**

This Clause is deleted in its entirety

### **14.1 The Contract Price**

Sub-para (d) is deleted.

### **14.2 Advance Payment**

The Text is deleted and replaced with following:

Advance Payment/Mobilization Advance shall be made available to the Contractor by the procuring agency on following conditions:

Mobilization Advance/Advance Payment

- (i) Mobilization advance up to 10 % of the Contract Price may be paid by the procuring agency to the Contractor on the works costing Rs2.5 million or above on following conditions:
  - a. on submission by the Contractor of a mobilization advance guarantee for the full amount of the advance in the specified form, from a Scheduled Bank in Pakistan, acceptable to the procuring agency;
  - b. contractor shall pay interest on the mobilization advance at the rate of 10% per annum on the advance; and
- (ii) This Advance including the interest shall be recovered in 5 equal installments from the 5 R.A bills and in case the number of bills is less than 5 then 1/5 of the advance inclusive of the interest thereon shall be recovered from each bill and the balance together with interest be recovered from the final bill. It may be insured that there is sufficient amount in the final bill to enable recovery of the Mobilization Advance.

### **14.5 Plants and Materials intended for Works**

Add the following paragraph as sub-clause 14.5 (d) for Secured Advance on non – perishable materials and sub-clauses (a), (b) and (c) will be applicable for plants only:

- (I) The Contractor shall be entitled to receive from the procuring agency Secured Advance against an INDENTURE BOND in Public Works Account Form No.31 (Fin. R. Form No.

2) acceptable to the procuring agency of such sum as the Engineer may consider proper in respect of non-perishable materials brought at the site but not yet incorporated in the Permanent Works provided that:

- (i) The materials are in accordance with the specifications for the permanent works;
- (ii) Such materials have been delivered to the site and are properly stored and protected against loss or damage or deterioration to the satisfaction and verification of the Engineer/Assistant Engineer but at the risk and cost of the Contractor;
- (iii) The Contractor's records of the requirements, orders, receipts and use of materials are kept in a form approved by the Engineer, and such records shall be available for inspection by the Engineer;
- (iv) The Contractor shall submit with his monthly statement the estimated value of the materials on site together with such documents as may be required by the Engineer for the purpose of valuation of materials and providing evidence of ownership and payment therefore;
- (v) Ownership of such materials shall be deemed to vest in the procuring agency and these materials shall not be removed from the site or otherwise disposed of without written permission of the procuring agency;
- (vi) The sum payable for such materials on site shall not exceed 75 % of the (i) landed cost of imported materials, or (ii) ex-factory / ex-warehouse price of locally manufactured or produced materials, or (iii) market price of stands other materials;
- (vii) Secured Advance shall not be allowed unless and until the previous advance, if any, is fully recovered;
- (viii) Detailed account of advances must be kept in part II of running account bill or a separate statement; and
- (ix) Secured Advance may be permitted only against materials/quantities anticipated to be consumed / utilized on the work within a period of 3 months from the date of issue of secured advance and in no case for full quantities of materials for the entire work/contract.

(II) Recovery of Secured Advance:

Secured Advance paid on non-perishable materials to the Contractor under the above provisions shall be effected from the monthly payments on actual consumption basis, but not later than period specified in the rules not more than three months (even if unutilized);

#### **14.8 Delayed Payment**

Second Para is replaced with following text:

In the event of the failure of the Procuring Agency to make the payment within the time stated, the procuring agency shall pay to the contractor in case of ICB contracts only, the compensation at rate of KIBOR+2% per annum in local currency and Libor+1% for foreign currency, upon all sums to be paid from the date of which the same would have been paid.

#### **15.2 Termination by Employer**

The following Para is added at the end of the sub-clause:

Provided further, that in addition to the action taken by the procuring agency against the Contractor under this Clause, the procuring agency 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.

#### **15.6 Corrupt and fraudulent Practices.**

The following text is to be added as 3rd paragraph:

Successful Contractor has to provide Integrity Pact (for contracts worth Rs.10.0 million and above).

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 procuring agency 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 procuring agency 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 15.2 & 15.5 and the payment under Sub-Clause 15.4 shall be made after having deducted the amounts due to the procuring agency under Sub-Para (a) and (c) of this Sub-Clause.

#### **16.4 Payment on Termination**

Sub-paragraph (c) is deleted.

#### **17.3 Employer's/ Procuring Agency's Risks**

Sub-Clause 17.3 (h) is deleted.

The following text is added in Clause 18.1 (GCC):

#### **18.1 General Requirements for Insurance**

The contractor shall be obliged to place all insurances relating to the contract (including, but not limited to, the insurances referred to in Clauses 18.1,18.2,18.3,18.4) with Insurance Company having at least AA rating from PACRA/JCR in favour of the Employer//Procuring Agency valid for a period 28 days after beyond the Bid Validity date.

Costs of such insurances shall be borne by the contractor.

#### **19.6 Optional Termination, Payment and release by the Employer**

Sub-clauses (c), (d) and (e) are deleted.

#### **20.6 Arbitration**

Text will be replaced as under;

Any dispute in respect of which:

- (a) the decision, of the Dispute Board has not become final and binding pursuant to sub-clause 20.2, and
- (b) amicable settlement has not been reached within the period stated in sub-clause 20.5, shall be finally settled, under the provisions of the Arbitration Act, 1940 as amended or any statutory modification/Rules of Conciliation And Arbitration PEC Islamabad or re-enactment thereof for the time being in force.

The place of arbitration shall be Karachi in Sindh Province.

# **SPECIFICATIONS**

# SPECIFICATIONS

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## **SPECIFICATIONS**

### **1. THE SCOPE OF WORK**

The Works are part of the project for water supply to Thar Coal. The Package Vb involves works in Makhi Farash Link Canal Project from RD 208+000 to 265+000 including remodeling and lining of distributaries / minors originating from within this reach, as summarized below:

#### **PACKAGE VB: WORKS FROM RD 265+000 TO 314+030**

- Makhi Farash Link Canal
  - o Earth Work in Length of 31+500 RDs
  - o CC lining of Makhi Farash Link Canal (RDs 296+50 to 314+030)
- Structures
  - o Road Bridge (297+551 RDs)
  - o Water Course 20 Nrs.

**Table-SP1: LIST OF REFERENCE TO PWD SPECIFICATIONS**

Sr.No.	Description	References of Specification	Reference Book
1	Jungle clearance and removing within 100ft (light) Provisional Quantity (page NO.100 item No.4 (a)) from SCR	17.1 (a) Whichever is applicable	Schedule of Rates Volume I, Part II (Specifications for Execution of works) 1967
2	Cutting removing trees within distance of 100ft Provisional Quantity . (p-100/1-2(b) SCR 2012)	17.1 (a) Whichever is applicable	Schedule of Rates Volume I, Part II (Specifications for Execution of works) 1967
3	Uprooting strumps & removing within 100ft.from 2" to 6" grith Provisional Quantity (page No.100 item No.3)	17.1 (a) Whichever is applicable	Schedule of Rates Volume I, Part II (Specifications for Execution of works) 1967
4	ploughing 3 items (page 102 item 41)	17.1 to 17.5 Whichever is applicable	Schedule of Rates Volume I, Part II (Specifications for Execution of works) 1967
5	earth work excavation in irrigation channels drains etc. Dressed to design section grades and profiles excavated material disposed off and dressed within 50ft lead (page 1, item No.5)	17.1 to 17.5 Whichever is applicable	Schedule of Rates Volume I, Part II (Specifications for Execution of works) 1967
6	Extra for wet earth Provisional Quantity (page No.4, item No.15)	17.1 to 17.5 Whichever is applicable	Schedule of Rates Volume I, Part II (Specifications for Execution of works) 1967
7	Remanding of earth work (b) Upto 50' (page No.2 item No.9(b))	17.1 to 17.5 Whichever is applicable	Schedule of Rates Volume I, Part II (Specifications for Execution of works) 1967
8	Borrow pit excavation undressed lead upto 100ft (a) ordinary soil, (page No.1, item 3a)	17.1 to 17.5 Whichever is applicable	Schedule of Rates Volume I, Part II (Specifications for Execution of works) 1967
9	Extra for every 50ft additional lead or part therof. (a) For earth work (soft, ordinary, hard and v.hard) item No.8(a) page No.2	17.1 to 17.5 Whichever is applicable	Schedule of Rates Volume I, Part II (Specifications for Execution of works) 1967
10	Carriage of 100 cft/5 tons of all materials like stone, aggregate. Spawl, coal, lime, surki etc B.G rail fasteningpoints and crossing bridge girders. Pipes sheets rail, MS bars etc or 1000 Nos.bricks 10"x5"x3" or 1000 Nos. tiles 12"x6"x2" or 150 cft timber 100 moulds of fuel wood by truck or any other means owned by the contractor 2 miles. (Page No. 1/1-1 schedule of carriage)	16	Schedule of Rates Volume I, Part II (Specifications for Execution of works) 1967
11	Earth work compaction soft ordinary hard soil (b) laying earth work in 6" layers leveling dressing & watering for compaction etc complete. (page No.4, item No.13(b))	17.1 to 17.5 Whichever is applicable	Schedule of Rates Volume I, Part II (Specifications for Execution of works) 1967
12	Earth work compaction by sheep feet roller and power roller with optimum moisture content (a) for 85 modified AASHO density (Page No. 2 item 7c highways schedule)	17.1 to 17.5 Whichever is applicable	Schedule of Rates Volume I, Part II (Specifications for Execution of works) 1967
13	Dressing and levelling of earth work to design section etc complete (ordinary or hard soil). S I No.11 (b) p-3	17.1 to 17.5 Whichever is applicable	Schedule of Rates Volume I, Part II (Specifications for Execution of works) 1967
14	Formation dressing and preparing sub-grade (ch;12 p-74 item no.1)	28.1 to 28.3 Whichever is applicable	Schedule of Rates Volume I, Part II (Specifications for Execution of works) 1967
	a) In Bed		
15	Cement plaster 1-1/2" thick ratio 1:6 (ch: 12 p-74 item-	28.1 to 28.3 Whichever is applicable	Schedule of Rates Volume I, Part II (Specifications for Execution of works) 1967
	a) In Bed		
16	Cement concrete lining ratio 1:2:4 (ch: 4 p-18 item-11	28.1 to 28.3 Whichever is applicable	Schedule of Rates Volume I, Part II (Specifications for Execution of works) 1967
	a) In Bed		
	b) On slope		

17	Errerction and removal of centering for RCC or C.C	20.1	Schedule of Rates Volume I, Part II (Specifications for Execution of works) 1967
	a) Horizontal (Bed)		
	b) Vertical (slope)		
18	Filling expansion joints 1" wide with bitumen sand and saw dust. (R.A).	20.1 (26)	Schedule of Rates Volume I, Part II (Specifications for Execution of works) 1967
19	Elastomeric sealant (R.A)	20.1 (26)	Schedule of Rates Volume I, Part II (Specifications for Execution of works) 1967
20	Excavation in foundation of buildings, bridges and other structure lie dag belling, dressing, refilling around the structures with excavated earth watering and ramming lead upto one chain and lift upto 5ft (in ordinary soil) (1/18 (b) P-4)	17.1 to 17.5 Whichever is applicable	Schedule of Rates Volume I, Part II (Specifications for Execution of works) 1967
21	Preparing watering and ramming surface for laying	20.1	Schedule of Rates Volume I, Part II (Specifications for Execution of works) 1967
	(a) Horizontal floor		
	(b) Glacis & crest		
	(c) Inverted filter (4/18 P-17)		
22	C.C plain including placing, compacting, finishing and curing complete (including screening and washing of stone aggregate without shuttering). Ratio 1:4:8 (4/5 (i) P-15)	20.1	Schedule of Rates Volume I, Part II (Specifications for Execution of works) 1967
23	C.C plain including placing, compacting, finishing and curing complete (including screening and washing of stone aggregate without shuttering). Ratio 1:2:4 (4/5 (f) P-15)	20.1	Schedule of Rates Volume I, Part II (Specifications for Execution of works) 1967
24	Precast cement concrete solid or face block (1:2:4) i/c cost of templates (4/9 P-16)	20.4	Schedule of Rates Volume I, Part II (Specifications for Execution of works) 1967
25	Erecting and fixing in position precast cement concrete or stone slab in roof or lintels etc. lift upto 20ft i/c all charge (4/6 (c) P-16)	20.4	Schedule of Rates Volume I, Part II (Specifications for Execution of works) 1967
26	R.C.C work in all labour and material except the cost of steel reinforcement and its labour for bending and binding which will be paid separately. This rate also i/c all kind of forms, moulds, lifting, shuttering, curing, rendering and finishing the exposed surface.(i/c screening and washing of shingle)	20.4	Schedule of Rates Volume I, Part II (Specifications for Execution of works) 1967
	(a) RCC work in roof slabs, beams, column, rafts, lintels and other structural members laid in situ or pre-cast laid in position complete in all respects.		
	(i) Ratio 1:2:4, 90lbs cement, 2cft sand, 4cft shingle 1/4" to 1/2" gauge. (4/6 (a)(1) p-16)		
27	fabrication of mild steel r/f for cement concrete ilc cutting, bending, laying in position, making joints 2nd fastening ilc cost of binding wire.(also include removal of rust from bars) (b) using deformed bars grade 60. (4/8 (b) p-16)	20.4	Schedule of Rates Volume I, Part II (Specifications for Execution of works) 1967
28	plain galvanized iron sheet flashing of 22 gauge.	Chapter 10 Iron Work	Schedule of Rates Volume I, Part I (Specifications for Materials of Construction) 1964
29	supply and fixing embedding F.L pipe 4" dia perforated with holes of 1/8" dia cast iron pipe in gauge well at require depth as direct	Chapter 10 Iron Work	Schedule of Rates Volume I, Part I (Specifications for Materials of Construction) 1964

30	supply and fixing embedding G.L pipe 4"dia perforated with holes of 1/8" dia @ 1/2"c/c surrounded with granted shingle of required size & 1ft depth around in its full length one end cut with 1:1 slope and upon to water side and other closed (N) rate	Chapter 10 Iron Work	Schedule of Rates Volume I, Part I (Specifications for Materials of Construction) 1964
31	providing and construction of expansion joints with 9"wide PVC waterstop M.S dowels and filling the joints with pre-modeled joint filter and elastic joint sealer as per drawing details, specification and as directed by the engineer.	20.1 (27)	Schedule of Rates Volume I, Part II (Specifications for Execution of works) 1967
32	fixing enamelled iron guages flush area masonry i/c cost of hooks.	Chapter 10 Iron Work	Schedule of Rates Volume I, Part I (Specifications for Materials of Construction) 1964
33	Supply and fixing temeucature boards of marble slab for hydraulic gate of size 2"x 4": duly careed as directed in fancy pillar of required size and place etc complete i/c cost of the pillar.		
34	designing fabrication manufacturing and erection of radial gates of MS sheet 8 mm.girders, channel angles of required size with operational device viz trusses such beams winches steel wire rope platform etc paining oil 1g i/c cortage of fabricated manufactured component from site of work etc. complete with one floor warranty period of operation.	Chapter 10 Iron Work	Schedule of Rates Volume I, Part I (Specifications for Materials of Construction) 1964
35	Formation dressing and preparing sub-grade on slope.	28.1 to 28.3 Whichever is applicable	Schedule of Rates Volume I, Part II (Specifications for Execution of works) 1967
36	stone pitching i/c sub-base with hammer dressed stone laid in courses i/c carriage of material with in 3 chains	22.2 to 22.4 Whichever is applicable	Schedule of Rates Volume I, Part II (Specifications for Execution of works) 1967
37	stone filling dry hand packed as filing behind retaining walls or in pitching and apron.	22.14	Schedule of Rates Volume I, Part II (Specifications for Execution of works) 1967
38	boring for tube well in all water bearing soils from ground level upto 100ft: or 30.50 meter depth i/c sinking and with drawing of casing pipe (e) 200 mm (8"dia).(S.I No.1 (e) p.No.41 PHE)	Chapter 37 Installation of Tube wells	This Specification
39	Supply and fixing M.S bail plug (S.I No.8b p.No.43 PHE)	Chapter 37 Installation of Tube wells	This Specification
40	Supplying & fixing local make coir strainers of approved quality complete (b) for 150mm (6"dia). (S.I No.10 (b) p.No.44 PHE)	Chapter 37 Installation of Tube wells	This Specification
41	Supplying & installing M.S blind pipe 3/16"(5mm) thick of best and approved quality and make i/c necessary socket etc complete. (S.I No.11 (b) p.No.44 PHE)	Chapter 37 Installation of Tube wells	This Specification

42	Full hire charges of the pumping set per day inclusive of the wage of driver and assistant fuel or electric energy plate forms required for placing pumps etc at lower depth with suction and delivery pipe for pumping out water found at various depth from trenches i/c the cost of erection and dismantling after completion of the job. (i) Hire charges of pumping set of 12 to 25 HP pumping out water (ten pumps will remain stand by)	Job / No Specification	This Specification
43	note:- For working the pump beyond 8 hours the following payment shall be made. The hire of the pumping set itself being for 24 hours. (i) for pumping set of upto P-Hour 12 to 25 H.P	Job / No Specification	This Specification
44	Provision of sheet piling rig on site and removing on completion L.S	29.1 to 29.3 Whichever is applicable	Schedule of Rates Volume I, Part II (Specifications for Execution of works) 1967
45	sheet piling/ Arcelor Mittal wt-66.1 kg per meter of single pile.	29.1 to 29.3 Whichever is applicable	Schedule of Rates Volume I, Part II (Specifications for Execution of works) 1967
46	construction of pre-stressed concrete 268ft bridge "AA" loading 4ft footpath on one side and 24ft road way with 8"curb on other side including soil investigation, loading of test piles.prepration of designing making , drawing and designing firm pilling work complete in all respect of construction of pre-stressed girders in all respect loading of girder in position aixl fixing fiber bearing pads of approved quality complete in all respect. construction of deck slab, foot path, curb railing included providing expansion of testing of bridge structure as per satisfaction of the engineers.	20.4 / Pre-Stressing	Schedule of Rates Volume I, Part II (Specifications for Execution of works) 1967
47	preparing sub base course by supplying and spreading stone metal 1-1/2"-2" in gauge of approved quality from. Approve quantity in require thickness of 6" of 6" in two layer 3" each to proper camber and grades including hand packing filling voids with 20 cft pit/canal sand Non plastic quarry fine of approved quality and gauge from approved source watering and compacting to achieve 98-100% density as per modified AASHO specification.	Chapter 28 Roads	Pakistan Public Works Department Specifications For Building And Road Works 1973
48	laying brick on edging including supply of 9x4-1/2x3" . 1st class burnt bricks from klin to site of work excavation for laing edging with small side parallel to road .rate include all cost of material T&P upto site of work etc complete.	21.1 to 21.4 Whichever is applicable	Schedule of Rates Volume I, Part II (Specifications for Execution of works) 1967
49	preparing base course including supplying and spreading stone metal of approved quality properly graded to max size 1-1/2 in required thickness to proper camber and grade including supplying and spreading 15 cft screening and non plastic quarry fine filling depression with stone metal after initial rolling including watering and compaction the same so as to achieve 100% density as per modified AASHO specification. Rate includes providing and using tremplates.camber plates, screens form as directed.(rate include all cost of material T&P and carriage upto 3 chains) (p-4/1-10)	Chapter 28 Roads	Pakistan Public Works Department Specifications For Building And Road Works 1973

50	providing 3 coats of the surface dressing on new of existing surface with (40+25+14)=79 lbs of bitumen per %sft of 80/100 penetration from NOR Karachi and (5.5+2.75+15)=9.75 cft. Crush basin size 3/4-1/2, 1/2-3/8, & 3/8-1/6 inches respectively including rolling with power roller etc complete (each coat will be provided and rolled separately)	Chapter 28 Roads	Pakistan Public Works Department Specifications For Building And Road Works 1973
51	cement concrete plain i/c finishing and curing complete i/c screening and eashing of stone aggregate without shuttering. Ratio 1:3:6 (P-16 item no. 5 h)	20.1	Schedule of Rates Volume I, Part II (Specifications for Execution of works) 1967
52	Pacca brick work in foundation and plinth in (a) cement sand mortar ratio 1:4 (sr .4 c page no.20)	21.1 to 21.4 Whichever is applicable	Schedule of Rates Volume I, Part II (Specifications for Execution of works) 1967
53	pacca brick work other than building.(p no.22 item no 7 i©)	21.1 to 21.5 Whichever is applicable	Schedule of Rates Volume I, Part II (Specifications for Execution of works) 1967
54	cement plaster upto ratio 1:4 upto 12' height 3/4" thick. (S.R.G 2012 S.No. 11 (c) P.No.52)	25.1 to 25.6 Whichever is applicable	Schedule of Rates Volume I, Part II (Specifications for Execution of works) 1967
55	providing , laying RCC pipe & collar of class "C" and fixing in trenches i/c cutting, fitting and jointing with maxphait composition and cement mortar (1:1) i/c testing with water to head of 45 meter or 150 ft (12"dia) S.I.No.3 (e) p.No.16 PHE	Chapter .14 pipes	Schedule of Rates Volume I, Part I (Specifications for Materials of Construction) 1964
56	filling and compacting soil, earth and boulder behind retaining walls (i/c excavation of soil and lead upto 50ft) S.I.No.23 P.No.4	17.1 to 17.5 Whichever is applicable	Schedule of Rates Volume I, Part II (Specifications for Execution of works) 1967
57	construction of groynes double upto 10ft height average lead one mile.	30.1	Schedule of Rates Volume I, Part II (Specifications for Execution of works) 1967
58	carriage of pilchi sarkanda or farash or brush wood by boat or by road (lead 03 miles)	30.1	Schedule of Rates Volume I, Part II (Specifications for Execution of works) 1967
59	pointing flush on stone work (b) cement sand mortar ratio 1:3 S.I.No.20(b) p.No.52	25.8	Schedule of Rates Volume I, Part II (Specifications for Execution of works) 1967
60	providing , laying RCC pipe & collar of class "A" and fixing in trenches i/c cutting, fitting and jointing with maxphait composition and cement mortar (1:1) i/c testing with water to head of 4.5 meter or 15 ft PHE P-15 item No.1(g)	Chapter 37 Installation of Tube wells	Schedule of Rates Volume I, Part II (Specifications for Execution of works) 1967
61	Cartage of RCC pipes any class ASTM/restressed with collar by mechanical transport i/c loading unloading and stacking at site. (PHEW Sch:P-1 item no.2 (f))	Chapter 37 Installation of Tube wells	Schedule of Rates Volume I, Part II (Specifications for Execution of works) 1967
62	Designing fabrication/manufacturing & erection of double screw vertical gate of MS sheets 8mm, girders, channel angles of required size with operational device and platform etc painting only i/c cartage of fabricated/manufactured components from W/shop to site of work etc complete with one year period of operation (Market rate)	Chapter 10 Iron Work	Schedule of Rates Volume I, Part I (Specifications for Materials of Construction) 1964
63	Earth work compaction by sheep feet roller and power roller with optimum moisture content (a) for 95% modified AASHO density (Page No. 2/1-4(a))	17.1 to 17.5 Whichever is applicable	Schedule of Rates Volume I, Part II (Specifications for Execution of works) 1967
64	Erection and removal and centering for RCC or plain CC work of Deodar Wood (2nd class) (ii)Vertical (4/19 a(ii) p-17)	20.4	Schedule of Rates Volume I, Part II (Specifications for Execution of works) 1967

## **2. SITE DATA**

### **2.1 Location and Access**

Makhi Farash Link Canal Project (Package-Vb) starts from 265+000 and ends at RD 314+030 near Khipro. The project is located in District Sanghar, in province of Sindh.

The project area is surrounded by the irrigated land comprises of silty sand and clay. The project site is partial lined canal and partial unconstructed. The Lower Nara Canal is perennial earthen canal.

### **2.2 Climate**

The climate of Sindh Province is arid and hot. However, winter months of November to January are mildly cold.

The climate here is "desert." There is virtually no rainfall all year long in Sanghar. This climate is considered to be BWh according to the Köppen-Geiger climate classification. The average annual temperature is 27.3 °C in Sanghar. About 215 mm of precipitation falls annually. June is the warmest month of the year. The temperature in June averages 37.0 °C. January is the coldest month, with temperatures averaging 15.0 °C.

## **3. GENERAL REQUIREMENTS**

### **3.1 Drawings**

#### **3.1.1 Engineer's Drawings**

The Tender Drawings included in the Tender Documents and which will form part of the Drawings to be used for the construction of the Works, show the work to be carried out in accordance with the Contract in sufficient detail for the Contractor to fully plan his activities.

The Engineer may issue, The Tender Drawings mentioned as above as construction drawings and any additional construction drawings when required for further details, clarifications or modifications.

The Contractor shall be required to perform the work in accordance with such further drawings and specifications at the applicable rates tendered in the priced Bill of Quantities for such work or work of a similar nature. Although the Drawings may be prepared to scale, work shall be based upon dimensions shown on the Drawings and not on dimensions scaled from the Drawings. The Drawings when read in conjunction with the specifications and instructions that may be issued from time to time by the Engineer, will show sufficient dimensions, specific details and typical details to define the various features of the work but the details necessary for

the construction of any part of the work may have to be deduced from several Drawings. Revision of any drawing details considered essential shall be provided by the Engineer prior to carrying out of the specific works.

Two (2) full size prints of the Drawings mentioned above and one PDF soft copy will be issued by the Engineer to the Contractor in accordance with the construction programme required under the provisions of these Specifications Section 3.4.2 – Contractor's Construction Programme.

On receipt of these Drawings, the Contractor shall check them carefully and advise the Engineer in writing of any discrepancies, errors or omissions and full instructions will be furnished to the Contractor should any discrepancies, errors or omissions be found.

### **3.1.2 Contractor's Drawings**

Based on Engineer's construction drawings Contractor shall prepare working drawings based on actual survey and site conditions showing further details and sections.

The working drawings and shop drawings required to be submitted to the Engineer for approval in accordance with Specification, shall consist of one printable soft copy, three prints and copies of design calculations, specification and parts catalogues in duplicate. All drawings submitted for approval shall be signed, checked and approved by the Contractor prior to submission. The drawings shall be signed by a competent professional engineer in the relevant discipline responsible for the design and shall be submitted in accordance with provision of these Specifications' Section 3.2 - Submittal Procedures.

Each drawing submitted by the Contractor shall be in ISO paper size A3.

Within thirty (30) days after receiving such designs, design calculations, parts catalogues, specifications and detailed drawings, the Engineer shall signify his approval or request modifications. The Contractor shall modify the designs and drawings as may be required by the Engineer.

The work shall be constructed in accordance with the approved drawings, and a copy of such drawings shall be kept on the Site at all times until the completion of the Contract. All drawings on which changes are made shall have the revisions clearly marked.

Construction, fabrication or manufacture of any portion of the Works shall not commence until the design and drawings have been approved and thereafter no change shall be made to any drawings so approved without the permission of the Engineer. Permission to make such changes shall be requested by sending one (1) soft copy and two print of each revised drawing for approval, explaining the reason for such a change.

Drawings showing the proposed method of construction and other drawings additional to those referred to herein above required by the Technical Specifications shall also be submitted by the Contractor to the Engineer for approval.

Any additional drawings, which the Contractor requires to interpret the Drawings to construct the Works or in compliance with this Sub-Section shall be prepared by the Contractor, and all costs shall be borne by the Contractor. No separate payment will be made for working, shop and lift drawings submitted by the Contractor.

### **3.1.3 Availability of CAD Drawing Files**

After award and upon request, the electronic "Computer-Aided Drafting and Design (CADD)" drawing files will only be made available to the Contractor for use in preparation of Contractor's drawings and construction data related to the referenced contract subject to the following terms and conditions.

Data contained on these electronic files shall not be used for any purpose other than as a convenience in the preparation of Contractors construction drawings and data for the referenced project. Any other use or reuse shall be at the sole risk of the Contractor and without liability or legal exposure to the Client. The Contractor shall make no claim and waives to the fullest extent permitted by law, any claim or cause of action of any nature against the Client, its agents or sub consultants that may arise out of or in connection with the use of these electronic files.

The Contractor shall, to the fullest extent permitted by law, indemnify and hold the Client harmless against all damages, liabilities or costs, including reasonable attorney's fees and defence costs, arising out of or resulting from the use of these electronic files.

These electronic CADD drawing files are not construction documents. Differences may exist between the CADD files and the corresponding construction documents. The Client makes no representation regarding the accuracy or completeness of the electronic CADD files, nor does it make representation to the compatibility of these files with the Contractors hardware or software. In the event that a conflict arises between the signed and sealed construction documents prepared by the Client and the furnished CADD files, the signed and sealed construction documents shall govern. The Contractor is responsible for determining if any conflict exists. Use of these CADD files does not relieve the Contractor of duty to fully comply with the contract documents, including and without limitation, the need to check, confirm and coordinate the work of all contractors for the project.

If the Contractor uses, duplicates and / or modifies these electronic CADD files for use in producing construction drawings and data related to this contract, all previous indicia of ownership (seals, logos, signatures, initials and dates) shall be removed.

## **3.2 Submittal Procedures**

### **3.2.1 Scope**

The Contractor is required to submit various documents and materials for Engineer's review,

approval and information in accordance with this Section and other Sections of the Specifications. Requirements of this Section apply to, and are a component part of, each Section of the Specifications.

### **3.2.2 Submittals General**

Standard approved transmittal form shall be used to transmit each submittal.

Submittal description may include drawings, diagrams, layouts, schematics, descriptive literature, illustrations, schedules, performance and test data, and similar materials to be furnished by the Contractor explaining in detail specific portions of the work required by the contract.

The following items are descriptions of data to be submitted for the Project. The requirements to actually furnish the applicable items will be called out in each Specification.

#### **Preconstruction Submittals**

Submittals required prior to the start of the next major phase of the construction on a multi-phase contract. Schedules or tabular list of data or tabular list including location, features, or other pertinent information regarding products, materials, equipment, or components to be used in the work, submitted prior to contract notice to proceed or next major phase of construction.

#### **Shop Drawings**

Submittals which graphically show relationship of various components of the work, schematic diagrams of systems, layout of particular elements, connections, and other relational aspects of the work.

#### **Product Data**

Data composed of catalogue, brochures, circulars, Specifications and product data, and printed information in sufficient detail and scope to verify compliance with requirements of the contract documents.

#### **Samples**

Samples, including both fabricated and unfabricated physical examples of materials, products, and units of work as complete units or as portions of units of work.

#### **Design Data**

Design calculations, mix design analyses, or other data, written in nature, and pertaining to a part of the work.

#### **Test Reports**

Written reports of a manufacturer's findings of his product during field inspections, attesting that the products are installed in accordance with the manufacturer's installation instructions, shop drawings, or other manufacturer's requirements. Written reports by the Contractor or his subcontractors including daily logs reporting on the progress of daily activities or attesting that the work has been installed in accordance with the contract plans and Specifications.

### **Certificates**

A document, required of the Contractor, or through the Contractor by way of a supplier, installer or manufacturer, the purpose of which is to further the quality or orderly progression of a portion of the work by documenting procedures, acceptability of methods or personnel, qualifications, or other verification of quality.

Statements signed by responsible officials of a manufacturer of a product, system, or material attesting that the product, system or material meet specified requirements. Statements must be dated after the award of this contract, name the project, and list the specific requirements which it is intended to address.

### **Manufacturer's Instructions**

Pre-printed material describing installation of a product, system, or material, including special notices and material safety data sheets, if any concerning impedances, hazards, and safety precautions.

### **Manufacturer's Field Reports**

A written report, which includes the findings of a test, made at the job site, in the vicinity of the job site, or on a sample taken from the job site, on a portion of the work, during or after installation. Report must be signed by an authorized official of a testing laboratory or agency and must state the test results; and indicate whether the material, product, or system has passed or failed the test.

### **Operation and Maintenance Data**

Data intended to be incorporated in an operations and maintenance manual.

### **Execution Records**

Records of execution, construction and installation.

### **Closeout Submittals**

Special requirements necessary to properly close out a construction contract. For example, as-built record drawings, manufacturer's help and product lines necessary to maintain and install equipment. Also, submittal requirements necessary to properly close out a major phase of construction on a multi-phase contract.

### **3.2.3 Certificates and Mill Test Data**

Before delivery of materials to the site, the Contractor shall submit to the Engineer, for his approval, certificates of Origin specifying physical and / or chemical characteristics of each material, and each constituent, which shall conform with those contained in the Specifications or other Standards acceptable to the Engineer. All such certificates of compliance with relevant standards shall accompany each shipment of all materials to be used in the Permanent Works.

Before delivery to the Site, or during the course of work, the Engineer may call for any test considered necessary for acceptance of the materials or for control of their use. All such tests

shall be performed at the expense of the Contractor. The materials that will be used in the Permanent Works for which certificate shall be provided include:

**Cement Concrete Works:**

- Cement
- Admixtures
- Curing compound
- Reinforcing steel

**Building Works**

- Paints
- Pipe fillings
- Electrical

The Contractor shall also submit appropriate mill analysis and laboratory test data of samples tested by the supplier. Mill analysis and test data shall be representative of materials furnished for the Permanent Works. The frequency of sampling and testing by the supplier shall conform with applicable standards.

**3.2.4 Submittal of Results of tests performed by the Contractor**

The Contractor shall furnish:

- Daily reports and monthly summaries of aggregate plant gradation test results on aggregate produced.
- Monthly calibration certificates for the weighing and dispensing devices on batching and mixing plants.

**3.2.5 Submittal of Construction details**

The Contractor shall submit his detailed proposals for the following for advance approval by the Engineer:

- Layout of lifts.
- Concrete placement sequences including special measures for dealing with concreting in hot weather and during nights.
- All formwork.
- Reinforcing bar details showing bar shapes, embedment and splice lengths.

Work shall not commence before such an approval is received by the Contractor.

**3.2.6 Submittal of Concreting Records**

The Contractor shall submit daily returns in respect of all concrete placed during the previous day, in a form to be agreed with the Engineer.

The returns shall include but not necessarily be restricted to:

- in respect of each concrete mix design:
- the number of batches mixed,
- the number of batches and the total volume of concrete placed,
- the number of batches wasted or rejected, and
- the weights of all cement, aggregates, water and additives used;
- in respect of each location in the Permanent Works:
- the position of the placement (e.g. structure, bay or lift reference number),
- the concrete mixes placed, and
- the total volume of concrete placed and the number of batches of each mix used.

In addition, the Contractor shall maintain an accurate and up-to-date record showing dates, times, weather and temperature conditions when each part of the Permanent Works was concreted. The record shall be available for inspection by the Engineer at all times.

### **3.2.7 Engineer's Review**

#### **(a) Review Notations**

Engineer will review submittals and provide pertinent notation within 30 calendar days after date of submission. Submittals will be returned to the Contractor with the following notations:

- (i) Submittals marked "approved" authorize the Contractor to proceed with the work covered.
- (ii) Submittals marked "approved as noted" authorize the Contractor to proceed with the work covered provided he takes no exception to the corrections. Notes shall be incorporated prior to submission of the final submittal.
- (iii) Submittals marked "return for correction" require the Contractor to make the necessary corrections and revisions and to re-submit them for approval in the same routine as before, prior to proceeding with any of the work depicted by the submittal.
- (iv) Submittals marked "not approved" or "disapproved" indicate noncompliance with the contract requirements and shall be re-submitted with appropriate changes. No item of requiring a submittal shall be accomplished until the submittals are approved or approved as noted.
- (v) Contractor shall make corrections required by the Engineer. If the Contractor considers any correction or notation on the returned submittals to constitute a change to the Tender Drawings or the Technical Specifications; notice as required under the Clauses 13 and 20 of Conditions of Contract shall be given to the Engineer. Approval of the submittals 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. Contractor shall be responsible for the dimensions and design of connection details and construction of work. Failure to point out deviations may result in the Engineer requiring

rejection and removal of such work at the Contractor's expense.

- (vi) If changes are necessary to approved submittals, the Contractor shall make such revisions and submission of the submittals in accordance with the procedures above. No item of work requiring a submittal change shall be accomplished until the changed submittals are approved.

**(b) Sample Approval**

Furnish, for the approval of the Engineer, samples required by the Technical Specifications or by the Engineer. Shipping charges shall be paid by the Contractor. Materials or equipment requiring sample approval shall not be delivered to the site or used in the work until approved in writing by the Engineer. Each sample shall have a label indicating:

- (a) Name of project
- (b) Name of Contractor
- (c) Material or equipment
- (d) Place of origin
- (e) Name of producer and brand
- (f) Specification section to which samples applies
- (g) Samples of furnished material shall have additional markings that will identify them under the finished schedules.

Contractor shall submit to the Engineer two samples of materials where samples are requested. Transmit to the Engineer with each sample a letter, original and two copies, containing the above information. Approval of a sample shall be only for the characteristics or use named in such approval and shall not be construed to change or modify any contract requirements. Before submitting samples, the Contractor shall assure that the materials or equipment will be available in quantities required in the project. No change or substitution will be permitted after a sample has been approved.

Materials and equipment incorporated in the work shall match the approved samples. If requested, approved samples, including those which may be damaged in testing, will be returned to the Contractor, at his expense, upon completion of the contract. Samples not approved will also be returned to the Contractor at its expense, if so requested. Failure of any materials to pass the specified tests will be sufficient cause for refusal to consider, under this contract, any further samples of the same brand or make of that material. Engineer reserves the right to disapprove any material or equipment which previously has proved unsatisfactory in service.

Variations from contract requirements shall be specifically pointed out in transmittal letters. Failure to point out deviations may result in the Engineer requiring rejection and removal of such work at no additional cost to the Employer.

Samples of various materials or equipment delivered on the site or in place may be taken by the Engineer for testing. Samples failing to meet contract requirements will automatically void

previous approvals. Contractor shall replace such materials or equipment to meet contract requirements.

Approval of the Contractor's samples by the Engineer shall not relieve the Contractor of his responsibilities under the Contract.

### **3.2.8 Status Report on Materials Orders**

Within 30 calendar days after notice to proceed, submit, for approval by the Engineer, an initial material status report on all materials orders. This report will be updated and re-submitted every 30 calendar days as the status on material orders changes.

Report shall list, in chronological order by need date, materials orders necessary for completion of the contract. The following information will be required for each material order listed:

- (a) Material name, supplier, and invoice number.
- (b) Bar chart line item or CPM activity number affected by the order.
- (c) Delivery date needed to allow directly and indirectly related work to be completed within the contract performance period.
- (d) Current delivery date agreed on by supplier.
- (e) When item 'd' exceeds item 'c', the effect that delayed delivery date will have on contract completion date.
- (f) When item 'd' exceeds item 'c', a summary of efforts made by the Contractor to expedite the delayed delivery date to bring it in line with the needed delivery date, including efforts made to place the order or subcontract with other suppliers.

### **3.3 Non-conformity**

During construction, after each assessment or measurement of quality, cases of non-conformity identified by the Engineer or by the Contractor's quality control supervisors or by the personnel in charge of execution will be divided into the following four categories:

- NC.1 This category covers minor defects which will be repaired immediately, then recorded on standard follow-up documents.
- NC.2 This category covers defects which can be repaired according to a pre-established procedure. The repairs will be carried out immediately and recorded on special documents.
- NC.3 This category covers defects which cannot be repaired according to a pre-established procedure. The decision to repair, modify or rebuild or remanufacture the item shall be proposed by the Contractor for the Engineer's approval.
- NC.4 This category covers major defects on critical items. The Contractor shall propose a solution for the Engineer's approval.

### **3.4 Project Schedule**

#### **3.4.1 Commencement, Execution and Completion of Works**

The Contractor shall commence work under the Contract in accordance with Sub-Clause 8.1 of the Conditions of Contract.

Pursuant to Sub-Clause 8.2 of the Conditions of Contract, the Contractor shall execute for mandatory completion of the different sections of the Works listed in the table below within the number of days specified herein under taken from the day of issue of the Engineer's written order to commence the Works:

	<b>Location and Description of Works to be Executed by the Contractor</b>	<b>Days to Complete the Work from Date of Engineer's Order to Commence the Works</b>
A	RIVER TRAINING WORKS	365 days
B	REPAIRS TO INSPECTION BUNGLOW KATIAR	180 days

#### **3.4.2 Contractor's Construction Programme**

In accordance with Sub-Clause 8.3 of the Conditions of Contract, the Contractor shall submit a revision of the construction programme attached to the Tender for approval.

Whenever the Contractor proposes to change the Construction Programme he shall immediately advise the Engineer in writing and if the Engineer considers the change is a major one the Contractor shall submit a revised programme for approval. If such a change in the construction programme affects the Engineer's design and drawings programme, the Employer will not be responsible for the consequences of the late issue of any drawings which are attributable to that change.

If the Contractor falls behind the approved construction programme he shall, within fourteen (14) days of the date of such default, submit a revision of the Construction Programme showing the proposed measure to complete the Permanent Works on time, for approval. When requested by the Engineer, the Contractor shall promptly furnish a detailed sub-programme of the Construction Programme for particular sections of the Permanent Works.

### **3.5 Setting Out of Works**

Pursuant to Sub-Clause 4.7 of the Conditions of Contract, the Contractor shall be solely responsible for the correct setting out of the Works and shall employ experienced qualified surveyors acceptable to the Engineer for this purpose.

The Engineer will establish free of charge to the Contractor necessary reference marks to define datum lines and the reduce levels of suitably located reference bench-marks to enable the Contractor to set out the Permanent Works. Any reference marks damaged as the result of action by the Contractor will be replaced by the Engineer at the expense for the Contractor.

The Contractor shall furnish all materials, labour and equipment including stakes, templates, patterns, platforms and special labour that may be required in setting out any part of the Works.

Separate payment will not be made for complying with the provisions of this Clause and all costs shall be deemed to be included in the various rates and lump sums tendered in the priced Bill of Quantities.

The Engineer may make checks as the Work progresses to verify lines or lines and grades established by the Contractor and to determine the conformance of the work as it progresses with the requirement of the Technical Specifications and the Drawings. Such checking by the Engineer shall not relieve the Contractor of his responsibility to perform all work in accordance with the Drawings and the Technical Specifications and the lines and grades given therein.

### **3.6 Safety Precautions**

The Contractor shall comply with any Safety instruction given by the Engineer. In the performance of the Works, the Contractor shall exercise every reasonable precaution to protect form injury persons or property. The Contractor shall erect and maintain all necessary temporary fencing, barricades, barriers, signs and lights and provide firm alarm, fire extinguishing and fire-fighting services at strategic points on the Site. The Contractor shall adopt and enforce such rules and regulations as may be necessary, desirable or proper to safeguard the public and all persons engaged in the work and its supervision.

### **3.7 Temporary Works**

The Contractor shall arrange an area of land at the Site at his own resources and cost within which the Contractor shall accommodate his work force and set up all services and facilities required for the construction of the Work on Site.

The Contractor's proposals for the details of erection and construction of all Temporary Works shall be in accordance with the proposals submitted with the Tender and approved in the Letter of Acceptance or with such modifications as approved from time to time.

Temporary Works shall include but not be limited to the work Contractors caps, temporary bridges, culverts or crossings, Contractor's offices and accommodation, a site office for Engineer's staff, temporary fences, sanitary facilities, fixed construction facilities including but not limited to workshops, compressed air stations, electric power, water supply,

telecommunications and construction and maintenance of access roads required for the execution of the Works and clean-up of the Site on completion.

The Contractor shall submit for approval drawings and full particulars of all Temporary Works, which he intends to construct at least thirty (30) days before he desires to commence constructing such works. Approval of any such proposals from the Contractor shall not relieve the Contractor of any of his responsibility for the sufficiency of the Temporary Works for their intended purpose. The Contractor shall also obtain any necessary approval from local statutory or other Government authorities before commencing construction. Such work shall not be started without prior approval.

Construction facilities shall be maintained in good order and shall not be demolished, removed from the Site or otherwise disposed of without prior approval.

No house, office, store, workshop or other habitable building will be permitted underneath or within 10ft of the nearest point in plan of the un-insulated overhead conductor of low or medium voltage of an electricity supply main.

On completion of the Works, all Temporary Works whether existing or constructed by the Contractor, unless otherwise specified or directed shall be removed from the Site. The Contractor shall make safe all areas affected by Temporary Works and reinstate natural drainage. The Contractor shall finish, reinstate, clean up and relinquish parts of the site at the end of the Maintenance Period or such earlier times as directed. Buildings and facilities removed from the Site will remain the Contractor's property.

Separate payment will not be made for Temporary Works and complying with the provisions of this Section unless included in Bill of Quantities as such.

### **3.8 Road Access to the Site**

#### **3.8.1 Practicability of Use**

The Contractor shall ascertain for himself the practicability of using the existing roads for access.

#### **3.8.2 Protection and Strengthening of Existing Facilities**

The highways, roads and bridges have widely varying load limits, and the Contractor shall be responsible for determining the load limits existing at and during Contract period and ensuring that his Constructional Plant does not exceed such limits. Before moving any heavy construction traffic onto highways, roads and bridges, the Contractor shall make suitable arrangements with the appropriate Government authorities and obtain their approval for the passage of such traffic. Pursuant to Clause 4.15 of the Conditions of Contract where the authorities require and specify any special protection or strengthening of highways, roads or bridges, the Contractor shall submit to the Engineer his proposals for such work after their approval by the authority concerned and shall carry out this work to the satisfaction of the

Engineer. Separate payment will not be made for any special protection or strengthening required by Government authorities and carried out at the direction of the Engineer. All costs payment shall be deemed to be included in the rates and lump sum prices in the priced Bill of Quantities.

### **3.8.3 Use of Bituminous Sealed Roads**

The Contractor shall not travel tracked vehicles or plant on any bituminous sealed road surface. Rubber typed vehicles conforming to applicable load restrictions will be permitted to use bituminous sealed roads.

### **3.8.4 Additional Roads**

All additional roads required by the Contractor as access and haul roads on the Site shall be provided by the Contractor.

### **3.8.5 Temporary Access and Haul Roads**

The Contractor shall design, construct and maintain all temporary access and haul roads (including associated drainage and stream crossing facilities) to the various working sites and designated borrow and disposal areas and quarry sites as required for the Works.

The temporary access and haul roads may be constructed at times to suit the Contractor's construction program.

The Contractor shall submit for approval drawings, design and full particulars of all temporary access roads, which he intends to construct at least thirty (30) days before he desires to commence constructing such temporary access roads. Approval of any such proposals by the Engineer shall not relieve the Contractor of any of his responsibility under this Contract.

### **3.8.6 Heavy Construction Traffic**

The Contractor's heavy construction traffic or tracked equipment shall not traverse any public roads or bridges, unless the Contractor has made arrangements with the Authorities concerned and the approval of the Engineer to such arrangements has been obtained.

### **3.8.7 Maintenance of Roads**

The Contractor shall be wholly responsible for the maintenance of all temporary access and haul roads constructed by him or as specified in this Contract.

In maintaining these roads the Contractor shall:

- (a) Keep clear and in good working order at all times all road structures, bridges, culverts, drains and other waterways;
- (b) Patch potholes with approved materials, keep the road surface in good repair and perform any grading and necessary resurfacing;

- (c) Maintain all fender posts, guide posts, guard posts, fencing, signs, signposts and other roadside structures;
- (d) Take reasonable and necessary measures to minimize nuisance from dust created while or in carrying out the Works.

### **3.8.8 Use of Roads by Others**

During the period of the Contract, the Employer will be engaged on other works in the vicinity of the Works covered by the Technical Specifications, and the Contractor shall allow the Engineer or persons authorized by the Engineer free use of all temporary access and haul roads.

## **3.9 First Aid and Medical Facilities**

### **3.9.1 General**

The Contractor shall in all respects be fully responsible for ensuring necessary first-aid services to his employees and employees of his subcontractors, including transport for injured personnel to hospital or other appropriate accommodation as and when required.

### **3.9.2 Staff**

To enable the fulfilment of his obligations under this Section, the Contractor shall engage qualified resident first-aid staff, provide and maintain an Ambulance to move serious patients or victims of an accident to nearby Hospital. The Contractor shall designate one or more approved competent licensed Doctors, whom shall at all times be in readiness to answer calls to supply medical and minor surgical services.

Separate payment will not be made for first-aid and medical facilities provided by the Contractor for his employees and the employees of his subcontractors. The facility shall be also available for the use of Engineer's staff.

## **3.10 Living Facilities, Camp Amenities and Recreation Facilities**

### **3.10.1 Location of Construction Camp**

The Contractor shall arrange land at his own resources and cost, to be used for the contractor's office, plant, storage, construction of quarters for his own staff and camps for workmen and for other camp amenities for his employees.

### **3.10.2 Contractor's Staff Quarters and Camps**

The Contractor shall ensure that his area is at all times kept in a clean and sanitary condition, and shall provide and maintain sanitary conveniences for the use of persons employed on the

Works to the extent and in the manner and at such places as shall be approved by the Engineer and by any local or other Government authority concerned, and all employees of the Contractor and his subcontractors shall be obliged to use these conveniences. Any employee found violating this requirement shall be liable to immediate termination of employment and to the refusal of further employment on the Works.

### **3.10.3 Removal of Buildings and Facilities**

The Contractor, upon completion of the works, shall dismantle and remove all buildings complete including the facilities as stated in this Sub-Section and temporary structures erected by him as part of his construction camp, and fill in all excavated areas as directed, remove all refuse, debris and other objectionable materials and leave the camp area in a clean and sightly condition to the satisfaction of the Engineer.

Separate payment will not be made for complying with the requirements of this Sub-Section.

### **3.11 Site Security**

The Contractor shall be responsible for the security of the works for the duration of the Contract and shall provide and maintain continuously an adequate security force to fulfil these obligations. The duties of the Contractor's security force shall include, but not be limited to, maintenance of order on the Site, provision of all lighting, fencing, guards, flagmen, and all other measures necessary for the protection of the Works within the camp and elsewhere on the Site, all material delivered to the Site, the public, and all persons employed in connection with the Works, continuously throughout working and non-working periods, including nights, days of rest and holidays, for the duration of the Contract.

## **4. TESTING OF MATERIALS AND WORKS**

The Contractors test programme shall be suitably documented by the Contractor to assure that the required materials and components testing is properly performed. The test programme shall address pertinent test pre-requisites, such as test instrumentation selection and calibration, acceptance criteria, documentation of test results, and evaluation of test results by qualified personnel. All tests shall be conducted with information to Engineer and in the presence of Engineer's representative.

The Contractor shall carryout following quality control field laboratory tests with specified frequency. The tests shall be conducted at Contractor's field laboratory or laboratories approval by Engineer.

### **4.1 Testing of Cement Concrete Work**

The following tests shall be conducted cement concrete work:

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#### **TABLE SP-2: FREQUENCY OF TESTS OF CEMENT CONCRETE WORKS**

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<b>Test Designation</b>	<b>Frequency</b>
<b>Tests on Fine Aggregate</b>	
ASTM C40: Test method for organic impurities in fine aggregates for concrete	Each two weeks or per 100 cubic yards of concrete whichever is more frequent
ASTM C136: Method for sieve analysis of fine and coarse aggregates	Each two weeks or per 100 cubic yards of concrete whichever is more frequent
<b>Tests on Coarse Aggregate</b>	
ASTM C127: Test method for specific gravity and absorption of coarse aggregate	Each month or 200 cubic meter whichever is more frequent
ASTM C88: Test method for soundness of aggregates by use of sodium sulphate or magnesium sulphate	Each month or 200 cubic meter whichever is more frequent
ASTM C131: Test method for resistance to degradation of small-size coarse aggregate by abrasion and impact in the Los Angeles machine	Each month or 200 cubic meter whichever is more frequent
ASTM C117: Test method for materials finer than 0.075mm (No. 200) sieve in mineral admixtures by washing	Each two weeks or per 100 cubic yards of concrete whichever is more frequent
ASTM C142: Test method for clay lumps & friable particles in aggregates	Each two weeks or per 100 cubic yards of concrete whichever is more frequent
ASTM C136: Method for sieve analysis of fine and coarse aggregates	Each two weeks or per 100 cubic yards of concrete whichever is more frequent
<b>Testing on Cement Concrete</b>	
ASTM C143: Test method for slump of Portland cement concrete	Every batch 3 test
ASTM C39: Test method for compressive strength of cylindrical concrete specimens	Every 50 cubic year of concrete

#### 4.2 Testing of Earthfill, Stones and Bedding Material

The following tests shall be carried out for quality control of earthfill, stone bedding material works:

**TABLE-SP3: TEST FREQUENCIES OF EARTHFILL, STONES AND BEDDING MATERIALS**

<b>Test</b>	<b>Frequency of Test</b>		
	<b>Impervious Fill</b>	<b>Sub-base Bedding</b>	<b>Riprap, Stone Pitching, Stone</b>

			<b>Apron</b>
<b>Gradation</b>	(i) 1 test for every 2000m <sup>3</sup> of fill or  (ii) at least one test for every shift of compaction, whichever is grater	(i) 1 test for every 500m <sup>3</sup> of fill or  (ii) at least one test for every shift of compaction, whichever is grater	10 tests
<b>Sodium Sulphate Soundness</b>	-	10 tests	1 test per 25,000 cubic yard
<b>Liquid limit and plastic limit</b>	1 test for every 2000m <sup>3</sup> of fill or	-	-
<b>Los Angeles Abrasion</b>		10 tests	1 test per 25,000 cubic yard
<b>Specific Gravity / Water Absorption</b>	10 tests	10 tests	1 test per 25,000 cubic yard
<b>Filed Density Test</b>	(i) 1 test for every 500m <sup>3</sup> of fill or	-	-
	(ii) At least one test for every shift of compaction, whichever is grater		
<b>Compaction Test in Laboratory</b>	One test for every 5 field density tests	-	-

## 5. CARE AND HANDLING OF WATER

### 5.1 Scope of Work

The Contractor shall be responsible for care and handing of water slurring construction period. The works to be done under care and handling of water, consist of the following:

- Protecting all works from damage by river flows, groundwater, rains and surface runoff during the entire construction period.

- Dewatering foundations and care of water to maintain all excavations and surfaces dry free of water as required for the proper construction of the works.

The Contractor shall furnish all labour, equipment and materials for constructing and maintaining all necessary cofferdams, bunds, channels diversion, sumps, pumps and other temporary protection. All such temporary protection and diversion works shall be removed or left and graded and so as not to interfere in anyway with the operation or usefulness of the completed works.

## **5.2 Dewatering**

Except where otherwise specified, shown on the Drawings or approved by the Engineer, the Contractor shall maintain all foundations and other Permanent Works areas well drained and free of water of any origin, including groundwater, seepage, precipitation, and runoff or from construction uses.

Except where otherwise approved by the Engineer, the Contractor shall drain, dewater and keep dry all areas of construction that are below the river or the groundwater elevation, and shall ensure that all excavated surfaces are maintained in a safe and stable condition.

All embankments whether Permanent Works or Temporary Works, shall be placed in the dry, with the exception of such parts of the Contractor's Diversion Scheme as are designed to be placed in water and have received the Engineer's approval for that method of placing.

The work to be performed by the Contractor in connection with dewatering shall include, but not necessarily be limited to, the following:

- The supply, installation, operation, maintenance and subsequent removal of all pumps, pumping stations, pipework and other equipment, including sufficient standby equipment, for the dewatering of the works areas and maintaining those areas free of water as required. Should deep well pumps be deployed, they shall be placed at least 30 m beyond the limits of any completed Permanent Works, except flexible aprons.
- The construction, maintenance and subsequent removal of any temporary sumps, lagoons, chambers, flumes, cofferdams, protective bunds or dykes and the like. All temporary sumps and lagoons shall be placed at least 20 m beyond the limits of any Permanent Works.
- The construction, maintenance and subsequent backfilling of such temporary drains or ditches as are required to efficiently carry all water to sumps or other collection or disposal locations.
- The supply, installation, maintenance, operation and subsequent removal of dewatering wells and/or well points.

Subject to the Engineer's approval, which shall not be unreasonably withheld, the Contractor may deploy any appropriate part of the Permanent Works as part of his drainage and dewatering arrangements.

## **6. MEASUREMENT AND PAYMENT**

### **6.1 Measurement and Payment - General**

The measurement for payment and the coverage of tendered rates various items of works in Bill of Quantities shall in general be made as specified in Specifications For Materials Of Construction-1964 and Specifications For Execution Of Works-1967 prepared by West Pakistan Standing Rates Committee except otherwise specified in various sub-sections of this Section.

### **6.2 General Requirements**

#### **6.2.1 Measurement and Payment**

No separate payment will be made for complying with all provisions of the Section: General Requirement of these Specifications except where otherwise detailed in the Bill of Quantities. The cost of complying with provision of General Requirements shall be deemed to be included in other items of works of the Bill of Quantities.

### **6.3 Care and Handling of Water**

#### **6.3.1 Measurement and Payment**

No separate payment will be made for complying with all provisions of this Section: Care and Handling of Water of these specifications except where otherwise detailed in the Bill of Quantities. The cost of complying with provision of the Care and Handling of Water shall be deemed to be included in other items of works of the Bill of Quantities.

### **6.4 Carriage of Materials**

#### **6.4.1 Measurement and Payment**

No separate payment will be made for loading, carriage, unloading and stacking of materials from source to specified site to be used in the Construction or stacking of various items of works. The cost of loading, transportation, unloading, processing and sorting, handling, demurrage, wharfage, toll taxes, duties, levies of materials etc. shall be deemed to be included in the relevant items of supply and / or construction of works.

The Contractor is responsible for making assessment about haulage of distances, adequacy and acceptability of materials from sources. The Employer is not responsible for any information provided about material sources in Employers documents. The Contractor shall propose for approval his own sources for supply of materials meeting the specified requirements.

### **6.5 Jungle Clearance and Removing within 100ft**

#### **(a) Light Jungle**

**(b) Thick Jungle**

**6.5.1 Measurement**

Measurement for Payment, of Jungle Clearance and Removing within 100ft of the area of permanent structures and embankments will be made of the horizontal projection of the areas actually cleared within the limits of excavation for the permanent works but excluding clearing for temporary access or haul roads, construction facilities and other temporary works, quarries and borrow areas. All costs of disposal shall be deemed to have been included in the unit price of Jungle Clearance and Removing with in 100ft.

**6.5.2 Payment**

Payment for Jungle clearance and removing within 100ft of site will be made at the rate per thousand (1,000) square feet tendered therefor in the priced Bill of Quantities.

Payment will be made for costs associated with furnishing plant, labour, materials and equipment, disposal and performing all operations necessary for clearing as specified.

The cost of clearing areas other than the area of permanent structures shall be deemed to be included in the rates tendered in the priced Bill of Quantities for the various items of the Works. No separate Payment shall be made for clearing areas other than area of permanent structures and embankment.

**6.6 Excavation**

**6.6.1 Measurement**

Unless specified otherwise, all excavation will be measured using vertical or horizontal cross-sections, whichever are the more appropriate for the particular application, and the average-end-area method utilising original ground lines obtained from the agreed ground level surveys and the lines and grades shown on the Drawings.

No measurement or payment will be made for excavation for the Contractor's temporary roads and for other Temporary Works for the Contractor's own use.

Measurement will not be made for excavation for any structure or feature that is paid for as a lump sum.

Neither Excess Excavation nor backfill of Excess Excavation will be measured for payment.

Earthwork Excavation under any Schedule shall be measured as the number of thousand (1,000) cubic feet in the relevant material, as identified by the Engineer, acceptably excavated for the Permanent Works in accordance with the Drawings.

## **6.7 Borrow Pit Excavation**

### **6.7.1 Measurement**

The borrow pit excavation shall be measured as the volume of embankment fill acceptably compacted in earthwork.

### **6.7.2 Payment**

Payment will be made for the number of thousand (1,000) cubic feet measured as above at the unit price for the Item. In the payment of excavation there will be no classification of material irrespective of it is rock or soil.

The unit prices for Borrow Pit Excavation shall be deemed to cover all costs of excavating and 100feet lead of the excavated material, including clearing, grubbing, stripping, ripping, excavating, trimming, loading, hauling, spreading and disposal in fill areas, embankments, topsoiling and all other work related to the Item.

## **6.8 Earthwork Excavation in Irrigation Channels and Structural Foundations**

### **6.8.1 Measurement**

Earthwork Excavation under any Schedule shall be measured as the number of thousand (1,000) cubic feet in the relevant material, as identified by the Engineer, acceptably excavated for the Permanent Works in accordance with the Drawings.

No separate payment shall be made for disposing, placing excavated material in spoil tips and embankments, nor for associated works such as spreading, compacting and topsoiling. The cost of such work shall be deemed to be included in the relevant excavation item.

### **6.8.2 Payment**

Payment will be made for the number of thousand (1,000) cubic feet measured as above at the unit price for the Item.

The unit prices for Earthwork Excavation in Irrigation Channels and Structural Foundations shall be deemed to cover all costs of excavating and disposing of the excavated material, including ripping, excavating, trimming, loading, hauling, spreading and disposal in stockpiles, spoil tips and spoil embankments, topsoiling and all other work related to the Item.

## **6.9 Earthwork Compaction**

### **6.9.1 Measurement**

The volumes of the fill materials, acceptably placed within the profiles shown on the Drawings or directed by the Engineer, shall be measured. Measurement shall be made using horizontal or vertical cross sections, whichever are the more appropriate for the particular application, and the average-end-area method utilising the lines and grades shown on the Drawings or as directed by the Engineer. If vertical sections are used for structures curved in plan, measurement will be based on radial cross sections. The agreed foundation levels shall be used for the measurement with no adjustment for any foundation settlement that may occur during construction. No deduction will be made for the measured volumes for excavation within the general profiles of the fills for drains and trenches for other purpose.

### **6.9.2 Payment**

Payment will be made for the number of thousand (1,000) cubic feet measured as above at the unit price for the respective Item.

The unit prices for Earthwork Compaction shall be deemed to cover all costs of placing the fill materials including spreading, watering, compacting, testing, controlling and protecting, and all other work related to the Item.

### **6.10 Surface Protection Fills**

- **Stone Filling Dry Hand Packed**
- **Stone Pitching on Slopes including Sub-base**
- **Dismantling stone pitching top layer relaying it after making good damaged slopes**
- **Supply of quarried stone**
- **Stone Apron**

#### **6.10.1 Measurement**

The volumes of the stones and sub-base material, conforming to the different specified Zones, acceptably placed within the profiles shown on the Drawings or directed by the Engineer, shall be measured. Measurement shall be made using horizontal or vertical cross sections, whichever are the more appropriate for the particular application, and the average-end-area method utilising the lines and grades shown on the Drawings or as directed by the Engineer. If vertical sections are used for structures curved in plan, measurement will be based on radial cross sections. The agreed foundation levels shall be used for the measurement with no adjustment for any foundation settlement that may occur during construction.

#### **6.10.2 Payment**

Payment will be made for the number of hundred (100) cubic feet measured as above at the unit price for the respective Item.

The unit prices for stones and sub-base shall be deemed to cover all costs of supplying and placing the materials including selecting, acquiring, excavating, processing, hauling, placing testing, controlling and all other work related to the Item.

## **6.11 Plain Cement Concrete**

### **6.11.1 Measurement**

Measurement shall be made of the volume of concrete acceptably placed in the Permanent Works within the lines and grades shown on the Drawings or as otherwise directed or approved by the Engineer. Where concrete is placed upon foundations, measurement shall be made to the foundation lines and grades shown on the Drawings or as otherwise directed and approved by the Engineer.

No deductions shall be made for rounded or bevelled edges or for space occupied by reinforcing steel and accessories. No deduction shall be made for voids, piping, electrical conduits or any other embedded items which are each less than 1 Sq.ft in cross-section or less than 5 cu.ft in volume. No measurement shall be made for concrete that is wasted for any reason or that is rejected.

### **6.11.2 Payment**

Payment for plain cement concrete will be made for the number of 100 cubic feet measured as above at the unit price tendered therefor. The unit prices for the concrete shall be deemed to cover all costs of concrete including cement, admixtures, formwork and jointing material. The unit prices shall also include furnishing all ingredients, batching, mixing, cooling, transporting, placing, curing and protecting, finishing and repairing, and all other work related to the Item for which separate payment is not provided.

## **6.12 Reinforcement Cement Concrete**

### **6.12.1 Measurement**

Measurement shall be made of the volume of concrete acceptably placed in the Permanent Works within the lines and grades shown on the Drawings or as otherwise directed or approved by the Engineer. Where concrete is placed upon foundations, measurement shall be made to the foundation lines and grades shown on the Drawings or as otherwise directed and approved by the Engineer.

No deductions shall be made for rounded or bevelled edges or for space occupied by reinforcing steel and accessories. No deduction shall be made for voids, piping, electrical conduits or any other embedded items which are each less than 1 Sq.ft in cross-section or less than 5 cu.ft in volume. No measurement shall be made for concrete that is wasted for any reason or that is rejected.

### **6.12.2 Payment**

Payment for reinforcement cement concrete will be made for the number of cubic feet measured as above at the unit price tendered therefor. The unit prices for the concrete shall be deemed to cover all costs of concrete including cement, admixtures, formwork and jointing material. The unit prices shall also include furnishing all ingredients, batching, mixing, cooling, transporting, placing, curing and protecting, finishing and repairing, and all other work related to the Item for which separate payment is not provided.

## **6.13 Supply and Fabrication of Mild Steel Reinforcement**

### **6.13.1 Measurement**

Reinforcing steel bars shall be measured as the net weight of reinforcing steel bars in Hundred Weight (CWT) acceptably placed in the Permanent Works. The net weight of reinforcing steel bars shall be calculated as the lengths of bars placed in accordance with approved Drawings or bar schedules multiplied by the appropriate nominal weight per unit length. The nominal weights per unit length are as follows:

<b>BAR SIZE</b>	<b>NOMINAL WEIGHT</b>	
	<b>Lbs./ft.</b>	<b>kg/m</b>
2	0.1670	0.2485
3	0.3759	0.5595
4	0.6680	0.9941
5	1.0429	1.5521
6	1.5019	2.2352
7	2.0439	3.0418
8	2.6699	3.9734
9	3.3999	5.0598
10	4.3028	6.4036
11	5.3128	7.9067

Laps in reinforcing steel which are for the convenience of the Contractor shall not be measured.

Tie wire, chairs, spacers, supports, bracings and other means of holding reinforcement in position shall not be measured.

### **6.13.2 Payment**

Payment will be made for the number of Hundred Weight (CWT) as measured above at the unit price for the respective Item.

The unit price for reinforcing steel shall be deemed to cover all costs of reinforcing steel including preparing detailed reinforcement drawings and schedules and supplying, cutting, bending and fixing the reinforcing steel, wastage and all other work related to the Item.

## **6.14 Formation Dressing and Preparing Subgrade**

### **6.14.1 Measurement**

Measurement for payment of formation dressing and preparing subgrade shall be made of the slope area actually dressed within the limits as shown in drawings or as directed by the Engineer.

### **6.14.2 Payment**

Payment for formation dressing and preparing subgrade will be made at the rate per hundred (100) square feet tendered therefor in the priced Bill of Quantities.

Payment will cover the cost associated with furnishing, labour, materials and equipment, disposal and performing all operations necessary for formation dressing and preparing subgrade.

## **6.15 Brickwork**

### **6.15.1 Measurement**

The unit of measurement shall be running feet. No deduction shall be made for openings having a superficial length of one foot or less.

### **6.15.2 Payment**

The unit rate for bricks shall include the cost of bricks mortar or any other material required and the cost of labour required for carrying out brick work, cutting bricks whenever required, curing and protecting, providing using and removing scaffolding, shuttering, centring staging, ladders, supports and other tools and plants required for carrying brickwork as per specifications.

## **6.16 Galvanized Iron Sheet**

### **6.16.1 Measurement**

The payment and measurement of this item shall be in square feet or as specified in the unit of the mentioned item.

### **6.16.2 Payment**

Payment for galvanized iron sheet will be made at the rate per square feet tendered therefor in the price of bill of quantities.

## **6.17 Pipe (All Types)**

- 4" Dia Perforated
- G.I Pipe 4" dia Perforated
- Coir Strainer Pipe
- MS Blind Pipe  $\frac{3}{4}$  Inch (5mm) thick
- RCC Pipe (All types)

### **6.17.1 Measurement**

Measurement shall be made in running feet for all type of pipes.

### **6.17.2 Payment**

Payment for above mentioned different items comprising the pipes will be made at the tendered rates quoted in the Bill of Quantities.

The rates for providing and installing of different items of pipes shall be deemed to cover all costs of providing, installing, constructing with required fittings like bends etc. as required and included in pipe length (with no additional payment), testing and commissioning, and all other work related to the Item.

The rates shall also be deemed to also include for weld joints, flanges, bolts, nuts, washers, lead, oakum, gaskets, sealing compounds, solder, coatings, rubber, collar, fastenings for holding pipe in place, excavation, backfilling, wall plates or other items required.

The payment and measurement of this item shall be in running feet or as specified in the unit of the mentioned item.

## **6.18 PVC Waterstop**

### **6.18.1 Measurement**

Waterstops shall be measured as the net length in running feet of waterstop shown on the Drawings and acceptably installed in the Permanent Works. The measurement shall be of the centreline length. At angled joints or junctions in a waterstop, the centreline length of each branch shall be measured up to the point of intersection of the centrelines.

Waterstops placed in construction joints which are for the convenience of the Contractor shall not be measured.

### **6.18.2 Payment**

The payment will be made for the number of running feet measured as above at the unit price for the respective Item.

The unit rates for waterstops shall be deemed to cover all costs of waterstops including supplying, fixing and jointing and all other work related to the Item. No additional payment shall be made for forming joints in waterstops.

## **6.19 Temeuclature Boards**

### **6.19.1 Measurement**

The measurement shall be made for size fitting, fixture as job of boards installed as directed by the Engineer. The payment and measurement of this item shall be done as complete of the mentioned job or as specified in the unit of the item.

### **6.19.2 Payment**

Payment shall be made at the rate quoted in priced Bill of Quantities. Unit of measurement shall be Job.

## **6.20 Gates (All Types)**

- Radial Gates
- Vertical Gate of MS Sheets 8mm

### **6.20.1 Measurement**

The measurement of this item shall be in square feet of the required thickness of MS sheet or as specified in the unit of the mentioned item.

### **6.20.2 Payment**

The payment of gates measured as above shall be deemed to include the cost of supply, transportation to site, storage, testing, supply of operating and maintenance manual. The cost shall be deemed to include all accessories required for the installation of the equipment. The unit of measurement shall be square feet.

## **6.21 M.S Bail Plug**

### **6.21.1 Measurement**

The measurement of this item shall be in each number or as specified in the unit of the mentioned item.

### **6.21.2 Payment**

The payment for MS Bail Plug will be made at the rate per each number tendered therefor in the price bill of quantities. The unit of measurement shall be number.

## **6.22 Pumping Set (Hire)**

### **6.22.1 Measurement**

The measurement of this item shall be for 8 hours of the day inclusive all charges of operator, fuel and oil expenditures or as specified in the unit of the mentioned item.

### **6.22.2 Payment**

The payment shall be made in number of days (08 hours).

## **6.23 Pump Beyond 8 Hours (Hire)**

### **6.23.1 Measurement and Payment**

The measurement and payment should be on pump running log book at hourly basis of all pumps with all charges of operator, fuel and oil expenditures or as specified in unit of the mentioned item.