

Standard Bidding Document

Provisioning / Installation and Replacement of outlived cooling towers with allied works at Allama Iqbal International Airport (AIIAP) Lahore (Works)

National

Single Stage-Two Envelope



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REQUEST FOR BIDS
PROCUREMENT OF CIVIL WORKS

1. The **Allama Iqbal International Airport (Pakistan Airports Authority (PAA))** has reserved Funds for the procurement planned for FY **2026-27**. The **Allama Iqbal International Airport (Pakistan Airports Authority (PAA))** intends to apply part of the proceeds of this Fund to cover eligible payments under the contract for the "**Provisioning / Installation and Replacement of outlived cooling towers with allied works at Allama Iqbal International Airport (AIIAP) Lahore**".
2. The **Allama Iqbal International Airport (Pakistan Airports Authority (PAA))** invites sealed Bids from eligible Bidders for procurement of Works (**Provisioning / Installation and Replacement of outlived cooling towers with allied works at Allama Iqbal International Airport (AIIAP) Lahore**) described in the bidding documents on **EPADS v2.0**.
3. **Single Stage-Two Envelope** will be used by adopting **Least Cost Based Selection (LCBS)** Technique for the subject procurement, in line with the Public Procurement Rules, 2004 and any Regulations, Regulatory Guides, Procurement Guidelines or Instructions issued by the Authority from time to time.
4. All Bids must be accompanied by a Bid Security amounting described in Bid Security Section in Bidding Document in the form of **Pay Order, Banker's Cheque, Call at Deposit, Demand Draft**. Or all bids must be accompanied by bid securing declaration in the format specified in the Bidding documents
5. E-Bidding documents, containing detailed terms & conditions, specifications and requirements etc. are available on **e-Pak Acquisition and Disposal System (EPADS)** at <https://vendors.epads.gov.pk/> for all the interested bidders registered on **EPADS v2.0**. Bidders are required to get themselves registered on **EPADS v2.0** to participate in Bidding process.
6. The e-bids, prepared in accordance with the instructions in the e-Bidding documents, must be submitted through **EPADS v2.0** on or before **Tuesday, July 7, 2026 11:00 AM**. E-bids will be opened by using **EPADS v2.0** on the same day at **Tuesday, July 7, 2026 11:30 AM**. Manual submission of Bids shall not be entertained. Those vendor who have not yet registered on the

new version of **EPADS v2.0**, may register themselves on <https://pa.epads.gov.pk/>. A tutorial to explain the registration process is available at <https://www.youtube.com/watch?v=MNW6T38v7tc>.

In terms of Rules 48 of Public Procurement Rules, 2004 Grievance Redressal Committee (GRC) is notified for the subject procurement and notification copy is available on the procuring agency's website and on Authority's website at (www.ppra.org.pk).

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Instructions to Bidders

A. INTRODUCTION

1. Scope of Bid

1.1. The Procuring agency/Employer (PA), as indicated in the Bid Data Sheet (BDS) invites Bids for the execution of Works as specified in the BDS and Section V- Works Requirements. The name, identification, and number of lots (contracts) of this National/ International Competitive Bidding process are specified in the BDS.

2. Source of Funds

2.1. Source of funds as referred in Clause 2 of Bid Data Sheet.

3. Eligible Bidders

3.1. A bidder may be natural person, company or firm or public or semi-public agency of Pakistan or any foreign country, or any combination of them with a formal existing agreement (on Judicial Papers) in the form of a joint venture or consortium. In the case of a joint venture or consortium, all members shall be jointly and severally liable for the execution of the Contract in accordance with the terms and conditions of the Contract. The joint venture or consortium shall nominate a Lead Member as nominated in the BDS, who shall have the authority to conduct all business for and on behalf of any and all the members of the joint venture or consortium during the Bidding process, and in case of award of contract, during the execution of contract. Verifiable copy of the agreement that forms a joint venture, consortium or association shall be required to be submitted as part of the Bid.

Any bid submitted by the joint venture, consortium or association shall indicate the part of proposed contract to be performed by each party and each party shall be evaluated (or post qualified if required) with respect to its contribution only, and the responsibilities of each party shall not be substantially altered without prior written approval of the Procuring Agency and in line with any instructions issued by the Authority.

(The limit on the number of members of JV or Consortium may be prescribed

in BDS, in accordance with the guidelines issued by the PPRA).

3.2. The invitation for bids is open to all prospective bidders subject to any provisions of incorporation or licensing by the respective national/international incorporating agency or statutory body established for that particular trade or business. Procuring agencies shall specify the registration/licensing requirements for the foreign bidder keeping in view the requirement of that business.

3.3. A Bidder shall not have a conflict of interest. All Bidders found to have a conflict of interest shall be disqualified. A Bidders may be considered to have a conflict of interest with one or more parties in this Bidding process, if they:

3.3.1. are associated or have been associated in the past, directly or indirectly with a firm or any of its affiliates which have been engaged by the Procuring agency/Employer to provide consulting services for the preparation of design or technical specifications of the works that are the subject of the bid; or

3.3.2. have controlling shareholders in common; or

3.3.3. receive or have received any direct or indirect subsidy from any of them; or

3.3.4. have the same legal representative for purposes of this Bid; or

3.3.5. have a relationship with each other, directly or through common third parties, that puts them in a position to have access to information about or influence on the bid of another bidder, or influence the decisions of the Procuring agency/Employer regarding this Bidding process; or

3.3.6. Submit more than one bid in this bidding process.

3.4. A Bidder may be ineligible if -

3.4.1. he is declared bankrupt or, in the case of company or firm, insolvent;

3.4.2. payments in favor of the bidder is suspended in accordance with the judgment of a court of law other than a judgment declaring bankruptcy and resulting (in accordance with the national laws) in the total or partial loss of the right to administer and dispose of its property;

3.4.3. the bidder is convicted, by a final judgment of a Court of Law or relevant Professional Statuary Body, of any offence involving professional conduct;

3.4.4. The bidder is debarred/ blacklisted by a national level Procuring agency/Employer and hence debarred due to involvement in corrupt and fraudulent practices, or performance failure or due to breach of bid securing declaration.

3.5. As and when required, bidders shall provide to the Procuring agency/Employer evidence of their eligibility, proof of compliance with the necessary legal requirements to carry out the contract effectively.

3.6. Bidders shall submit proposal relating to the nature, conditions and modalities of sub-contracting wherever the sub-contracting of any elements of the contract is envisaged.

4. Eligible Material and Equipment

4.1. All the material and equipment to be mobilized under the contract shall have their origin in eligible source countries, and all expenditures made under the contract will be limited to such materials and equipment. For this purpose, ineligible countries are stated in the section-IV titled as "Eligible Countries".

B. BIDDING DOCUMENTS

1. Contents of Bidding Documents

1.1. The scope of Works, bidding procedures, and terms and conditions of the contract are prescribed in the bidding documents. In addition to the Invitation for Bids, the bidding documents which should be read in

conjunction with any addenda issued in accordance with ITB 7.1 include:

- Section I -Invitation for Bids
- Section II Instructions to Bidders (ITBs)
- Section III Bid Data Sheet (BDS)
- Section IV Eligible Countries
- Section V Evaluation and Qualification Criteria
- Section VI Works Requirements Technical Specifications & Schedule of Requirements
- Section VII Standard Bidding Forms
- Section VIII General Conditions of Contract (GCC)
- Section IX Particular Conditions of Contract (PCC)
- Section X Contract Forms

1.2. The bidder is expected to examine all instructions, forms, specifications, terms and conditions prescribed in the bidding documents. Failure to furnish all the information required in the bidding documents will be at the bidder's risk and may result in the rejection of his bid.

2. Clarification of Bidding Document, Pre-bid Meeting

2.1. A prospective bidder requiring any clarification of the bidding document may notify the Procuring agency/Employer through EPADS.

2.2. The Procuring agency/Employer shall respond to the request for clarification in accordance with Rule 31 of the Public Procurement Rules 2004.

2.3. Should the Procuring Agency deem it necessary to amend the BIDDING document as a result of a clarification, it shall do so following the procedure under ITB 7.

2.4. If indicated in the BDS, the bidder's designated representative is invited at the bidder's cost to attend a pre-bid meeting at the place, date and time mentioned in the BDS. During this pre-bid meeting, prospective bidders may request clarification of the schedule of requirement, the evaluation criteria or any other aspects of the bidding documents.

2.5. Minutes of the pre-bid meeting, if applicable, including the text of the questions asked by bidders, including those during the meeting (without identifying the source) and the responses given, together with any responses prepared after the meeting will be uploaded on EPADS. Any modification to the bidding documents that may become necessary as a result of the pre-bid meeting shall be made by the Procuring agency/Employer exclusively through the use of an Addendum pursuant to ITB 7. Non-attendance at the pre-bid meeting will not be a cause for disqualification of a bidder.

2.6. The bidder is advised to visit and examine the Site of Works and its surroundings and obtain for itself on its own responsibility all information that may be necessary for preparing the bid and entering into a contract for construction of the Works. The costs of visiting the Site shall be at the bidder's own expense.

2.7. The bidder and any of its authorized personnel will be granted permission by the Procuring agency/Employer to enter upon its premises and lands for the purpose of such visit, but only upon the express condition that the bidder and its personnel will release and indemnify the Procuring agency/Employer 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 the inspection.

3. Amendment of Bidding Documents

3.1. The procuring agency may issue notification of any change, addition, modification or deletion in accordance with Rule 23 of the Public Procurement Rules 2004 i.e. Bidding Documents.

3.2. To give prospective bidders reasonable time in which to take an addendum/corrigendum into account in preparing their bids, the Procuring agency/Employer may, at its discretion, extend the deadline for the submission of bids:

Provided that the Procuring agency/Employer shall extend the deadline for submission of bid in pursuance of Rule 27 of the Public Procurement Rules 2004, i.e. Extension of time for submission of bids, if such an addendum is

issued within last three (03) days of the bid submission deadline.

C. PREPARATION OF BIDS

1. Language of Bid

1.1. The bid prepared by the bidder, as well as all correspondence and documents relating to the bid exchanged by the bidder and the Procuring agency/Employer shall be written in the English language unless specified in the BDS. Supporting documents and printed literature furnished by the bidder may be in another language provided they are accompanied by an accurate translation of the relevant pages in the English language unless specified in the BDS, in which case, for purposes of interpretation of the bidder, the translation shall govern.

2. Documents Constituting the Bids

2.1. The Bids prepared by the Bidder shall constitute of all the documents required in the BDS.

3. Documents Establishing Eligibility of Material, Equipment and Works, their Conformity to Bidding Documents

3.1. The bid prepared by the bidder shall constitute the following components: -

3.1.1. Documentary evidence established in accordance with ITB 10 that the material and equipment to be utilized by the Bidder for the executions of works are eligible material and equipment and conform to the Bidding Documents;

3.1.2. Documentary evidence established in accordance with ITB 11 that the bidder has been authorized to carry out the Construction works;

3.1.3. Documentary evidence established in accordance with ITB 11 that the bidder is eligible and/or qualified for the subject bidding process;

3.1.4. Form of Bid and Bid Prices completed in accordance with ITB 12 and 13;

3.1.5. Completed schedules as required, including priced Bill of Quantities in accordance with ITB 13.

3.1.6. Technical Proposal completed in all aspects in accordance with ITB-15.

3.1.7. Bid security or Bid Securing Declaration furnished in accordance with ITB 17;

3.1.8. Any other document required in the BDS.

3.2. In addition to the requirements, bids submitted by a JV shall include a copy of the Joint Venture Agreement entered into by all members. Alternatively, a letter of intent to execute a Joint Venture Agreement in the event of a successful bid shall be signed by all members and submitted with the bid, together with a copy of the proposed Agreement.

3.3. The bidder shall furnish, as part of its bid, all those documents establishing the eligibility in conformity to the terms and conditions specified in the bidding documents for all material, equipment and works which the bidder proposes to execute.

3.4. The documentary evidence of conformity of the material, equipment and works to the Bidding Documents may be in the form of literature, drawings, and data, and shall consist of:

3.4.1. a detailed description of the work methodology, approach, schedule and resources to be mobilized at site;

3.4.2. an item-by-item commentary on the Procuring agency/Employer's Technical Specifications demonstrating substantial responsiveness of the material, equipment and works to those specifications, or a statement of deviations and exceptions to the provisions of the Technical Specifications;

3.4.3. any other procurement specific documentation requirement as stated in the BDS.

3.5. The required documents and other accompanying documents must be in English. In case any other language than English is used the pertinent translation into English shall be attached to the original version.

4. Documents Establishing Eligibility and Qualification of the Bidder

4.1. The bidder shall furnish, as part of its bid, all those documents establishing the bidder's eligibility to participate in the bidding process and/or its qualification to perform the contract if its bid is accepted.

4.2. The documentary evidence of the bidder's eligibility to bid shall establish to the satisfaction of the Procuring agency/Employer that the bidder, at the time of submission of its bid, is from an eligible country as defined in Section-IV titled as "Eligible Countries".

4.3. The documentary evidence of the bidder's qualification to perform the contract if its bid is accepted shall establish to the satisfaction of Procuring agency/Employer that:

4.3.1. The bidder has the financial and technical capability necessary to perform the Contract, meets the qualification criteria specified in Section-V, Evaluation and Qualification Criteria and BDS.

4.3.2. In the case of a bidder not doing business within Pakistan, the bidder is or will be (if awarded the contract) represented by a local bidder (Joint Venture) in accordance with the PEC works bylaws, and in case of award of works such foreign firm is required to participate in the execution of works to carry out its obligations as prescribed in the Conditions of Contract and /or Technical Specifications.

4.3.3. That the bidder meets the qualification criteria listed in Section-V, Evaluation and Qualification Criteria and BDS.

5. Forms of Bid

5.1. The Bidder shall fill the Form of Bids furnished in the bidding documents. The Bids Form must be completed without any alterations to its format and no substitute shall be accepted.

6. Bid Prices

6.1. The bid prices quoted by the bidder in the Standard bid Forms, Bill of Quantities and in the Price Schedules shall conform to the requirements specified below or exclusively mentioned hereafter in the bidding documents.

6.2. The bidder shall fill in rates and prices for all items of the Works described in the Bill of Quantities. If a Price Schedule shows items listed but not priced, their prices shall be construed to be included in the prices of other items in the Bill of Quantities and will not be paid for separately by the Procuring agency/Employer.

6.3. Items not listed in the Price Schedule shall be assumed not to be included in the bid, and provided that the bid is still substantially responsive in their absence or due to their nominal nature, the corresponding average price of the respective item(s) of the remaining substantially responsive bidder(s) shall be construed to be the price of those missing item(s):

Provided that:

6.3.1. where there is only one (substantially) responsive bidder, or

6.3.2. where there is provision for alternate proposals and the respective items are not listed in the other bids,

The Procuring agency/Employer may fix the price of missing items in accordance with market survey, and the same shall be considered as final price.

6.4. The Bid price to be quoted in the Form of Bid in accordance with ITB 12 shall be the total price of the bid.

6.5. Unless otherwise specified in the BDS and the Contract, the rates and prices quoted by the bidder are subject to adjustment during the performance of the Contract in accordance with the provisions of the

Conditions of Contract.

6.6. If so specified in ITB 1.1, bids may be invited for individual lots (contracts) or for any combination of lots (packages).

6.7. Prices quoted by the Bidder shall be fixed during the bidder's performance of the contract and not subject to variation on any account. A bid submitted with an adjustable price will be treated as non-responsive and shall be rejected, pursuant to ITB 27, unless otherwise price adjustment is permissible under Conditions of the Contract.

6.8. All duties, taxes, and other levies payable by the Contractor under the Contract, or for any other cause, as of the date twenty-eight (28) days prior to the deadline for submission of bids, shall be included in the rates and prices and the total bid price submitted by the bidder.

7. Currencies of Bid and Payment

7.1. Prices shall be quoted in Pakistani Rupees unless otherwise specified in the BDS. Comparison of bids and tie of bid shall be treated in accordance with the Rule 30(2) of Public Procurement Rules, 2004.

8. Documents Comprising the Technical Proposal

8.1. The bidder shall furnish a Technical Proposal including a statement of work methods, equipment, personnel, schedule and any other information as stipulated in Section VII - Standard Bid Forms, in sufficient detail to demonstrate the adequacy of the bidder's proposal to meet the work requirements and the completion time.

9. Bid Validity Period

9.1. Bids shall remain valid for the period specified in the BDS after the bid submission deadline prescribed by the Procuring agency/Employer. A bid valid for a shorter period shall be rejected by the Procuring agency/Employer as non-responsive. The period of bid validity will be determined from the complementary bid securing instrument i.e. the expiry period of bid security or bid securing declaration as the case may be.

9.2. Under exceptional circumstances, prior to the expiration of the initial Bids/Bid validity period, the Procuring Agency may request the Bidders' consent to an extension of the period of validity of their Bids/Bid. Such request for extension of the period of bid validity shall be carried out in accordance with Rule 26 of the Public Procurement Rules, 2004.

10. Bid Security or Bid Securing Declaration

10.1. Pursuant to ITB 11.1 unless otherwise specified in the BDS, the bidder shall furnish as part of its bid, a Bid Security in accordance with Rule 25 of the Public Procurement Rules, 2004 in the amount and currency specified in the BDS or Bid Securing Declaration as specified in the BDS in the format provided in Section VII (Standard Bidding Forms).

In case Procuring agency/Employer is inviting bids in lots / packages, the bidder shall be required to submit his bid security against the respective lot/package for which he is submitting his bid.

Until the development of functionality of auto verification of financial instrument in EPADS, the scanned copy of bid security or bid securing declaration, as the case may be, shall be uploaded on E-PADS whereas the original instrument to be submitted to the procuring agency before closing of bid submission deadline,

10.2. The Bid Security shall be denominated in the local currency or in another freely convertible currency, and it shall be in the form specified in the **BDS** which shall be in any of the following:

10.2.1. A bank guarantee, an irrevocable letter of credit issued by a Scheduled bank in the form provided in the Bidding Documents or another form acceptable to the Procuring agency/Employer and valid for twenty-eight (28) days beyond the end of the validity of the Bid. This shall also apply if the period for Bid Validity is extended. In either case, the form must include the complete name of the bidder;

10.2.2. A cashier's or certified cheque; or

10.2.3. Another security as indicated in the **BDS**.

10.3. The Bid Security or Bid Securing Declaration shall be in accordance with the Form of the Bid Security or Bid Securing Declaration included in Section VII (Standard Bidding Forms) or another form approved by the Procuring agency/Employer prior to the bid submission.

10.4. The Bid Security shall be payable promptly upon written demand by the Procuring agency/Employer in case any of the conditions listed in ITB 17.9 are invoked.

10.5. Any bid not accompanied by a Bid Security or Bid Securing Declaration in accordance with ITB 17.1 or 17.3 shall be rejected by the Procuring agency/Employer and shall be declared as non-responsive bid, pursuant to ITB 27.

10.6. Unsuccessful bidders' Bid Security will be discharged or returned as promptly as possible, however in no case later than thirty (30) days after the expiration of the period of Bid Validity prescribed by the Procuring agency/Employer pursuant to ITB 16. The Procuring agency/Employer shall make no claim to the amount of the Bid Security, and shall promptly return the Bid Security document, after whichever of the following that occurs earliest:

10.6.1. The expiry of the Bid Security;

10.6.2. The entry into force of a procurement contract and the provision of a performance security (or guarantee), for the performance of the contract if such a security (or guarantee), is required by the Bidding documents;

10.6.3. The rejection by the Procuring agency/Employer of all Bids;

10.6.4. The withdrawal of the bid prior to the deadline for the submission of bids, unless the bidding documents stipulate that no such withdrawal is permitted.

10.7. The successful bidder's Bid Security will be discharged upon the bidder signing the contract pursuant to ITB 40, or furnishing the performance security (or guarantee), pursuant to ITB 41.

10.8. The Bid Security may be forfeited or the Bid Securing Declaration executed:

10.8.1. if a Bidder:

10.8.1.1. Withdraws its Bid during the period of Bid Validity as specified by the Procuring agency/Employer, and referred by the bidder on the Form of Bid except as provided for in ITB 16.2; or

10.8.2. In the case of a successful bidder, if the bidder fails:

10.8.2.1. to sign the contract in accordance with ITB 40; or

10.8.2.2. to furnish performance security (or guarantee) in accordance with ITB 41.

10.9. In case of Bid Security issued by the foreign bank is allowed by the Procuring agency/Employer, the same should be counter guaranteed by a corresponding bank in Pakistan. Furthermore, in case of joint venture, it should be in the name of Joint venture to ensure joint responsibility. In case the JV is not legally constituted at the time of bid submission, the bid security or bid securing declaration shall be in the names of all future members as named in the letter of bid.

11. Withdrawal of Bids

11.1. Before bid submission deadline, any bidder may withdraw, substitute, or modify its bid after it has been submitted by sending a written notice, duly signed by an authorized representative, and the corresponding must accompany the respective written notice.

12. Format and Signing of Bid

12.1. The Bidder shall prepare and submit Bids through EPADS with due diligence after carefully reading all the terms and condition before bid submission deadline.

D. SUBMISSION OF BIDS

1. **Submission of Bids through EPADS v2.0**

1.1. All bids shall be submitted through EPADS v2.0.

2. **Deadline for Submission of Bids**

2.1. All bids shall be received through **EPADS v2.0** not later than bid submission deadline as specified in the **BDS**.

2.2. The Procuring agency/Employer may, under exceptional circumstances and at its discretion, extend the deadline for the submission of bids, pursuant to Rule 27 of the Public Procurement Rules, 2004. Extension of Time for submission of bid, by amending the Bidding Documents in accordance with ITB 7, in which case all rights and obligations of the Procuring agency/Employer and bidders previously subject to the deadline will thereafter be subject to the new deadline.

3. **Substitution and Modification of bids**

3.1. A bidder may substitute or modify his bid after it has been submitted, provided that written notice of the substitution or modification of the bid, is received by the Procuring agency/Employer prior to the deadline for submission of bids.

3.2. Revised bid may be submitted after the substitution or modification made in the original bid in accordance with the provisions referred in **ITB 18**.

E. **OPENING AND EVALUATION OF BIDS**

1. **Opening of Bids**

1.1. The Procuring Agency will open bids in accordance with Rule 28 of the Public Procurement Rules, 2004 and as specified in the BDS.

2. **Confidentiality**

2.1. Information relating to the examination, clarification, evaluation and comparison of bids and recommendation of contract award shall not be disclosed to bidders or any other persons not officially concerned with such process until the time of the announcement of the respective evaluation report.

3. Clarification of Bids

3.1. Clarification of Bidding Documents shall be carried out in accordance with Rule 31 of the Public Procurement Rules, 2004.

3.2. The alteration or modification in the bid which in any case affect the following parameters will be considered as a change in the substance of a bid:

- 3.2.1. evaluation & qualification criteria;
- 3.2.2. required scope of work;
- 3.2.3. contract price;
- 3.2.4. all securities requirements;
- 3.2.5. tax requirements;
- 3.2.6. terms and conditions of bidding documents.
- 3.2.7. change in the ranking of the bidder

4. Preliminary Examination of Bids

4.1. Prior to the detailed evaluation of bids, the Procuring agency/Employer will determine whether each bid:

- 4.1.1. meets the eligibility criteria defined in **ITB 3** and **ITB 4**;
- 4.1.2. has been prepared as per the format and contents defined by the Procuring agency/Employer in the bidding documents;
- 4.1.3. has been properly signed;

4.1.4. is accompanied by the required securities; and

4.1.5. is substantially responsive to the requirements of the bidding documents.

The Procuring agency/Employer's determination of a bid's substantial responsiveness will be based on the contents of the bid itself.

4.2. A substantially responsive Bid is one which conforms to all the terms, conditions, and specifications of the Bidding Documents, without material deviation or reservation. A material deviation or reservation is one that: -

4.2.1. affects in any substantial way the scope, quality, or performance of the Works;

4.2.2. limits in any substantial way, inconsistent with the bidding documents, the Procuring agency/Employer's rights or the bidders' obligations under the Contract; or

4.2.3. if rectified, would affect unfairly the competitive position of other bidders presenting substantially responsive bids.

4.3. The Procuring agency/Employer will confirm that the documents and information specified under ITB 9, 10 and 11 have been provided in the bid. If any of these documents or information is missing, or is not provided in accordance with the Instructions to Bidders, the bid shall be rejected.

4.4. The Procuring agency/Employer may waive-off any minor informality, nonconformity, or irregularity in a bid which does not constitute a material deviation, provided such waiver does not prejudice or affect the relative ranking of any Bidder.

Explanation: A minor informality, non-conformity or irregularity is one that is merely a matter of form and not of substance. It also pertains to some immaterial defect in a Bid or variation of a bid from the exact requirements of the invitation that can be corrected or waived without being prejudicial to other bidders. The defect or variation is immaterial when the effect on quantity, quality, or delivery is negligible when contrasted with the total cost or scope of the works. The Procuring agency/Employer either shall give the bidder an opportunity to cure any deficiency resulting from a minor

informality or irregularity in a bid or waive the deficiency, whichever is advantageous to the Procuring agency/Employer. Examples of minor informalities or irregularities include failure of a bidder to –

4.4.1. Submit the number of copies of signed bids required by the invitation;

4.4.2. Furnish required information concerning the number of its employees;

4.4.3. the firm submitting a bid has formally adopted or authorized, before the date set for opening of bids, the execution of documents by typewritten, printed, or stamped signature and submits evidence of such authorization and the bid carries such a signature.

4.5. Provided that a Technical Bid is substantially responsive, the Procuring agency/Employer may request the bidder to submit the necessary information or documentation, within a reasonable period of time, to rectify nonmaterial nonconformities or omissions in the Technical Bid related to documentation requirements. Requesting information or documentation on such nonconformities shall not be related to any such aspect of the technical Proposal linked with the ranking of the bidders. Failure of the bidder to comply with the request may result in the rejection of its bid.

4.6. Provided that a Technical Bid is substantially responsive, the Procuring agency/Employer shall rectify quantifiable nonmaterial nonconformities or omissions related to the Financial Proposal. To this effect, the Bid Price shall be adjusted, for comparison purposes only, to reflect the price of the missing or nonconforming item or component.

4.7. If a bid is not substantially responsive, it will be rejected by the Procuring agency/Employer and may not subsequently be evaluated for complete technical responsiveness.

5. Examination of Terms and Conditions; Technical Evaluation

5.1. The Procuring agency/Employer shall examine the bid to confirm that all terms and conditions specified in the **GCC** and the **PCC** have been accepted

by the bidder without any material deviation or reservation.

For this purpose:

“Deviation” means departure from the requirements specified in the Bidding Document.

“Reservation” means setting of limiting conditions or withholding from complete acceptance of the requirements specified in the Bidding Document.

5.2. The Procuring agency/Employer shall evaluate the technical aspects of the bid submitted in accordance with ITB 30, to confirm that all requirements specified in Section VI – Works Requirement, Technical Specifications of the Bidding Documents have been met without material deviation or reservation.

5.3. If after the examination of the terms and conditions and the technical evaluation, the Procuring agency/Employer determines that the bid is not substantially responsive in accordance with ITB 27, it shall reject the bid.

6. Correction of Arithmetic Errors

6.1. Bids determined to be substantially responsive will be checked for any arithmetic errors. Errors will be corrected as follows: -

6.1.1. if there is a discrepancy between unit prices and the sub-total price that is obtained by multiplying the unit price and quantity, the unit price shall prevail, and the sub-total price shall be corrected, unless in the opinion of the Procuring agency/Employer there is an obvious misplacement of the decimal point in the unit price, in which the total price as quoted shall govern and the unit price shall be corrected;

6.1.2. if there is an error in a total corresponding to the addition or subtraction of sub-totals, the sub-totals shall prevail, and the total shall be corrected; and

6.1.3. where there is a discrepancy between the amounts in figures and in words, the amount in words will govern.

6.1.4. Where there is discrepancy between grand total of price schedule and amount mentioned on the Form of Bid, the amount referred in Price Schedule shall be treated as correct subject to elimination of other errors.

6.2. The amount stated in the Bid will, be rectified by the Procuring agency/Employer in accordance with the above procedure for the correction of errors and, with, the concurrence of the bidder, shall be considered as binding upon the bidder. If the bidder does not accept the corrected amount, its bid shall be rejected after forfeiture of Bid Security or execution of the Bid Securing Declaration, as the case may be, in accordance with **ITB 41.3**.

7. Conversion to Single Currency

7.1. 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 from outside the Procuring agency/Employer's country (referred to as the "Foreign Currency Requirements") shall indicate the same in the letter of bid-financial proposal. The proportion of the Bid Price (excluding Provisional Sums) needed by him for the payment of such Foreign Currency Requirements either (i) entirely in the currency of the Bidder's home country or, (ii) at the bidder's option, entirely in Pak rupees provided always that a bidder expecting to incur expenditures in a currency or currencies other than those stated in (i) and (ii) above for a portion of the foreign currency requirements, and wishing to be paid accordingly, shall indicate the respective portions in his bid. Comparison of bids quoted in different currencies and conversion of bids into a single currency shall be carried out in accordance with Rule 30(2) of the Public Procurement Rules, 2004.

8. Evaluation of Bids

8.1. The Procuring agency/Employer shall evaluate and compare only the bids determined to be substantially responsive, pursuant to **ITB 27**.

8.2. In evaluating the Technical Proposal of each Bid, the Procuring agency/Employer shall use the criteria and methodologies listed in the BDS

and in terms of works requirement. No other evaluation criteria or methodologies shall be permitted.

8.3. The Procuring agency/Employer's evaluation of a bid will take into account:

8.3.1. the bid price, excluding provisional sums and the provision, if any, for contingencies in the summary bill of quantities, but including day work items, where priced competitively;

8.3.2. converting the amount resulting from applying above, if relevant, to a single currency in accordance with ITB 29;

8.4. 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.

8.5. If these bidding documents allow bidders to quote separate prices for different lots, and the award to a single bidder of multiple lots, the methodology of evaluation to determine the lowest evaluated lot combinations in the Form of Bid, is specified in the **BDS**.

8.6. If the bid, which results in the Evaluated Bid Price (Successful Bid), is seriously unbalanced or front loaded in the opinion of the Employer, the Employer may require the Bidder to produce detailed price analyses for any or all items of the Bill of Quantities, to demonstrate the internal consistency of those prices with the construction methods and schedule proposed. After evaluation of the price analyses, taking into consideration the schedule of estimated Contract payments, the Employer may require that the amount of the performance security be increased at the expense of the Bidder to a level sufficient to protect the Employer against financial loss in the event of default of the successful Bidder under the Contract.

Explanation:

"Unbalanced" or "front-loaded" bids consist of deliberately submitting bids with artificially high prices or unit rates for the early stages of a construction project, offset by artificially low prices or unit rates for the later stages of the project, to improve the contractor's cash flow.

9. Domestic Preference

9.1. If the **BDS** so specifies, the Procuring agency/Employer will grant a margin of preference to the domestic contractor in line with the rules, regulations, regulatory guides or instructions issued by the Authority from time to time.

10. **Determination of Successful Bid**

10.1. The Procuring agency/Employer shall compare the evaluated bids in accordance with the predefined bidding procedure, of all substantially responsive bids to determine the Successful bidder.

11. **Qualification of Bidder**

11.1. The Procuring agency/Employer shall determine to its satisfaction whether the bidder is substantially responsive and whose bid is declared as Successful bid either continues to meet (if prequalification applies) or meets (if post-qualification applies) the qualifying criteria specified in Evaluation and Qualification Criteria.

Note: In case of international bidding, the parameters for incorporation or licensing within Pakistan may be fulfilled as part of post qualification.

11.2. The determination shall be based upon an examination of the documentary evidence of the bidder's qualifications submitted by the bidder, pursuant to **ITB 11**.

11.3. Prior to contract award, the Procuring agency/Employer will verify that the successful bidder (including each member of a JV) is not blacklisted/debarred. The Procuring agency/Employer will conduct the same verification for each sub-contractor proposed by the successful bidder.

12. **Sub-Contractors**

12.1. The bidder shall provide details regarding any specialized sub-contractor to the Procuring agency/Employer. In case change of sub-contractors, the bidder shall promptly notify the Procuring agency/Employer and obtain approval for replacement of sub-contractors.

12.2. Bidders may propose sub-contracting up to the percentage of total value of contracts or the volume of works as specified in the **BDS**.

13. **Abnormally Low Financial Bid**

13.1. A procuring Agency may reject abnormally low bids. The decision of the Procuring agency/Employer to reject a bid and reasons for the decision shall be recorded in the procurement proceedings and promptly communicated to the bidder concerned. Moreover, the Procuring agency/Employer shall not incur any liability solely by rejecting abnormally bid

Guidance for Procuring agency/Employer:

An abnormally low bid means, in the light of the Procuring agency/Employer's estimate and of all the bids submitted, the bid appears to be abnormally low by not providing a margin for normal levels of profit. In order to identify the Abnormally Low Bid (ALB) following approaches can be considered to minimize the scope of subjectivity:

13.1.1. Comparing the bid price with the cost estimate;

13.1.2. Comparing the bid price with the bids offered by other bidders submitting substantially responsive bids; and

13.1.3. Comparing the bid price with prices paid in similar contracts in the recent past either government- or development partner-funded.

13.2. The Procuring agency/Employer will determine to its satisfaction whether the bidder that is selected as having submitted the successful bid is qualified to perform the contract satisfactorily, in accordance with the criteria listed in **ITB 11**

13.3. The determination will take into account the bidder's financial and technical capabilities. It will be based upon an examination of the documentary evidence of the bidder's qualifications submitted by the bidder, pursuant to **ITB 11**, as well as such other information as the Procuring agency/Employer deems necessary and appropriate. Factors not included in these bidding documents shall not be used in the evaluation of the bidders' qualifications.

13.4. Procuring agency/Employer may seek “Certificate for Independent Price Determination” from the bidder and the results of reference checks may be used in determining award of contract.

Explanation: The Certificate shall be furnished by the bidder. The bidder shall certify that the price is determined keeping in view of all the essential aspects such as raw material, its processing, value addition, optimization of resources due to economy of scale, transportation, insurance and margin of profit etc.

13.5. An affirmative determination will be a prerequisite for award of the contract to the bidder. A negative determination will result in rejection of the bidder’s bid, in which event the Procuring agency/Employer will proceed to the next ranked bidder to make a similar determination of that bidder’s capabilities to perform satisfactorily.

F. AWARD OF CONTRACT

1. Criteria of Award

1.1. Subject to **ITB 36 and 37**, the Procuring agency/Employer will award the Contract to the bidder whose bid has been determined to be substantially responsive to the bidding documents and who has been declared as Successful Bidder, provided that such bidder has been determined to be:

1.1.1. eligible in accordance with the provisions of **ITB 3**;

1.1.2. is determined to be qualified to perform the Contract satisfactorily;
and

1.1.3. Successful negotiations have been concluded, if any.

2. Negotiations

2.1. The Committee of the Procuring agency/Employer may negotiate with the Most Advantageous Bidder relating to the following areas:

2.1.1. a minor alteration to the technical (drawings, design technical specifications) details of the statement of works;

2.1.2. Methodology, work plan, staffing in view to streamline the work;

2.1.3. a minor amendment to the Particular conditions of Contract;

2.1.4. finalizing payment arrangements;

2.1.5. clarifying details that were not apparent or could not be finalized at the time of Bidding;

2.2. Where negotiation fails to result into an agreement, the Procuring agency/Employer may invite the next ranked bidder for negotiations. Where negotiations are commenced with the next ranked bidder, the Procuring agency/Employer shall not reopen earlier negotiations.

3. Procuring agency's Right to reject All Bids

3.1. The procuring agency has the right to reject all bids in accordance with Rule 33 of the Public Procurement Rules, 2004. However, the Authority (i.e. **PPRA**) may call from the Procuring agency/Employer the justification of those grounds.

4. Notification of Award

4.1. The procuring agency shall announce and publish the evaluation result in accordance with Rule 35 of the Public Procurement Rules, 2004.

4.2. Where no complaints have been lodged, the bidder whose bid has been accepted will be notified of the award by the Procuring agency/Employer prior to expiration of the bid validity period through EPADS. However, the Procuring agency/Employer shall not award any procurement contract at least for five (05) days after the announcement of final evaluation report. The notification letter (herein after and in the condition of the contract and contract form called "Letter of Acceptance" will specify the sum that the Procuring agency/Employer will pay the successful bidder in consideration for the execution and completion of the works as prescribed by the Contract

(hereinafter and in the Contract called the "Contract Price).

4.3. The notification of award will constitute the formation of the Contract, subject to the bidder furnishing the Performance Security (or guarantee) in accordance with **ITB 41** and signing of the contract in accordance with **ITB 40**.

4.4. Upon the successful bidder's furnishing of the performance security (or guarantee) pursuant to **ITB 41**, the Procuring agency/Employer will promptly notify each unsuccessful bidder, the name of the successful bidder and the Contract amount and will discharge the Bid Security or Bid Securing Declaration of the bidder(s) pursuant to **ITB 17**.

5. Signing of Contract

5.1. Promptly after notification of award, Procuring agency/Employer shall send the successful bidder the draft agreement, incorporating all terms and conditions as agreed by the parties to the contract.

5.2. Immediately after the Redressal of grievance by the **GRC**, and after fulfillment of all conditions precedent of the Contract Form, the successful bidder and the Procuring agency/Employer shall sign the contract.

5.3. Where no formal signing of a contract is required, work order issued to the bidder shall be construed to be the contract.

6. Performance Security (or Guarantee)

6.1. After the receipt of the Letter of Acceptance, the successful bidder, within the specified time, shall deliver to the Procuring agency/Employer a Performance Guarantee in the amount and in the form stipulated in the BDS and PCC, denominated in the type and proportions of currencies in the Letter of Acceptance and in accordance with the Conditions of Contract.

6.2. If the Performance Guarantee is provided by the successful bidder and it shall be in the form specified in the BDS which shall be in any of the following:

6.2.1. certified cheque, cashier's or manager's cheque, or bank draft;

6.2.2. irrevocable letter of credit issued by a scheduled bank of Pakistan or in the case of an irrevocable letter of credit issued by a foreign bank, the letter shall be confirmed or authenticated by a scheduled bank of Pakistan;

6.2.3. bank guarantee confirmed by a reputable local bank or, in the case of a successful foreign bidder, bonded by a foreign bank; or

6.2.4. surety bond callable upon demand issued by any reputable surety or insurance company.

Any Performance Guarantee submitted shall be enforceable in Pakistan.

6.3. Failure of the Most Advantageous Bidder to comply with the requirement of **ITB 40** shall constitute sufficient grounds for the annulment of the award and forfeiture of the Bid Security or declare blacklisted (in case bid securing declaration is submitted) in which event the Procuring agency/Employer may make the award to the next most advantageous bidder or reinitiate the procurement process afresh (as a case may be).

7. Advance Payment

7.1. Advance payment will be provided to the bidder in percentage and in the manner as agreed by the both parties in terms of Conditions of the Contract.

7.2. The Procuring agency/Employer will provide an advance payment as stipulated in the Conditions of Contract, subject to a maximum amount, as stated and/or Conditions of the Contract. The advance payment request shall be accompanied by an advance payment security (guarantee) in the form provided in Section X. For the purpose of receiving the advance payment, the bidder shall make and estimate of, and include in its bid, the expenses that will relate to the purchase of equipment, machinery, materials, and on the engagement of labor during the first month beginning with the date of the Procuring agency/Employer's "**Notice to Commence**" as specified in the **PCC**.

8. General Performance of the Bidders

8.1. The Procuring agency/Employer reserves the right to obtain information regarding performance of the bidders on their previously awarded contracts / works. The Procuring agency/Employer may seek information / report from the previous employer for consideration. However, the Procuring agency/Employer shall incorporate such parameters in the evaluation criteria and accordingly decide the fate of the bid submitted.

9. Corrupt & Fraudulent Practices

9.1. Procuring agencies (including beneficiaries of Government funded projects and procurement) as well as Bidders/Suppliers/Contractors under Government financed contracts, observe the highest standard of ethics during the procurement and execution of such contracts, and will avoid to engage in any corrupt and fraudulent practices.

G. GRIEVANCE REDRESSAL & COMPLAINT REVIEW MECHANISM

1. Grievance Redressal

1.1. Grievance Redressal shall be carried out in accordance with Rule 48 of the Public Procurement Rules, 2004 i.e. Redressal of grievances by the procuring agency and "Redressal of Grievances Regulations 2021".

H. MECHANISM OF BLACKLISTING

1. Mechanism of Blacklisting

1.1. The Procuring agency/Employer shall proceed Blacklisting of Bidders/Contractors in accordance with Rule 19 of the Public Procurement Rules, 2004 i.e. Blacklisting and "Blacklisting and Debarment of Bidders or Contractors Regulations 2024".



Bid Data Sheet

Bids Data Sheet (BDS)

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

BDS Clause Number	ITB Number	Amendments of, and Supplements to, Clauses in the Instruction to Bidders
A. Introduction		
1	1.1	<p>Name of Procuring Agency:Allama Iqbal International Airport (Pakistan Airports Authority (PAA))</p> <p>The subject of procurement is:Provisioning / Installation and Replacement of outlived cooling towers with allied works at Allama Iqbal International Airport (AllAP) Lahore</p> <p>Expected commencement date: Wednesday, September 30, 2026</p>
2.	2.1	<p>Financial year for the operations of the Procuring Agency:2026-27</p> <p>Name and identification number of the Contract: P37508</p>
3.	3.1	<p>JV/Consortium or Association Allowed: Yes</p> <p>Number of JV/Consortium Members: 03</p>
B. Bidding Documents		

4.	6.2 & 6.4	The Bidders may seek clarifications through EPADS v2.0 : Clarification Date: Monday, June 22, 2026 Pre-Bid Meeting: Monday, June 8, 2026 05:00 AM Venue: Office of Divisional Engineer E&M, Level-IV, Allama Iqbal International Airport, Lahore.
5.	7.2	Any addendum, in case issued, shall be published on Allama Iqbal International Airport (Pakistan Airports Authority (PAA)) website and on EPADS v2.0 .
C. Preparation of Bids		
6.	8.1	List of documents required along with the bid: No
7.	9.1	The qualification criteria to establish the supply / production capability of the bidder. <i>see Eligibility Criteria</i>
8.	11.2	Works and Their related documents: <i>See section Required Scope of Work</i>
9.	11.1	Price schedule will be provided according to the format defined and acquired. <i>see section price schedule.</i>
10.	11.4	Specifications: <i>see section of specifications.</i>

11.	11.5 & 13.5	The price shall be Fixed . The bid price shall be adjusted in accordance with Appendix provided - Formula for Price Adjustment.
12.	14.1	Currency of the Bids shall be : PKR
13.	16.1	The Bids/Bid Validity period shall be: 180 Days
14.	17.1	The amount of Bid Security shall be as defined in Bid Security Section for items and lots given in BDS 6
15.	17.2	The Bid Security shall be in the form of: Pay Order, Banker's Cheque, Call at Deposit, Demand Draft
16.	15.1	Alternative Bids to the requirements of the bidding documents willnot be permitted.
D. Submission of Bids		
17.	18.1 & 21.1	<p>Bid shall be submitted online on EPADS v2.0 whereas hard copy of the bid security should be submitted to the following;</p> <p>Office of Divisional Engineer E&M, Level-IV, Allama Iqbal International Airport., Lahore City, Lahore (District), Lahore Division (Division), Punjab (Province).</p> <p>Bids that are not submitted on EPADS v2.0 shall be disqualified.</p> <p>The deadline for Bids submission is: Tuesday, July 7, 2026 11:00 AM</p>

E. Opening and Evaluation of Bids

18.	24.1	<p>The Bids opening shall take place on EPADS v2.0.</p> <p>Day : Tuesday</p> <p>Date:July 07, 2026</p> <p>Time : 11:30 AM</p>
19.	30.2	<p>Selection technique adopted will be: Least Cost Based Selection (LCBS) see <i>Evaluation Criteria</i></p>

F. Award of Contract

20.	41.1 & 41.2	<p>The Performance guarantee shall: 5.00%.</p> <p>The Performance Guarantee shall be acceptable in the form of:Pay Order, Banker's Cheque, Call at Deposit, Bank Guarantee, Demand Draft</p>
21.	45.1	<p>Arbitrator shall be appointed by mutual consent of the both parties.</p>

G. Review of Procurement Decisions

22.	37	<p>Grievance against this procurement shall be submitted online on EPADS v2.0.</p>
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Eligibility Criteria

Bidder's Type	Required Registration
Any	NADRA CITIZENSHIP (CNIC/NICOP) FBR (NTN) PEC

Eligibility Criteria	Document
Original Bid Security furnished in accordance with general instructions, invitation to bids and instructions to bidders Note: The physical financial instrument shall reach the office of the Divisional Engineer ES E&M AllAP Lahore in envelope before opening of bids	Yes
Certificate of incorporation/Article & memorandum of association/Partnership deed/Affidavit for sole proprietorship Note: Duly attested by Notary Public/oath commissioner	Yes
Joint Venture Agreement (if applicable). In case of foreign firm/company, joint venture with Pakistani firm and registration with SECP	Yes
Affidavit on non-judicial e-stamp paper (worth Rs. 500/-) to the effect that company has not been blacklisted by any Govt./Semi-Govt./Autonomous body Note: Duly attested by Notary Public/oath commissioner	Yes
Active Taxpayer status (ATL)/NTN/GST and Professional Tax Certificate Note: Duly attested by Notary Public/oath commissioner	Yes
Valid Certification/License by the Pakistan Engineering Council (PEC) in relevant Category i.e. C-2 or above having specialization code ME-01 Note: Duly attested by Notary Public/oath commissioner	Yes

Power of attorney in accordance with Additional Instruction to Bidders. Note: Duly attested by Notary Public/oath commissioner	Yes
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Evaluation Criteria

Least Cost Based Selection (LCBS)

Technical Marks	100
Passing Marks	70
Bidder must be a Cooling Tower Manufacturer (OEM) or OEM's authorized agent / partner of the manufacturer for Pakistan (Minimum Passing Marks: 08)	
Valid authorization certificate of OEM in case of Agent/Dealer/Partner partnership certificate for Pakistan as evidence of being an authorized partner. (Qualitative)(Doc Required)	15
OEM/authorized agent/partner for 20 years (15)	
OEM/authorized agent/partner for 10 years Note: Additional 0.5 mark per past year if authorized dealer for Pakistan. (10)	
OEM/authorized agent/partner Note: Additional 0.5 mark per past year if authorized dealer for Pakistan. (5)	
Not OEM/authorized agent/partner (0)	
Applicant Firm / Contractor profiles resources and project planning (Minimum Passing Marks: 10)	

<p>Please submit a complete proposal/plan for Work methodology, PAA officials training program of delivered Cooling Tower. (Qualitative)(Doc Required)</p> <p><input type="checkbox"/> 06 Marks: if the step-by-step breakup of activities linked with manpower is provided with job responsibility and personal qualification/profile of the deployed staff. <input type="checkbox"/> Additional 05 Marks: if the detailed breakup project is given with deployed tools/plant, testing equipment, machinery and equipment resources. <input type="checkbox"/> Additional 04 Marks: if complete operation and maintenance training plan with contents and schedule for PAA Officials is prepared and submitted (15)</p> <p><input type="checkbox"/> 0 marks if none of the required three (03) documents are submitted. (0)</p>	<p>15</p>
<p>General Experience of Bidder. (Minimum Passing Marks: 05)</p>	
<p>Attach list of purchaser or delivery orders or contracts or project completion or sign-off certificate with contact details. (Qualitative)(Doc Required)</p> <p><input type="checkbox"/> Full Marks will be given in case of 100 Cooling Towers for HVAC System have been completed in the last 10 years. (10)</p> <p><input type="checkbox"/> 08 Marks will be given, if the bidder has commissioned 50 Cooling Towers for HVAC System in Pakistan during the last 10 years. Note: If less than 50 Cooling Towers for HVAC System in Pakistan during the last 10 years, 0.16 mark shall be awarded for each tower. If more than 50 Cooling Towers for HVAC System in Pakistan during the last 10 years, 0.04 mark shall be awarded for each additional tower. (8)</p> <p><input type="checkbox"/> 0 mark for more than 10-year-old cooling towers work. (0)</p>	<p>10</p>
<p>Particular Experience of Bidder. (Minimum Passing Marks: 05)</p>	

<p>Attach list of purchaser or delivery orders or contracts or project completion or sign-off certificate with contact details for induced draft, cross flow, hot water distribution type Cooling Tower. (Qualitative)(Doc Required)</p> <p><input type="checkbox"/> Full Marks will be given in case of 100 Cooling Towers i.e. induced draft, cross flow, hot water distribution type at least 600 TR capacity during the last 10 years. (10)</p> <p><input type="checkbox"/> 08 Marks will be given, if the bidder/ OEM has Provided/ Installed/ erected, commissioned 50 Cooling Towers i.e. induced draft, cross flow, hot water distribution type at least 600 TR capacity locally or Globally during the last 10 years. Note: If less than 50 Cooling Towers (above specified type) during the last 10 years, 0.16 mark shall be awarded for each tower. If more than 50 Cooling Towers (above specified type) during the last 10 years, 0.04 mark shall be awarded for each additional tower (8)</p> <p><input type="checkbox"/> 0 mark for more than 10-year-old cooling towers work. (0)</p>	<p>10</p>
<p>Technical Compliance to Tender Specifications. (Minimum Passing Marks: 10)</p>	
<p>Prepare and attach a detailed technical compliance sheet to PAA Technical Specifications Appendix III-b covering clause wise features of offered Cooling Tower Note: <input type="checkbox"/> 0 marks in case sheet is not prepared or incomplete compliance sheet is attached. <input type="checkbox"/> Full marks for submitting completely filled (and complied) compliance sheet with required documents mentioned therein are attached. (Quantitative)(Doc Required)</p>	<p>10</p>
<p>Bidders Technical Capacity. (Minimum Passing Marks: 07)</p>	
<p>Please attach copy of PEC valid registration certificate with specific category. Note: <input type="checkbox"/> 0 mark for non submission of valid PEC certificate or PEC certificate below C-2 category or non-availability of ME-01 Code. <input type="checkbox"/> 07 marks for C-2 category or above with ME-01 field of specialization. (Quantitative)(Doc Required)</p>	<p>7</p>
<p>Bidder must have Technical Strength of at least one (01) OEM Certified / Trained Engineer for after sales services and support. (Minimum Passing Marks: 08)</p>	

<p>Please attach copies of OEM certificate with Engineer's profile/s. Note: 0 mark if OEM certificate for trained engineer is not Submitted Full marks if OEM certificate for one or more trained engineer is Submitted (Quantitative)(Doc Required)</p>	<p>8</p>
<p>Financial Capacity of the bidder. (Minimum Passing Marks: 10)</p>	
<p>Copies of Audited Financial Statement for last three financial years shall be provided i.e. 2022-23, 2023-24, 2024-25. (Qualitative)(Doc Required)</p> <p>15 Marks are given if the average annual turnover of last 3 years is equal to Rs 850 Million or above. (15)</p> <p>10 Marks are given if the average annual turnover of last 3 years is equal to Rs 600 Million. Note: 01 additional mark is given for every PKR 50 million (average annual turnover of last 3 years) surplus of PKR 600 Million. (10)</p> <p>05 Marks are given if the average annual turnover of last 3 years is below Rs 600 Million. (5)</p> <p>0 mark if audited financial statement for all mentioned last three years are not attached. (0)</p>	<p>15</p>
<p>Time schedule to design, manufacture, transport, hardware installation with software deployment at site, debugging testing commissioning, provision of training and handing over of the System to PAA. (Minimum Passing Marks: 05)</p>	

<p>Gantt chart with complete time schedule and milestones to be provided. (Qualitative)(Doc Required)</p> <p>□ 5 Marks are given if the complete Gantt chart showing complete work schedules with milestones within completion time is submitted with technical bid. □ Additional 5 Marks are given if the contractor has shown to complete the project in 300 days or earlier in his Gantt chart. (10)</p> <p>□ 5 Marks are given if the complete Gantt chart showing complete work schedules with milestones within completion time is submitted with technical bid. Note: For more than 300 days of project completion time 1 mark each shall be deducted for every additional 13 days. (5)</p> <p>□ 0 mark if the Gantt chart showing complete work schedules with milestones is not submitted with technical bid. (0)</p>	10
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Jobs/Lots

Lot Title : Replacement of cooling towers

Bid Security : 5000000

Job	Delivery Schedule	Quantity
E&M Works	Address: Allama Iqbal International Airport., Lahore City, Lahore (District), Lahore Division (Division), Punjab (Province). Schedule: 365 Days Quantity: 01	1
Civil Works	Address: Allama Iqbal International Airport., Lahore City, Lahore (District), Lahore Division (Division), Punjab (Province). Schedule: 365 Days Quantity: 01	1

Items Without Lots :

Item	UNSPSC	Delivery Schedule	Quantity	Bid Security	Related to Job/Lot
Calculator Large	Desktop calculator	Address: Allama Iqbal International Airport., Lahore City, Lahore (District), Lahore Division (Division), Punjab (Province). Schedule: 30 Days Quantity: 01	1	0	Replacement of cooling towers (Lot)

Related Services :

Yes

Replacement of cooling towers

Job	Related Services
E&M Works	Dismantled materials to be shifted to PAA Stores
Civil Works	Clear site as per instructions of Engineer Incharge

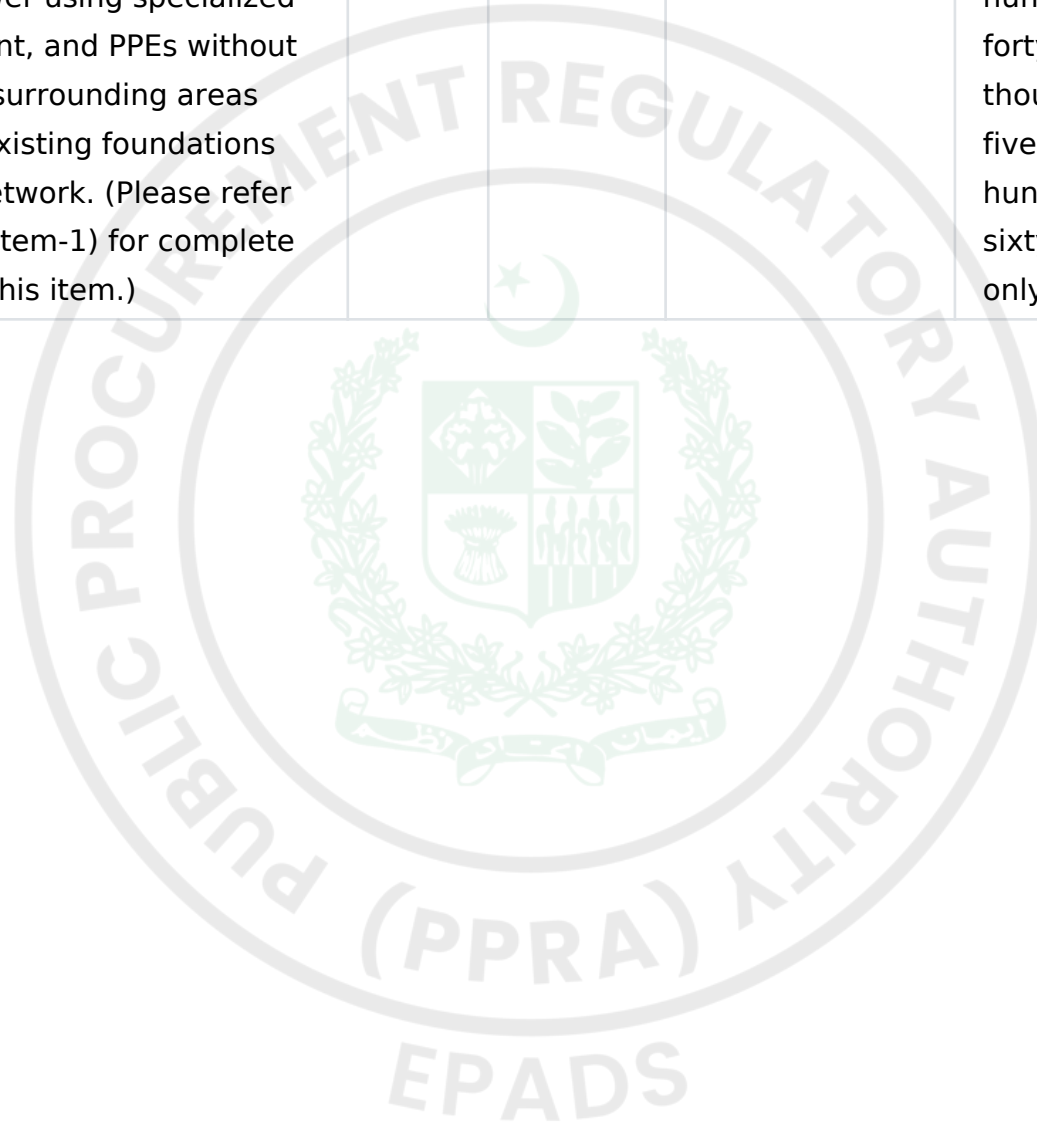
Work Specifications and Market Rates

Lot Title: Replacement of cooling towers

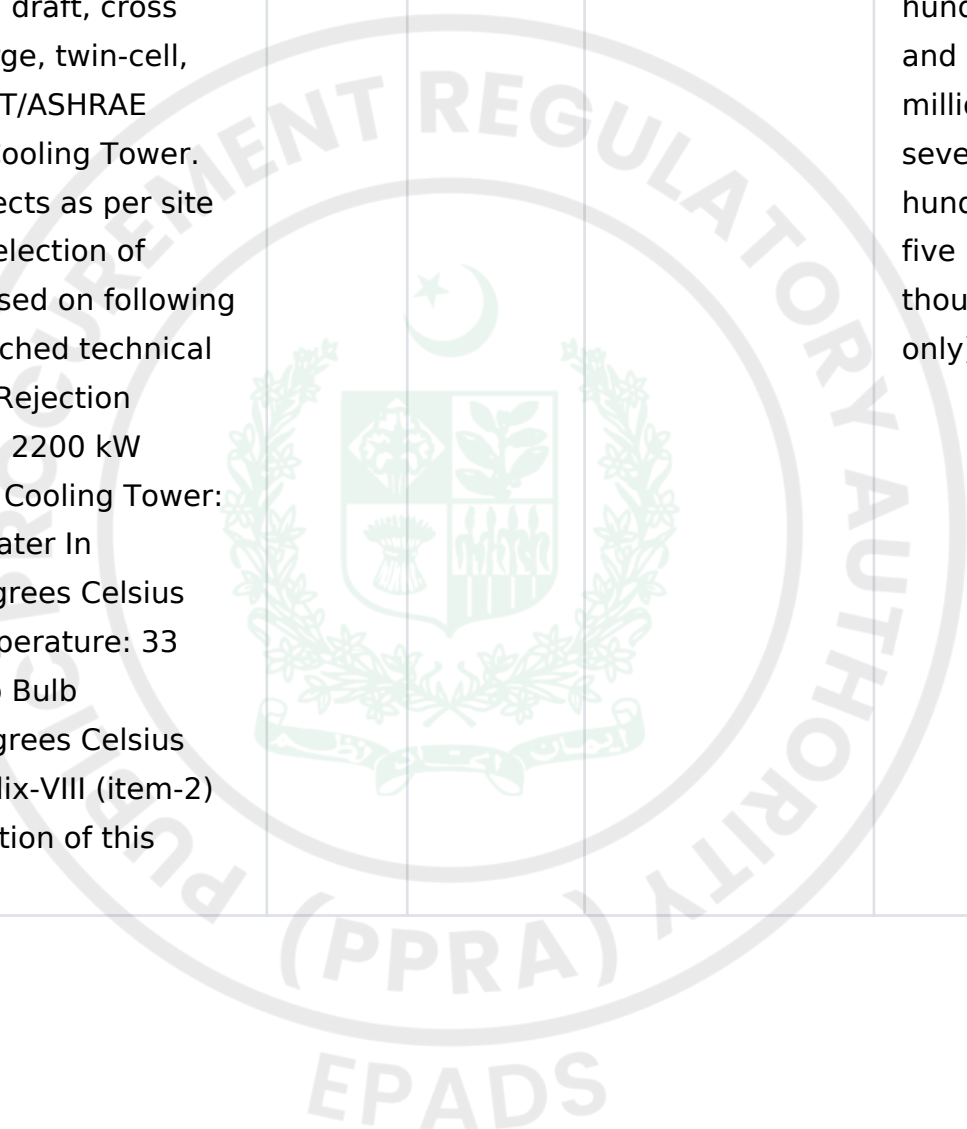
Specifications / Requirements:

Sr. No	Ref No.	Description	Unit	Qty	Rate	Amount
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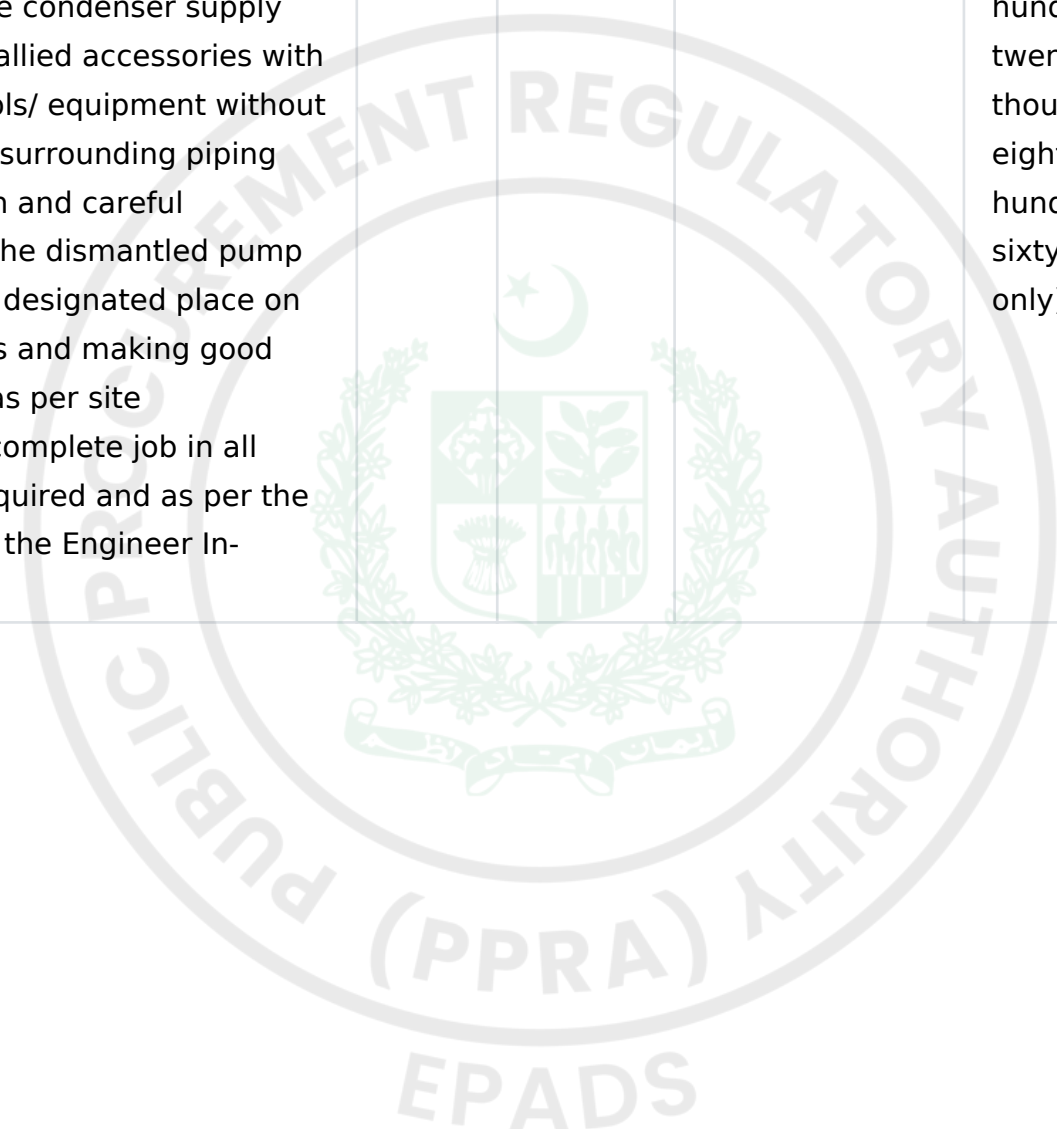
1	1	Dismatling of old/ outlived Marley Make cross flow, induced draft, twin-cell cooling tower using specialized tools/ equipment, and PPEs without damaging the surrounding areas including the existing foundations and pipeline network. (Please refer Appendix-VIII (item-1) for complete description of this item.)	P/Job	4	848,563.00	(Rupees eight hundred forty eight thousand five hundred sixty three only)	3,394,252.00
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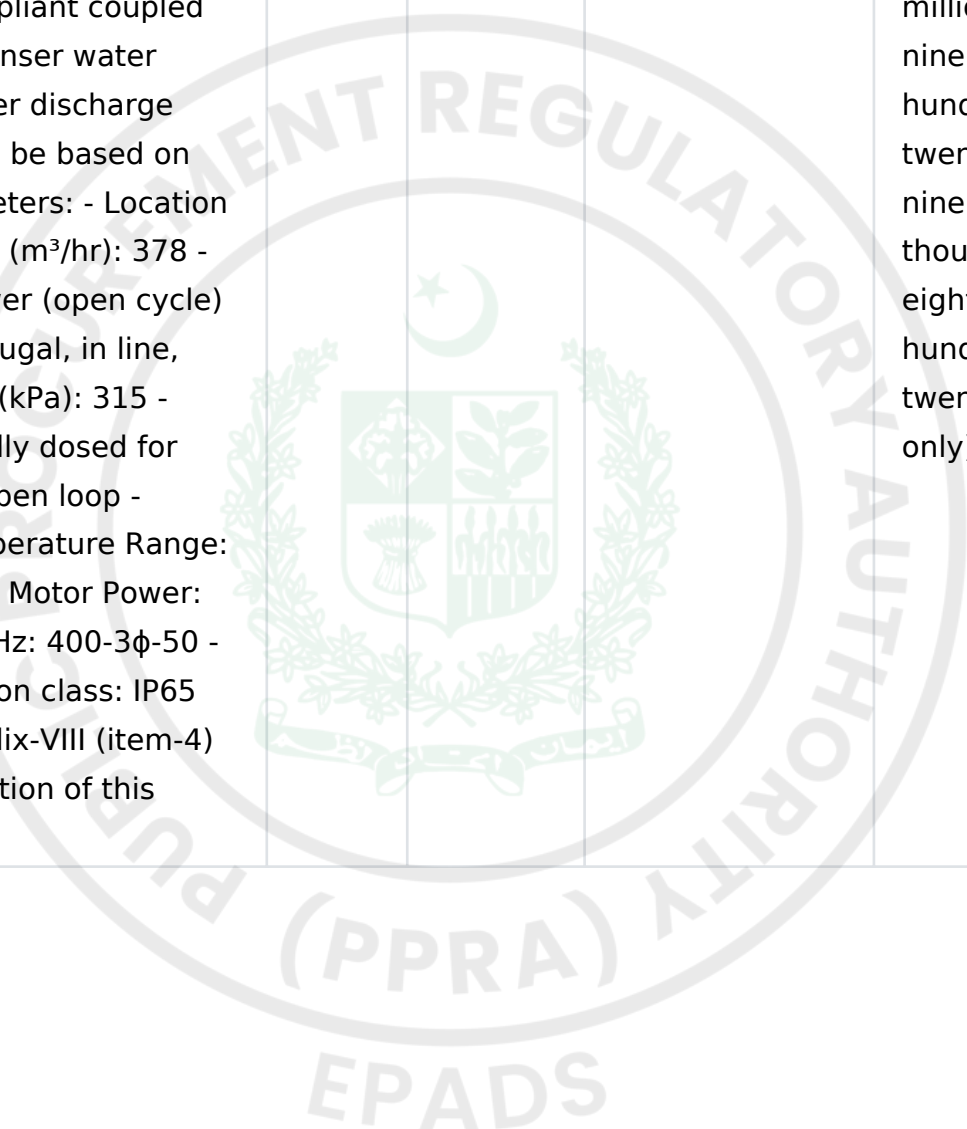
2	2	<p>Providing, installation/ erection, testing, commissioning and water balancing of induced draft, cross flow, vertical discharge, twin-cell, CTI/ JCI/JIS/EUROVENT/ASHRAE standards certified Cooling Tower. Complete in all respects as per site requirements. The selection of Cooling Tower be based on following parameters and attached technical specifications: Heat Rejection Capacity (Minimum): 2200 kW Water Flow Rate Per Cooling Tower: 105 liters/Sec Hot Water In Temperature: 38 degrees Celsius Cold Water Out Temperature: 33 degrees Celsius Web Bulb Temperature: 29 degrees Celsius (Please refer Appendix-VIII (item-2) for complete description of this item.)</p>	P/Job	5	101,705,000.00	(Rupees one hundred and one million, seven hundred five thousand only)	508,525,000.00
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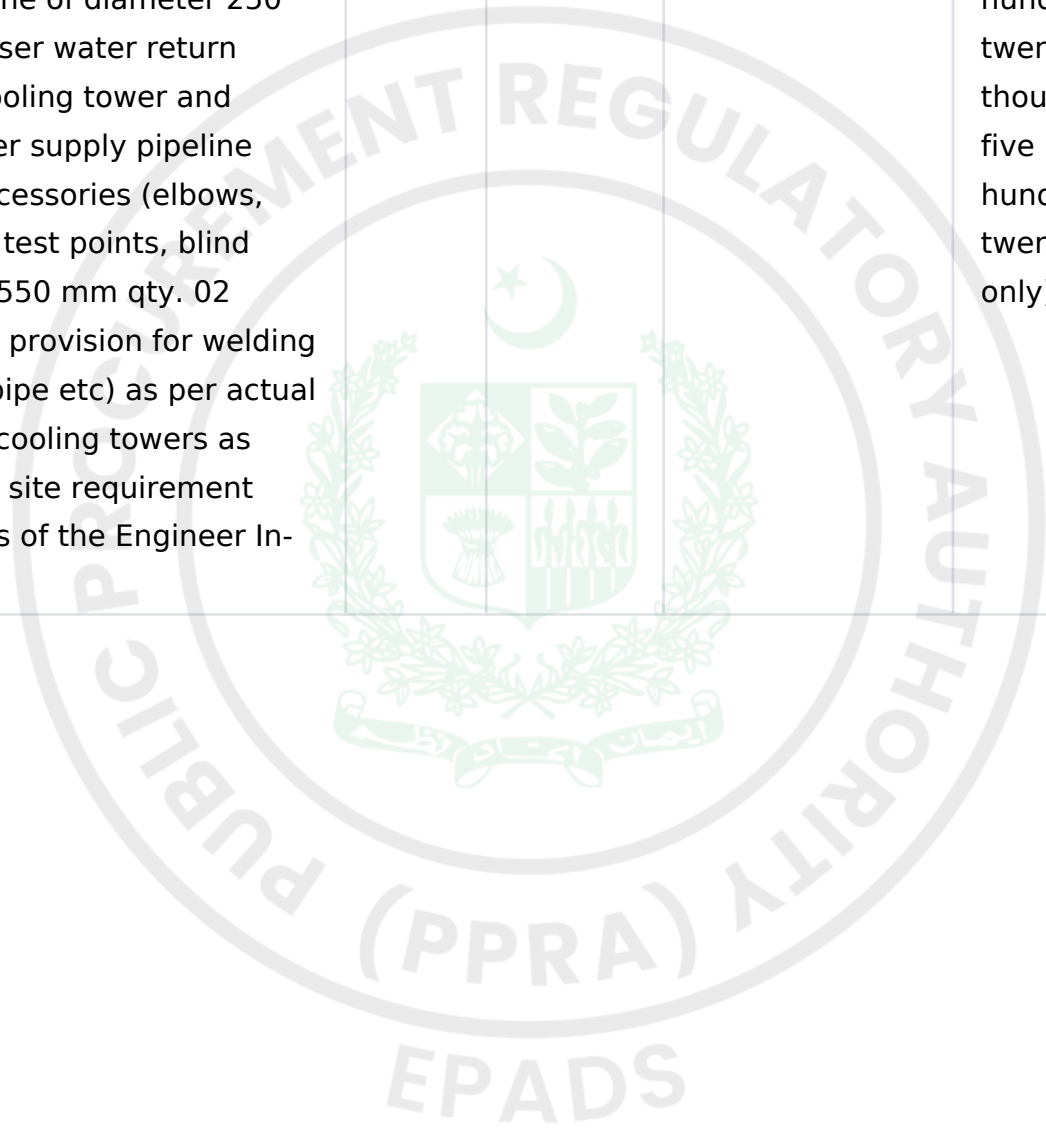
3	3	Dismantling of existing deteriorated in-line centrifugal pump with motor installed on the condenser supply piping and all allied accessories with specialized tools/ equipment without damaging the surrounding piping and foundation and careful placement of the dismantled pump motor set at a designated place on wooden pallets and making good the damages as per site requirement, complete job in all respects as required and as per the instructions of the Engineer In-Charge.	P/Job	4	324,861.00	(Rupees Three hundred twenty four thousand eight hundred sixty one only)	1,299,444.00
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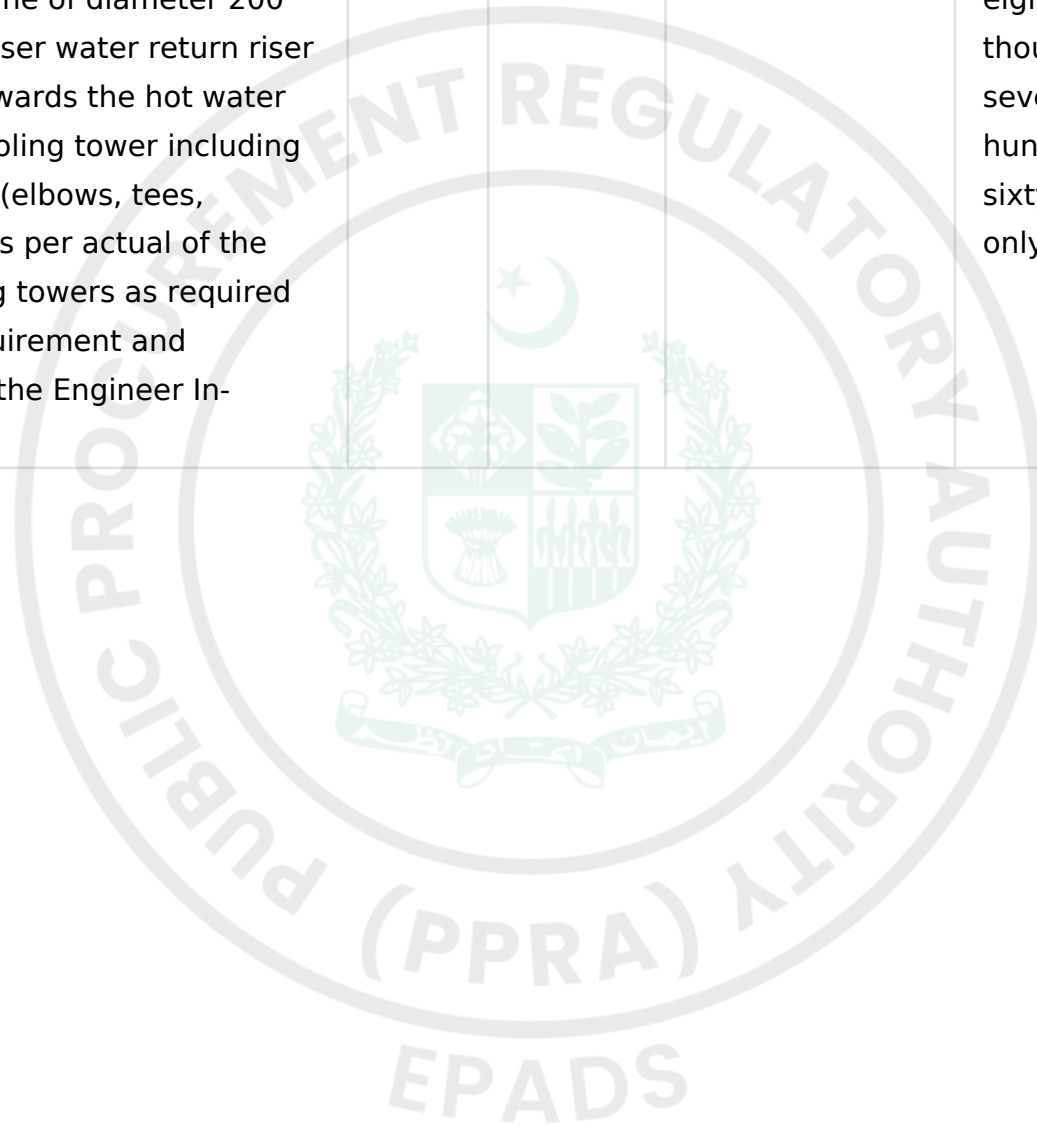
4	4	<p>Providing, installation, testing and commissioning of inline centrifugal pump ISO 9906 compliant coupled with motor on condenser water supply/ Cooling Tower discharge piping. The selection be based on the following parameters: - Location : Outdoor - Flow rate (m³/hr): 378 - Service: Cooling Tower (open cycle) water - Type: Centrifugal, in line, direct driven - Head (kPa): 315 - Water type: Chemically dosed for chiller condensor / open loop - Water Working Temperature Range: 01 to 50°C - Existing Motor Power: 55kW - Volts-Phase-Hz: 400-3φ-50 - RPM: 1450 - Protection class: IP65 (Please refer Appendix-VIII (item-4) for complete description of this item.)</p>	P/Job	5	11,929,820.00	(Rupees eleven million, nine hundred twenty nine thousand eight hundred twenty only)	59,649,100.00
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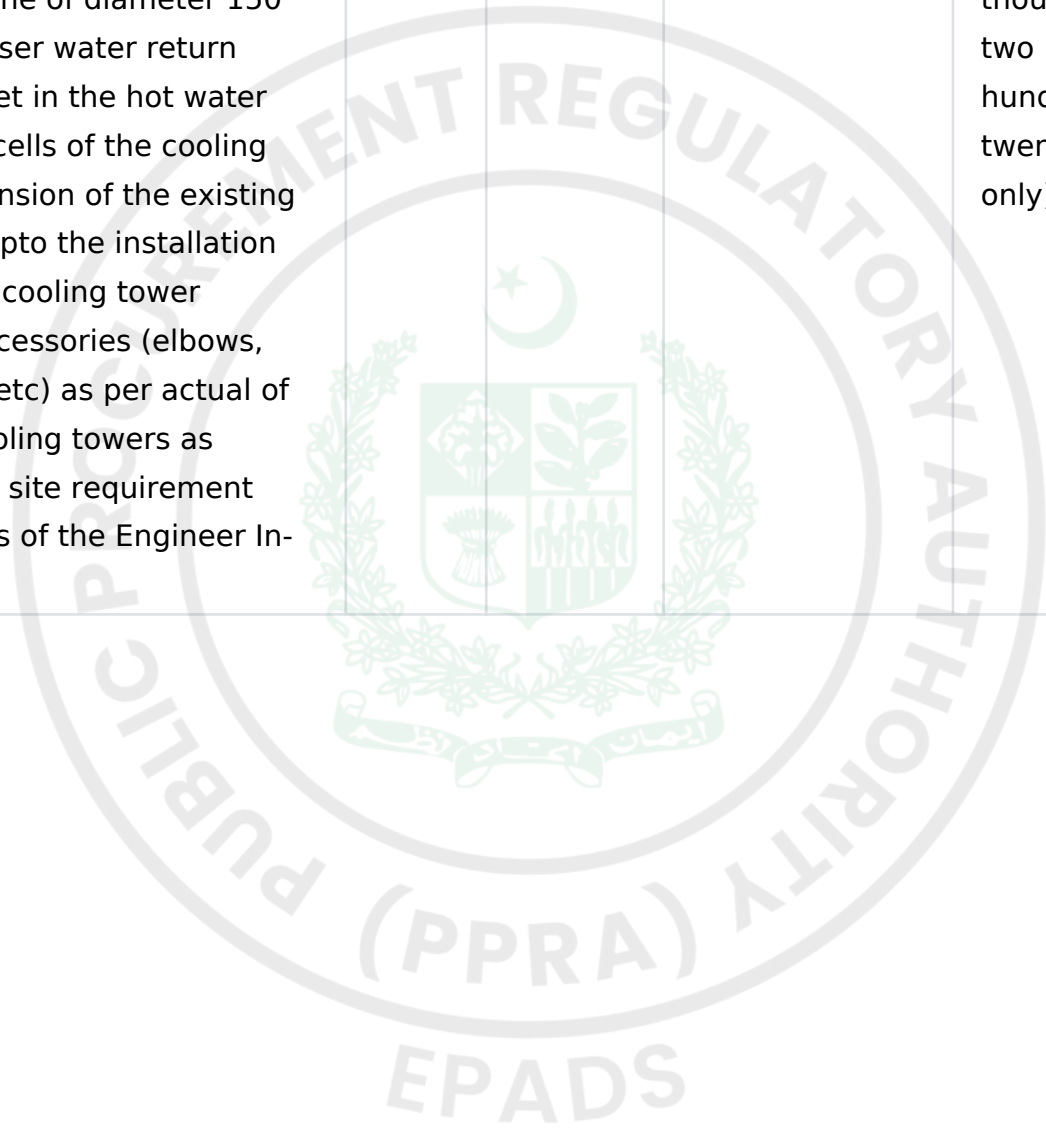
5	5	Supply, installation, testing & comissioning of M.S schedule 40 seamless pipeline of diameter 250 mm for condenser water return main pipe to cooling tower and condenser water supply pipeline including all accessories (elbows, tees, reducers, test points, blind flange size DN 550 mm qty. 02 having suitable provision for welding of 250MM Dia pipe etc) as per actual of the existing cooling towers as required as per site requirement and instructions of the Engineer In-Charge.	P/RM	45	122,524.00	(Rupees one hundred twenty two thousand five hundred twenty four only)	5,513,580.00
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6	6	Supply, installation, testing & comissioning of M.S schedule 40 seamless pipeline of diameter 200 mm for condenser water return riser branch pipe towards the hot water basin of the cooling tower including all accessories (elbows, tees, reducers etc) as per actual of the existing cooling towers as required as per site requirement and instructions of the Engineer In-Charge.	P/RM	10	98,769.00	(Rupees ninety eight thousand seven hundred sixty nine only)	987,690.00
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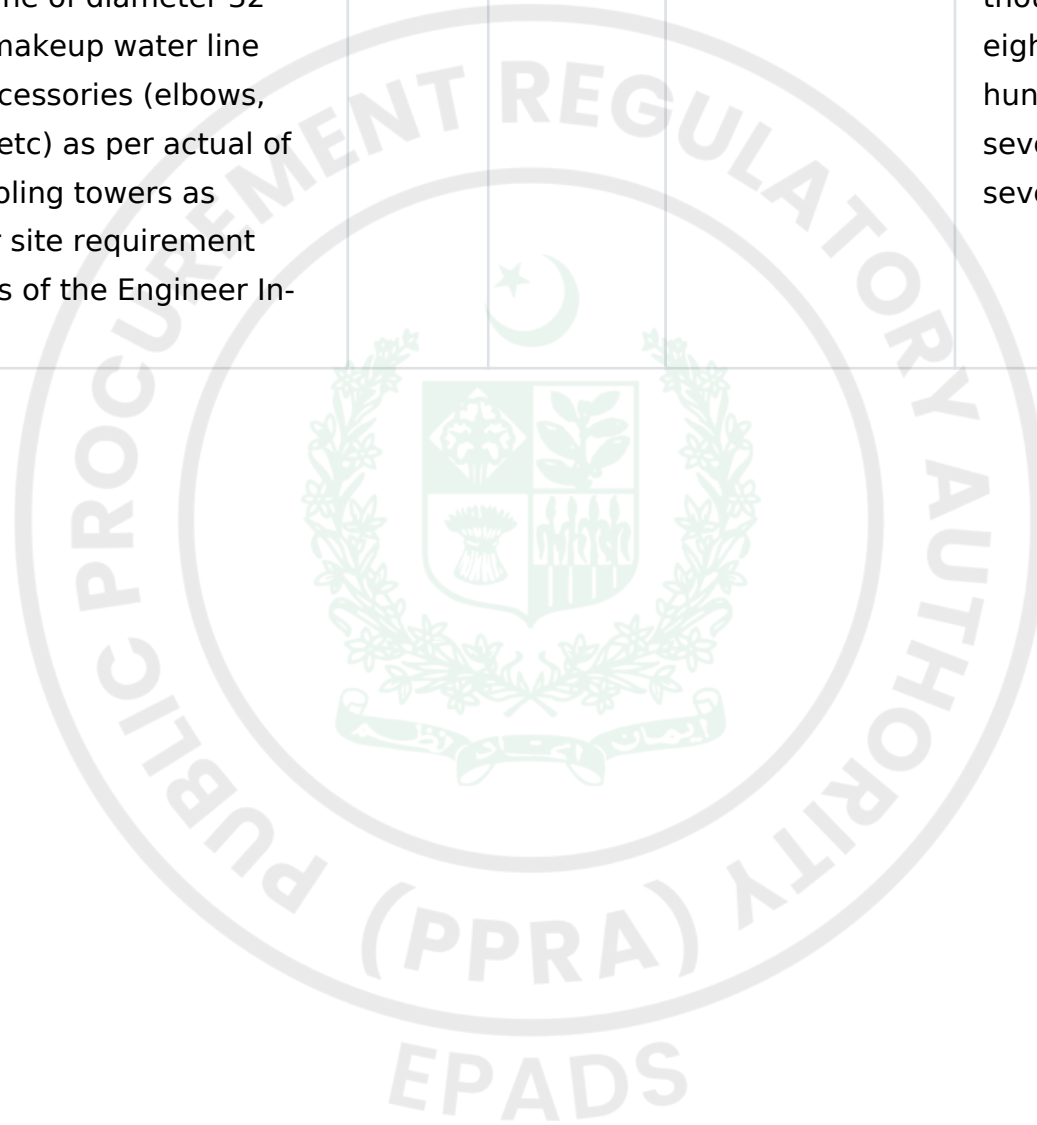


7	7	Supply, installation, testing & comissioning of M.S schedule 40 seamless pipeline of diameter 150 mm for condenser water return branch pipe inlet in the hot water basins of both cells of the cooling tower and extension of the existing equalizer line upto the installation site of the new cooling tower including all accessories (elbows, tees, reducers etc) as per actual of the existing cooling towers as required as per site requirement and instructions of the Engineer In-Charge.	P/RM	20	42,225.00	(Rupees forty two thousand two hundred twenty five only)	844,500.00
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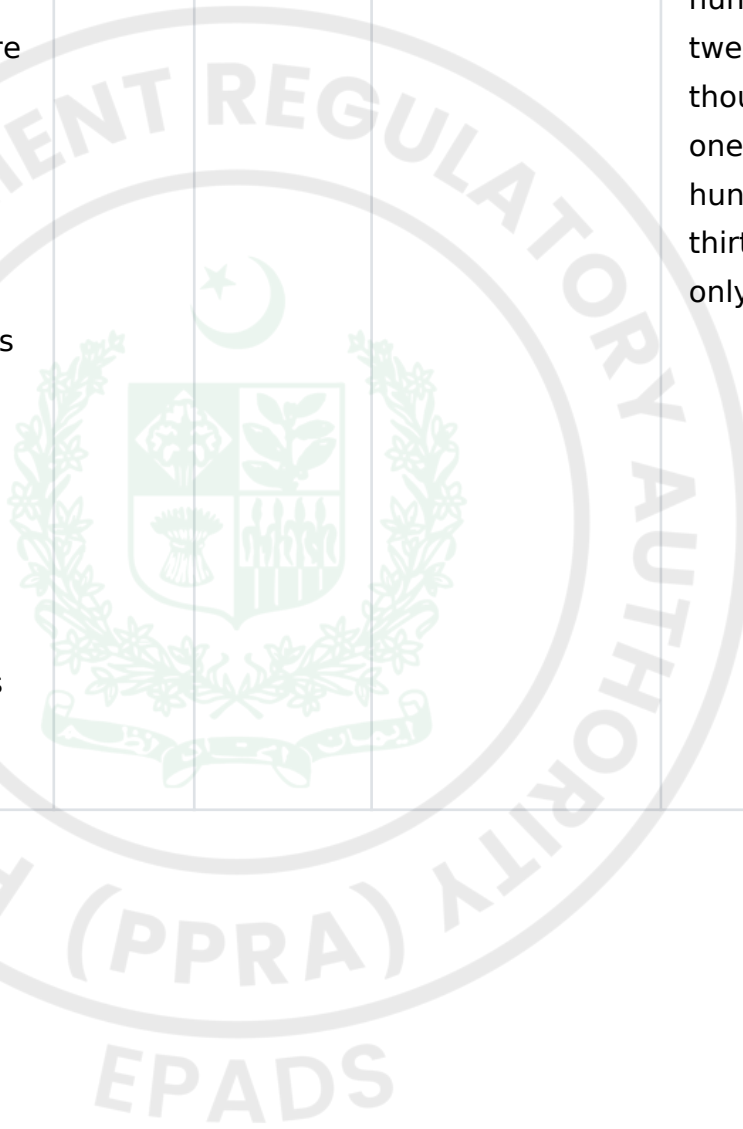


8	8	Supply, installation, testing & comissioning of M.S schedule 40 seamless pipeline of diameter 100 mm for drainage line and interconnection of the tower equalizer line with the main equalizer line including all accessories (elbows, tees, reducers etc) as per actual of the existing cooling towers as required as per site requirement and instructions of the Engineer In-Charge.	P/RM	10	36,960.00	(Rupees thirty six thousand nine hundred sixty only)	369,600.00
9	9	Supply, installation, testing & comissioning of M.S schedule 40 seamless pipeline of diameter 80 mm for overflow drain pipe and interconnection of the drain line with overflow drain pipe including all accessories (elbows, tees, reducers, flanges etc) as per actual of the existing cooling towers as required as per site requirement and instructions of the Engineer In-Charge.	P/RM	10	20,019.00	(Rupees twenty thousand nineteen only)	200,190.00

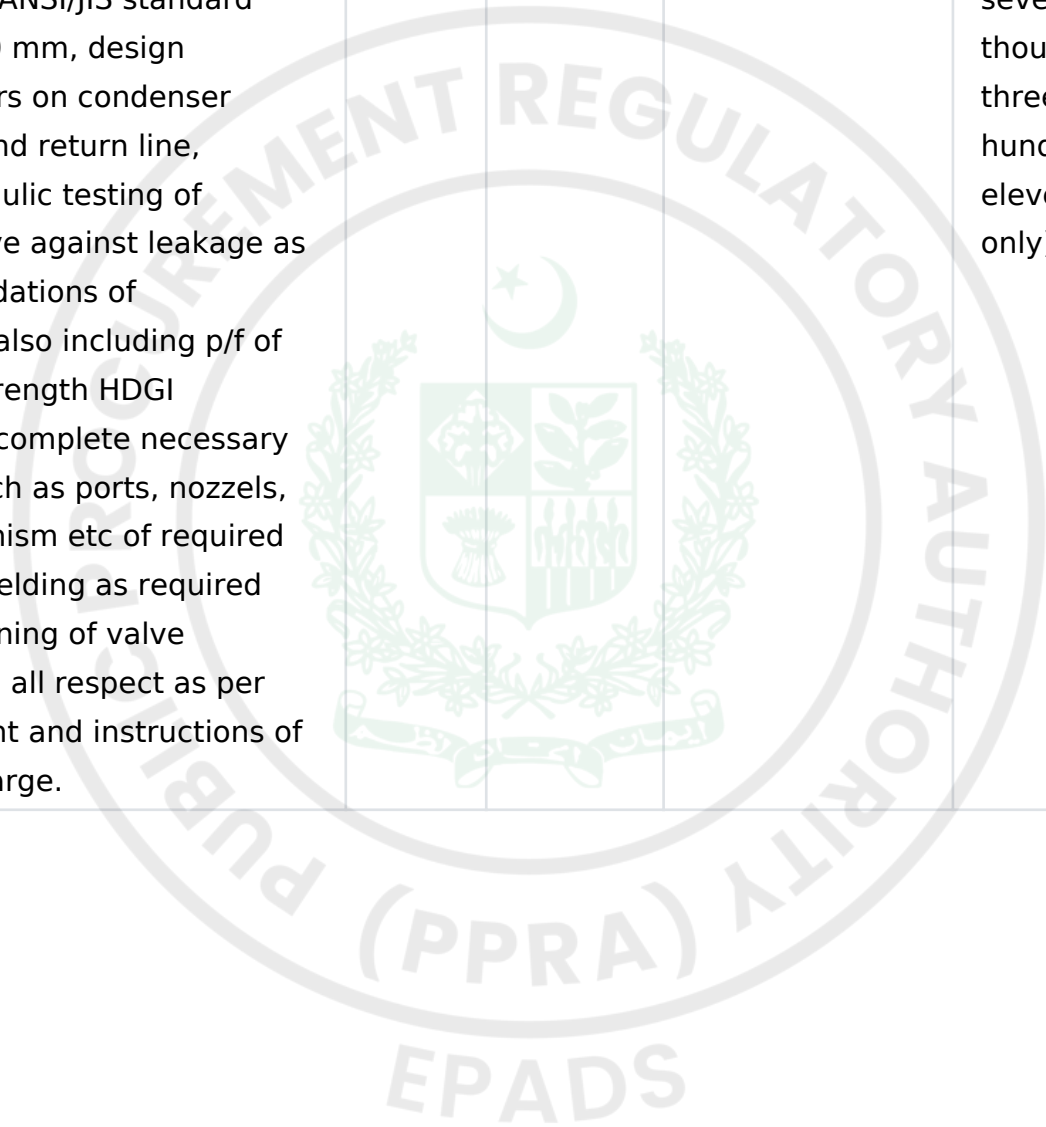
10	10	Supply, installation, testing & comissioning of M.S schedule 40 seamless pipeline of diameter 32 mm for tower makeup water line including all accessories (elbows, tees, reducers etc) as per actual of the existing cooling towers as required as per site requirement and instructions of the Engineer In-Charge.	P/RM	8	7,877.00	(Rupees seven thousand eight hundred seventy seven only)	63,016.00
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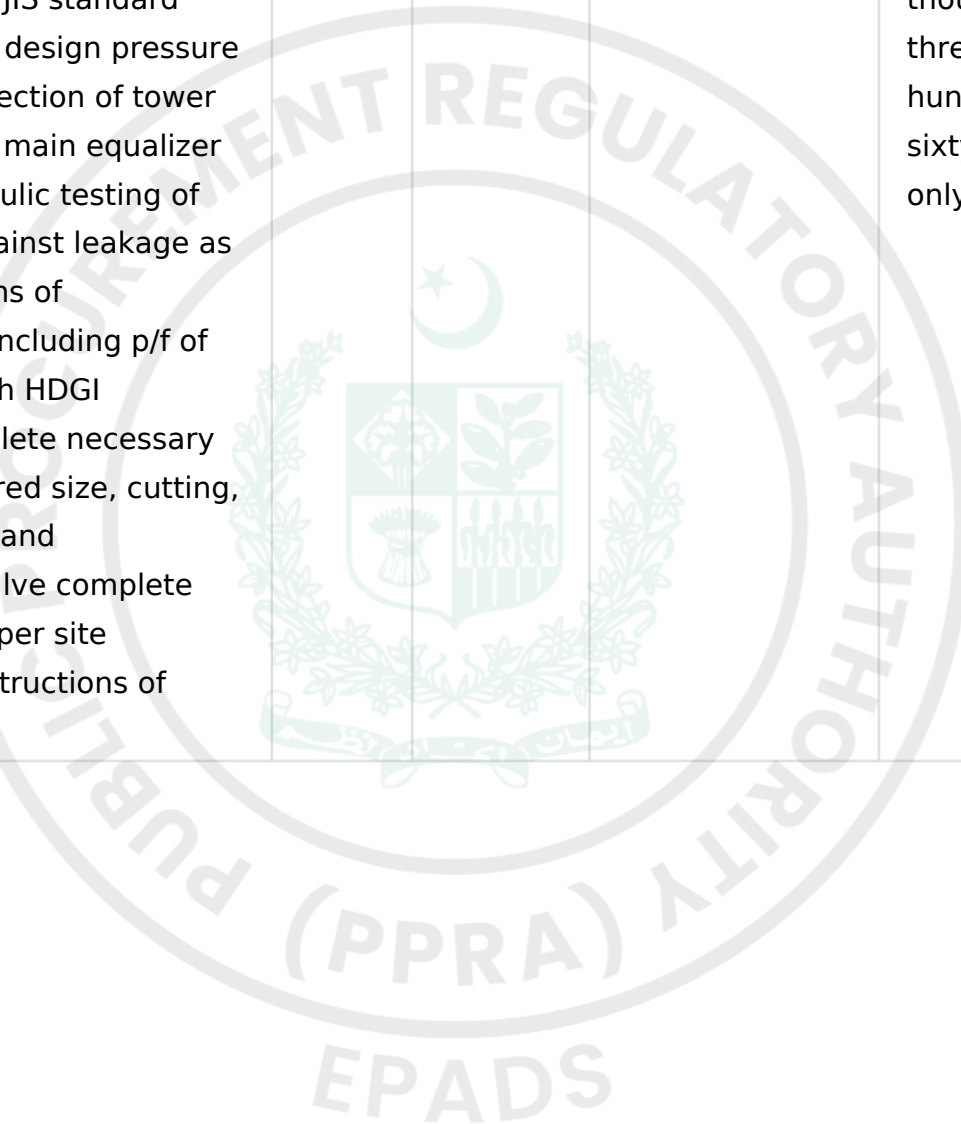
11	11	Supply and installation of butterfly valve flanged type compliant with relevant ASME/ANSI/JIS standard having dia 250 mm, design pressure 16 bars (Qty. 02 valves shall be compatible for installation with motorized actuator) on condenser water supply and return line, including hydraulic testing of mentioned valve against leakage as per recommendations of manufacturer, also including p/f of gasket, high strength HDGI nuts/bolts and other necessary accessories, cutting, welding as required and commissioning of valve complete job in all respect as per site requirement and instructions of Engineer In-charge.	Each	5	124,139.00	(Rupees one hundred twenty four thousand one hundred thirty nine only)	620,695.00
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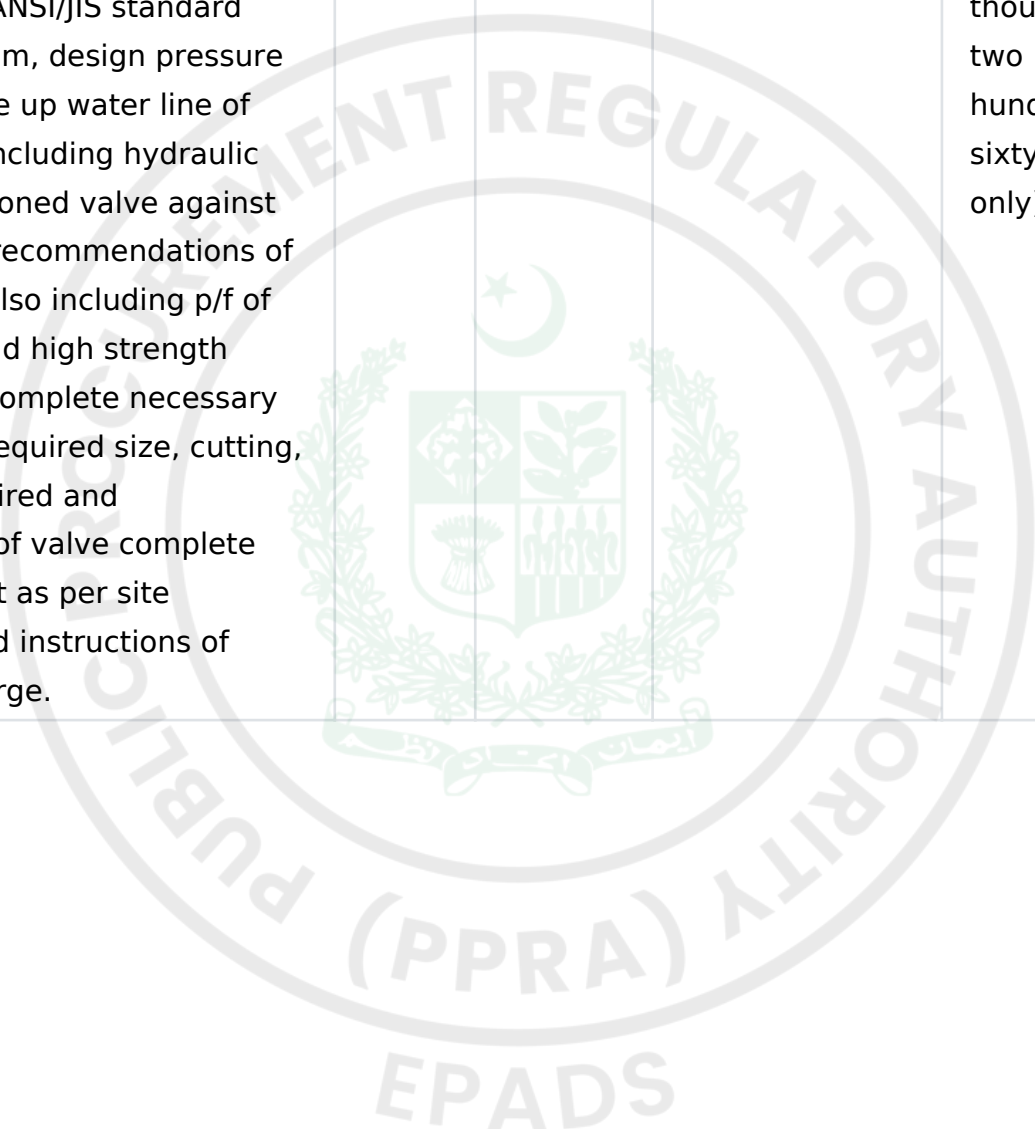
12	12	Supply and installation of balancing valve flanged type compliant with relevant ASME/ANSI/JIS standard having dia. 250 mm, design pressure 16 bars on condenser water supply and return line, including hydraulic testing of mentioned valve against leakage as per recommendations of manufacturer, also including p/f of gasket, high strength HDGI nuts/bolts and complete necessary accessories such as ports, nozzels, locking mechanism etc of required size, cutting, welding as required and commissioning of valve complete job in all respect as per site requirement and instructions of Engineer In-charge.	Each	2	607,311.00	(Rupees six hundred seven thousand three hundred eleven only)	1,214,622.00
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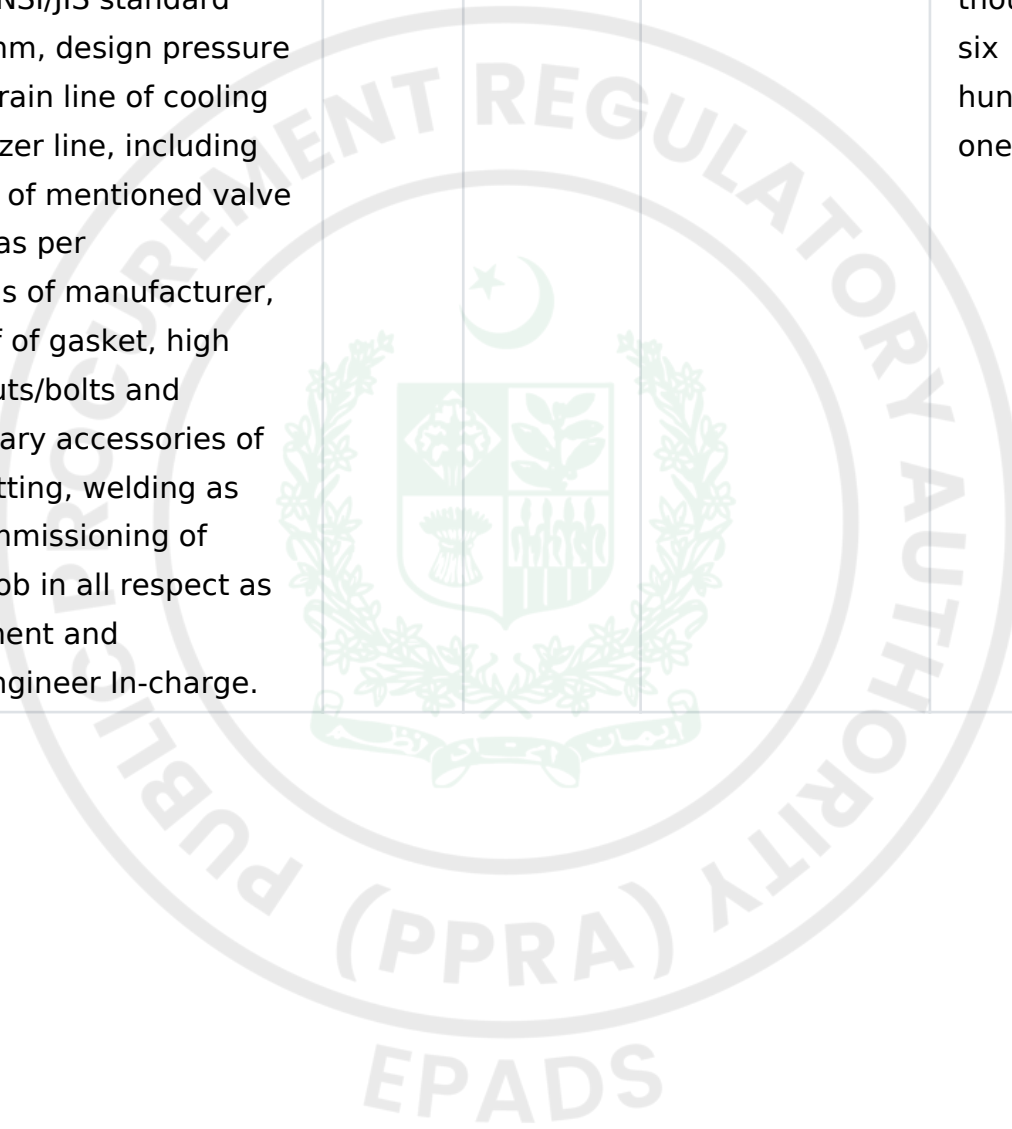
13	13	Supply and installation of Butterfly valve flanged type compliant with relevant ASME/ANSI/JIS standard having dia 100 mm, design pressure 16 bars on the connection of tower equalizer line to the main equalizer line, including hydraulic testing of mentioned valve against leakage as per recommendations of manufacturer, also including p/f of gasket, high strength HDGI nuts/bolts and complete necessary accessories of required size, cutting, welding as required and commissioning of valve complete job in all respect as per site requirement and instructions of Engineer In-charge.	Each	1	41,364.00	(Rupees forty one thousand three hundred sixty four only)	41,364.00
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14	14	Supply and installation of Gate Valve flanged type compliant with relevant ASME/ANSI/JIS standard having dia 32 mm, design pressure 16 bars on make up water line of cooling tower, including hydraulic testing of mentioned valve against leakage as per recommendations of manufacturer, also including p/f of gasket, HDGI and high strength nuts/bolts and complete necessary accessories of required size, cutting, welding as required and commissioning of valve complete job in all respect as per site requirement and instructions of Engineer In-charge.	Each	1	18,264.00	(Rupees eighteen thousand two hundred sixty four only)	18,264.00
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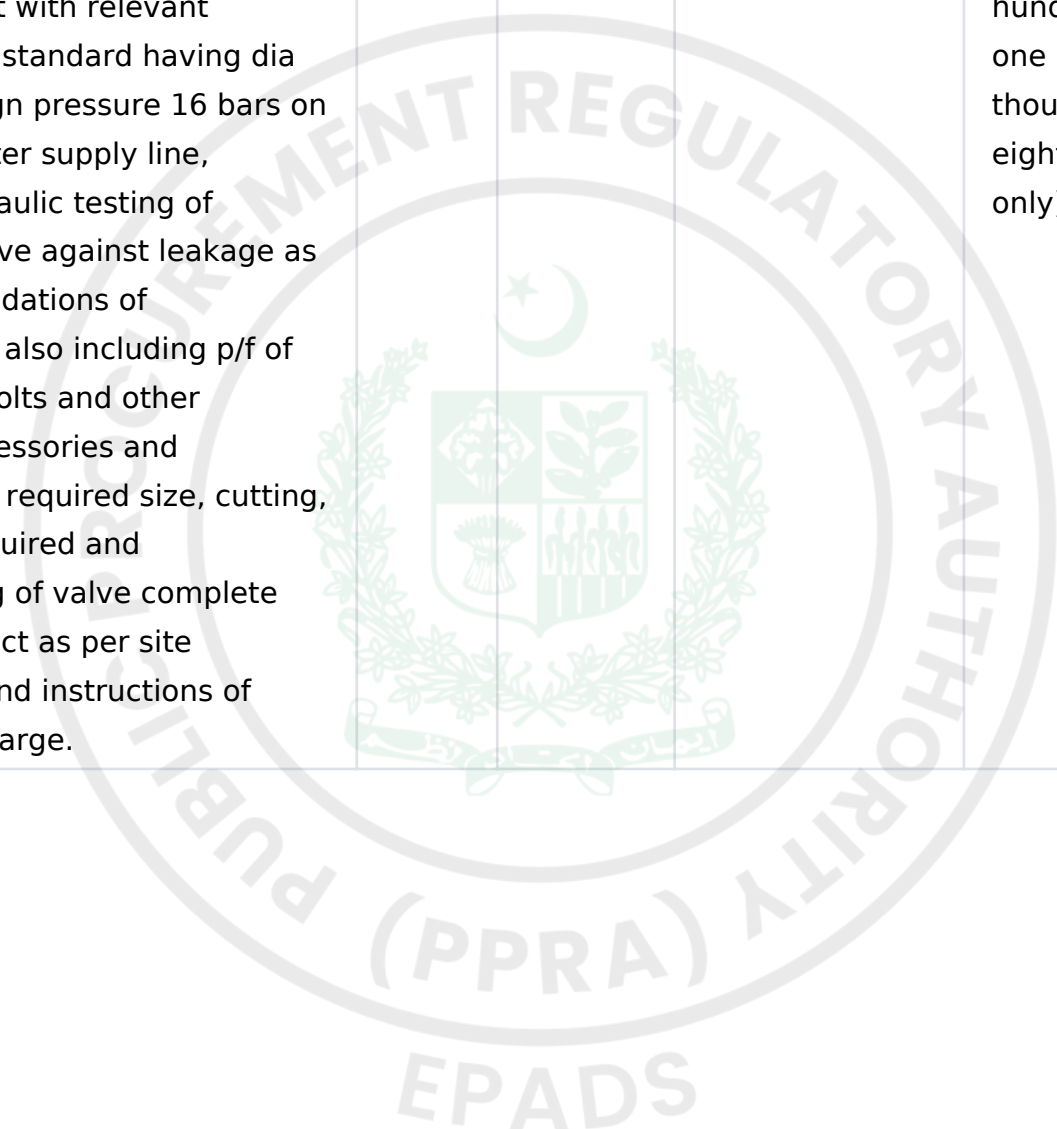
15	15	Supply and installation of Gate Valve flanged type compliant with relevant ASME/ANSI/JIS standard having dia 100 mm, design pressure 16 bars for the drain line of cooling tower and equalizer line, including hydraulic testing of mentioned valve against leakage as per recommendations of manufacturer, also including p/f of gasket, high strength HDGI nuts/bolts and complete necessary accessories of required size, cutting, welding as required and commissioning of valve complete job in all respect as per site requirement and instructions of Engineer In-charge.	Each	3	66,601.00	(Rupees sixty six thousand six hundred one only)	199,803.00
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16	16	Supply, installation, testing and comissioning of Y-Type strainer flanged type relevant ASME/ANSI/JIS standard compliant dia 250 mm, Mesh Size 0.75 mm, design pressure 16 bars, including hydraulic testing against leakage as per recommendations of manufacturer, also including p/f of gasket, high strength HDGI nuts/bolts and complete necessary accessories of required size, cutting, welding as required in the condenser water supply line before the pump including all fittings and accessories as per site requirement and Instructions of the Engineer In-Charge.	Each	1	305,589.00	(Rupees three hundred five thousand five hundred eighty nine only)	305,589.00
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17	17	Supply and installation of Non Return Valve flanged end swing type compliant with relevant ASME/ANSI/JIS standard having dia 250 mm, design pressure 16 bars on condenser water supply line, including hydraulic testing of mentioned valve against leakage as per recommendations of manufacturer, also including p/f of gasket, nuts/bolts and other necessary accessories and foundations of required size, cutting, welding as required and commissioning of valve complete job in all respect as per site requirement and instructions of Engineer In-charge.	Each	1	401,081.00	(Rupees four hundred one thousand eighty one only)	401,081.00
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18	18	<p>Preparation of all existing and newly erected non HDGI surfaces to near white finish SA 2 1/2 with the help of sand blasting with provisioning of suitable abbrasive media, air compressor, nozzles, hoses, blasting machine complete material, consumable and skilled labour.</p> <p>Remove weld spatter and smoothen weld seams, corners and sharp edges as applicable. Job also include isolation of other operational equipment during blasting activity, cleaning and disposal of waste material complete in all respect as per instructions of Incharge.</p>	P/SFT	3326	1,389.00	(Rupees one thousand three hundred eighty nine only)	4,619,814.00
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19	19	Cleaning and painting of all existing and newly erected prepared surface including valves and allied fittings etc for C4 Corrosive , Medium life coating system by one coat of zinc rich primer and then two coat of epoxy paint (Nippon, Kansai, Jotun or equivalent) to the required thickness as per instruction of manufacturer and engineer in-charge including air spray machine complete in all respect.	P/Sq. M	294.015	6,328.00	(Rupees six thousand three hundred twenty eight only)	1,860,526.92
20	20	Providing and fixing PVC pipe spouts of 3" (80 mm) dia and required length including fixing in cement mortar 1:4 etc. complete	P/RM.	10	2,196.18	(Rupees two thousand one hundred ninety six paisa eighteen only)	21,961.80

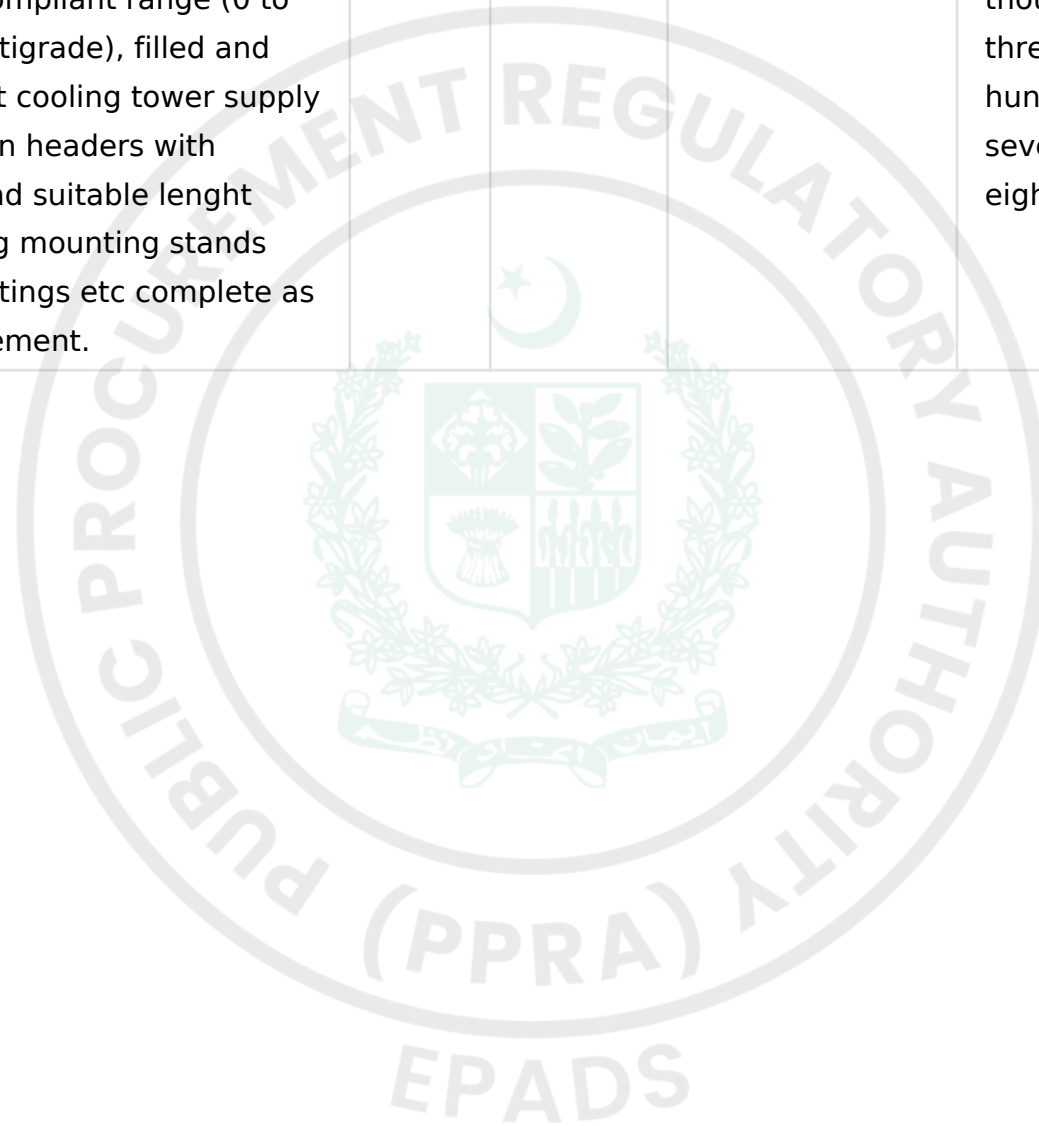
21	21	Providing & fixing cubical type metal sheet vermin protected LT pannel board as per drawing with locking arragement duly powder coated I/c all fastening devices and electrical wire/ leads for internal connection complete as required.	P/SFT	15	15,058.40	(Rupees fifteent thousand fifty eight paisa forth only)	225,876.00
22	22	Providing & fixing 400 Amps, 4 pole, three phase bus bar strip set (Standred size) fitted in suitable size metallic sheet steel box with hinged type front door duly painted and fixed on existing board I/c connection as required.	Each	1	25,768.40	(Rupees twenty five thousand seven hundred sixty eight paisa forty only)	25,768.40
23	23	Providing & fixing pilot lamp set fitted on existing board I/c connection as required.	P/Set	1	1,220.80	(Rupees one thousand two hundred twenty paisa eighty only)	1,220.80

24	24	Providing and laying 4 core, 35mm ² PVC insulated & PVC sheathed, 600/1000 volts grade with stranded copper conductor, armoured underground, L.T cable buried in the ground dully covered with sand and warning cable tiles as per Pak. P. W.D specification as required	P/RM	15	11,226.60	(Rupees eleven thousand two hundred twenty six paisa sixty only)	168,399.00
25	25	Providing and laying 4 core, 25mm ² PVC insulated & PVC sheathed, 600/1000 volts grade with stranded copper conductor, unarmoured, L.T cable in existing all kind of conduit or cable duct as per Pak. P. W.D specification as required.	P/RM	100	5,618.20	(Rupees five thousand six hundred eighteen paisa twenty only)	561,820.00
26	26	Supply and drawing of 16mm ² single core PVC insulated wire in all kinds of existing or given conduit/ cable duct as required. Note: ECC for pump	P/RM	50	960.40	(Rupees nine hundred sixty paisa forty only)	48,020.00

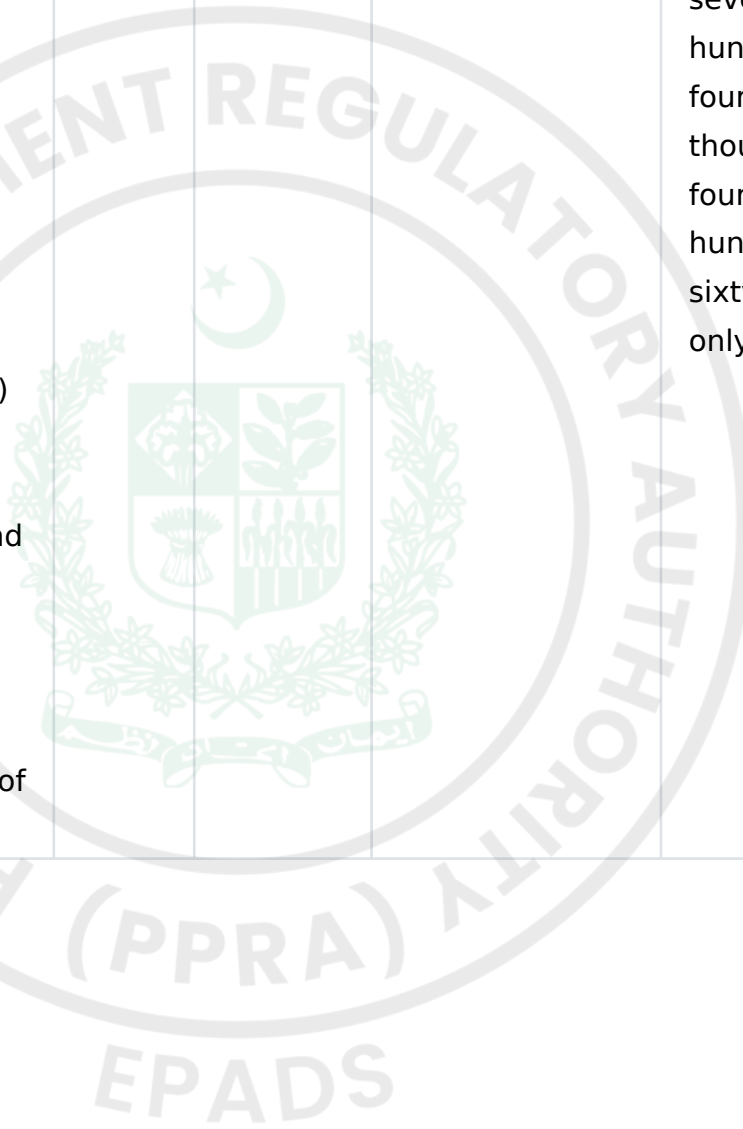
27	27	Providing and laying 4 core, 10mm ² , stranded copper conductor, PVC insulated & PVC sheathed cable including 2.5mm ² single core PVC insulated wire as ECC in all kind of existing or given conduit/ duct as required. Note: Job also include proper termination of Cables as per site requirement.	P/RM	250	2,745.40	(Rupees two thousand seven hundred forty five paisa forty only)	686,350.00
28	28	Making termination of 3 or 4 core 35mm ² to 50mm ² armoured/ unarmoured copper conductor, PVC x PVC L.T cable including providing & fixing proper lugs, etc complete in all respect as required	P/Job	2	3,491.60	(Rupees three thousand four hundred ninety one paisa sixty only)	6,983.20
29	29	Making termination of 3 or 4 core 16mm ² to 25mm ² armoured/ unarmoured copper conductor, PVC x PVC L.T cable including providing & fixing proper lugs, etc complete in all respect as required	P/Job	4	3,211.60	(Rupees three thousand two hundred eleven paisa sixty only)	12,846.40

30	30	Providing and fixing 250 to 400 Amps, (High Breaking Capacity) T.P circuit breaker fixed on existing board, i/c inter connection as required.	Each	1	59,904.60	(Rupees fifty nine thousand nine hundred four paise sixty only)	59,904.60
31	31	Providing / Fabricating & fixing of cable tray (from existing tray network to new cooling tower and pump) made of 16 SWG Perforated bottom HDGI Cable Tray with 16 SWG HDGI Cover With Joint Plates, Nuts & Bolts. of size 6"x3", with complete necessary supports, complete job as per the instructions of the Engineer In-charge.	P/Rft	20	1,849.00	(Rupees one thousand eight hundred forty nine only)	36,980.00
32	32	Providing & fixing of 4" dia dial water pressure gauge ASME/EN/JIS Compliant range (0 to 60 PSi), filled and outdoor type at suction and discharge of the condenser water pump with syphon type, isolating valves and suitable fittings etc complete as per site requirement.	Each	10	34,189.00	(Rupees thirty four thousand one hundred eighty nine only)	341,890.00

33	33	Providing & fixing of 6" dia water temperature gauge/ thermometer ASME/EN/JIS Compliant range (0 to 60 Degree Centigrade), filled and outdoor type at cooling tower supply and return main headers with thermowells and suitable length stems including mounting stands and suitable fittings etc complete as per site requirement.	Each	2	31,378.00	(Rupees thirty one thousand three hundred seventy eight only)	62,756.00
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34	34	<p>Rehabilitation and redesigning (as required) of existing electrical cum control panel of cooling towers including dismatling of existing control panel accessories including dismantling of main incoming breaker and star delta panel accessories (MCCBs, magnetic contactors, relays, voltmeters, current transformers, associated wiring housed inside the panel etc.) for cooling tower fans (8 Nos.) and condenser water pumps (4 Nos.). Job includes safely handing over and placing the dismantled accessories at a designated place as per the instructions of the Engineer In-Charge. (Please refer Appendix-VIII (item-34) for complete description of this item.)</p>	P/Job	1	9,704,465.00	(Rupees nine million seven hundred four thousand four hundred sixty five only)	9,704,465.00
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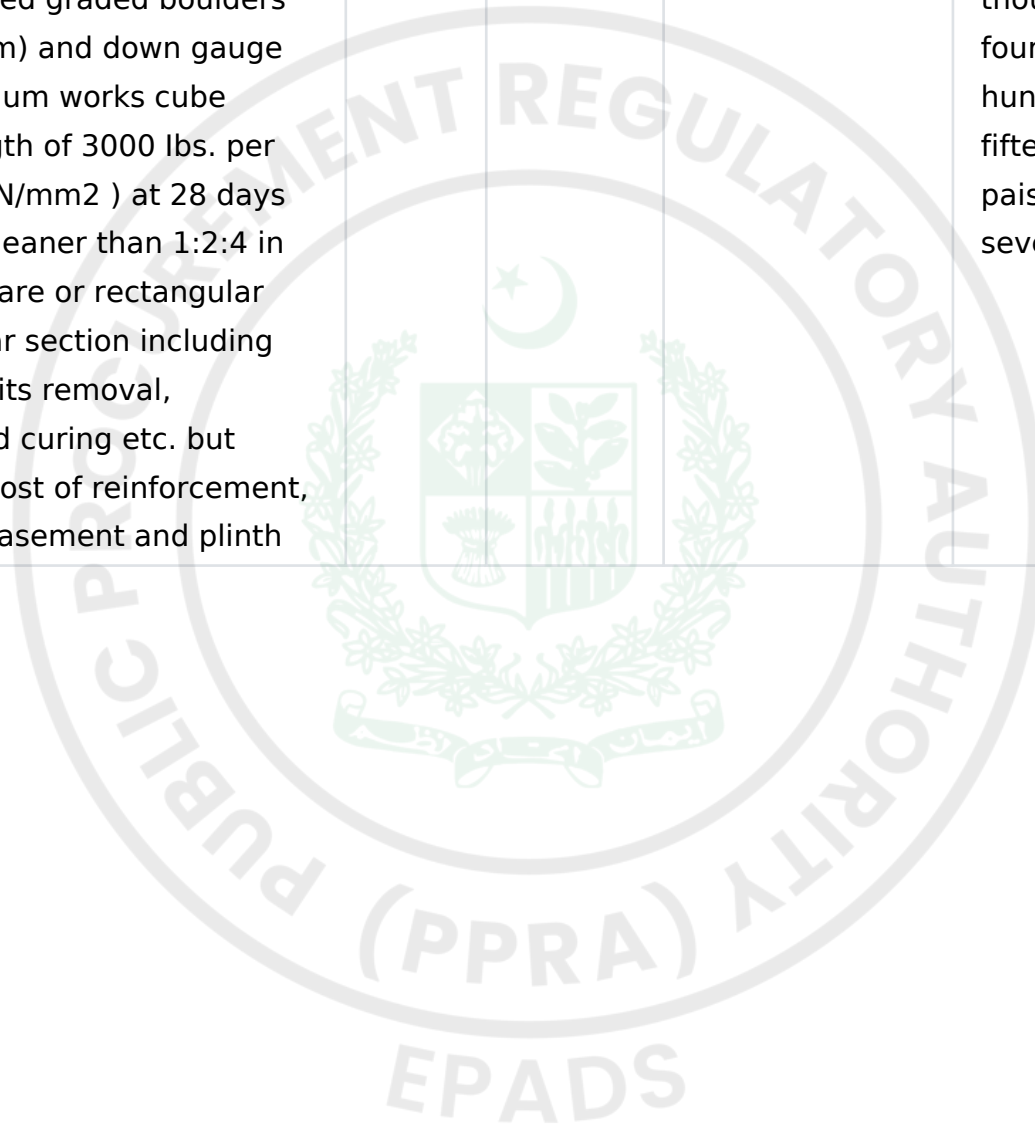


35	35	Dismantling R.C.C. including separating reinforcement from concrete in foundation, basement, plinth and ground floor including stacking at site and disposing of unserviceable material within three chains (91.5 m)	P/100 Cft	266	11,838.75	(Rupees eleven thousand eight hundred thirty eight paise seventy five only)	31,438.98
36	36	Providing and laying reinforced cement concrete using lawrancepur sand and crushed graded boulders 3/4 inch (19 mm) and down gauge having a minimum works cube crushing strength of 3750 lbs. per sq inch (23.24 N/mm ²) at 28 days with a mix not leaner than 1:1.5:3 in straight walls more than 6" (152 mm) thick including form work and its removal, compacting and curing etc. but excluding the cost of reinforcement, in foundation basement and plinth	P/100 Cft	663	66,328.77	(Rupees sixty six thousand three hundred twenty eight paise seventy seven only)	439,452.48

EPADS

37	37	Supplying stacking and filling sand of approved quality from outside sources in foundation, trenches, plinth or under floor, etc. including dressing, watering and consolidation by ramming in layers not exceeding 9 inches (229 mm) in depth to full compaction and lift up to 5 feet (1.52 m).	P/100 Cft	1,527	6,817.92	(Rupees six thousand eight hundred seventeen Paise ninety two only)	104,109.58
38	38	Providing and laying reinforced cement concrete using lawrencepur sand and crushed graded boulders 3/4 inch (19 mm) and down gauge having a minimum works cube crushing strength of 3000 lbs. per sq inch (20.69 N/mm ²) at 28 days with a mix not leaner than 1:2:4 in raft or strip foundation with columns and pillars, of any shape including form work and its removal, compacting, leveling and curing etc. complete but excluding the cost of reinforcement, in foundation basement and plinth	P/100 Cft	1,332	49,211.61	(Rupees forty nine thousand two hundred eleven paise sixty one only)	655,498.64

39	39	Providing and laying reinforced cement concrete using lawrencepur sand and crushed graded boulders 3/4 inch (19 mm) and down gauge having a minimum works cube crushing strength of 3000 lbs. per sq inch (20.69 N/mm ²) at 28 days with a mix not leaner than 1:2:4 in columns of square or rectangular shape of regular section including form work and its removal, compacting and curing etc. but excluding the cost of reinforcement, in foundation basement and plinth	P/100 Cft	35	61,415.37	(Rupees sixty one thousand four hundred fifteen paise thirty seven only)	21,482.95
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40	40	Providing and laying hard grade ribbed deformed (minimum yield point 60,000 psi) reinforcement bars with & including the cost of straightening, cutting, bending, binding, wastage, and such overlaps as are not shown in the drawings, placing in position on cement concrete 1:2:4 precast or m.s. chairs, tying with binding wire, cost of chairs and wires etc. in all kinds of RCC work in foundation, basement, plinth and ground floor of building including septic tanks and under ground tanks and in projections for future extension.	P/Kg	6446	395.43	(Rupees three hundred ninety five paisa forty three only)	2,548,941.78
41	41	Providing and fixing R. S. Joists and channels including welding all the side of the sections at the junction, gusset plates, bolts, nuts etc. complete with hoisting and erecting in position in steel trusses, frames, towers etc of any design in ground floor.	P/Kg	1,000	482.24	(Rupees four hundred eighty two paisa twenty four only)	482,244.00

42	42	Providiing & Filling cavity / joint having size 15mm x 15mm with Poly Sulphide Conflex PS (or equivalent) including the cost of 19mm dia backer rod, Conflex primer on both edges of cavity / joint, cleaning the surface before application, cartage, wastage etc. complete in all respect as directed by the Engineer In Charge.	P/Kg	145	1,068.00	(Rupees one thousand sixty eight only)	154,817.28
43	43	Providing and laying reinforced cement concrete using lawrancepur sand and crushed graded boulders 3/4 inch (19 mm) and down gauge having a minimum works cube crushing strength of 3750 lbs. per sq inch (23.24 N/mm ²) at 28 days with a mix not leaner than 1:1.5:3 in straight walls 5" (127 mm) to 6" (152 mm) thick including form work and its removal, compacting and curing etc. but excluding the cost of reinforcement, in foundation basement and plinth	P/100 Cft	553	79,688.27	(Rupees seventy nine thousand six hundred eighty eight paisa twenty seven only)	440,676.11

44	44	Providing and laying hard grade ribbed deformed (minimum yield point 60,000 psi) reinforcement bars with & including the cost of straightening, cutting, bending, binding, wastage, and such overlaps as are not shown in the drawings, placing in position on cement concrete 1:2:4 precast or m.s. chairs, tying with binding wire, cost of chairs and wires etc. in all kinds of RCC work in foundation, basement, plinth and ground floor of building including septic tanks and under ground tanks and in projections for future extension.	P/Kg	2008	395.43	(Rupees three hundred ninety five paisa forty three only)	794,023.44
45	45	Providing and fixing R. S. Joists and channels including welding all the side of the sections at the junction, gusset plates, bolts, nuts etc. complete with hoisting and erecting in position in steel trusses, frames, towers etc of any design in ground floor.	P/Kg	3116	482.24	(Rupees four hundred eighty two paisa twenty four only)	1,502,672.30
						GRAND TOTAL:	Rs609,268,729.66

Scope of Work

Please refer Appendix-III

Price Schedule

For Individual Jobs

#	Job Title	Quantity	Unit Price (PKR)	Total Price (PKR)	Delivery Location	Delivery Period / Year	Country of Origin
1							
2							

For Lots

#	Lot Title	Total Lot Price (PKR)	Country of Origin
1	[Lot 1 Title]		





General Conditions of Contract

A. General

1. Definitions

1.1. Unless the context otherwise requires, the following terms whenever used in this Contract shall have the same meaning and shall be interpreted as indicated

1.1.1. "Applicable Law" means the laws and any other instruments having the force of law in the Government's Country, or in such other country as may be specified in the Special Conditions of the Contract (SC), as they may be issued and in force from time to time;

1.1.2. "The Contract" means an agreement enforceable by law;

1.1.3. "The Contract Price" means the price payable to the Contractor under the Contract for the full and proper performance of its contractual obligations;

1.1.4. "The Services" means the work to be performed by the Contractor pursuant to this Contract and as prescribed in the Specifications and Schedule of Activities included in the Contractor's Bid;

1.1.5. "Ancillary Services" means those services ancillary to the provision of Services, such as transportation and insurance, and any other incidental services, such as installation, commissioning, provision of technical assistance, training, and other such obligations of the Contractor covered under the Contract;

1.1.6. "GCC" means the General Conditions of Contract contained in this section;

1.1.7. "SCC" means the Special Conditions of Contract by which the GCC may be amended or supplemented;

1.1.8. "Day" means calendar day unless indicated otherwise;

1.1.9. "Effective Date" means the date on which this Contract comes into force and effect;

1.1.10. "The Contractor" means the individual or corporate body whose Bids to provide the Services has been accepted by the Procuring Agency;

1.1.11. "The Project Site," where applicable, means the place or places named in Bid Data Sheet and technical Specifications;

1.1.12. "Government" means the Government of Pakistan;

1.1.13. "Local Currency" means the currency of Pakistan;

1.1.14. "In Writing" means communicated in written form with proof of receipt;

1.1.15. "Completion Date" means the date of completion of the Services by the Contractor as certified by the Procuring Agency;

1.1.16. "Foreign Currency" means any currency other than the currency of the country of the Procuring Agency;

1.1.17. "Party" means the Procuring Agency or the Contractor, as the case may be, and "Parties" means both of them;

1.1.18. "Service" means any object of procurement other than goods or works;

1.1.19. "Subcontractor" means any entity to which the Bidder subcontracts any part of the Services.

2. **Applicable Law**

2.1. The contract shall be governed and interpreted in accordance with the laws of Pakistan, unless otherwise specified in SCC.

3. **Language**

3.1. The Contract as well as all correspondence and documents relating to the Contract exchanged between the Contractor and the Procuring Agency, shall be written in the **English language** unless otherwise stated in the SCC. Supporting documents and printed literature that are part of the Contract may be in another language provided these are accompanied by an accurate translation of the relevant passages in English, in which case, for purposes of interpretation of the Contract, this translation shall govern.

4. **Notices**

4.1. Any notice, request, or consent made pursuant to this Contract shall be in writing and shall be deemed to have been made when delivered in person to an authorized representative of the Party to whom the communication is addressed, or when sent by registered mail, telex, telegram, or facsimile to such Party at the address specified in the SCC.

5. **Location**

5.1. The Services shall be performed at such locations as the Procuring Agency may approve and as specified in SCC.

5.2. A {DOCUMENTS}

6. **Authorized Representatives / Authority of Member in charge**

6.1. Any action required or permitted to be taken, and any document required or permitted to be executed, under this Contract by the Procuring Agency or the Contractor may be taken or executed by the officials specified in the SCC.

B. **Commencement, Completion, Modification, and Termination of Contract**

1. **Effectiveness of Contract**

1.1. This Contract shall come into effect on the date the Contract is signed by both parties and such other later date as may be stated in the SCC.

2. Commencement of Services

2.1. The Contractor shall confirm availability of Key Experts and begin carrying out the Services not later than the number of days after the Effective Date specified in the SCC.

3. Program schedule

3.1. Before commencement of the Services, the Contractor shall submit to the Procuring Agency for approval a Program showing the general methods, arrangements, order and timing for all activities. The Services shall be carried out in accordance with the approved Program as updated.

4. Starting Date/Expiration Date

4.1. The Contractor shall start carrying out the Services Five (05) days after the date the Contract becomes effective, or at such other date as may be specified in the SCC.

4.2. Unless terminated earlier pursuant to Clause **GCC 14** hereof, this Contract shall expire at the end of such time period after the Effective Date as specified in the SCC.

5. Entire Agreement

5.1. This Contract contains all covenants, stipulations and provisions agreed by the Parties. No agent or representative of either Party has authority to make, and the Parties shall not be bound by or be liable for, any statement, representation, promise or agreement not set forth herein.

6. Modification

6.1. Any modification or variation of the terms and conditions of this Contract, including any modification or variation of the scope of the Services, may only be made by written agreement between the Parties. However, each Party shall give due consideration to any modification(s) or variation(s) made by the other Party.

6.2. In cases of any modification(s) or variation(s), the prior written consent of the Procuring Agency is required.

7. Force Majeure

7.1. Definition

For the purposes of this Contract, "Force Majeure" means an event which is beyond the reasonable control of a Contractor and which makes a Contractor's performance of its obligations under the Contract impossible or so impractical as to be considered impossible under the circumstances.

7.2. No Breach of Contract

The failure of a Party to fulfill any of its obligations under the contract shall not be considered to be a breach of, or default under, this Contract in so far as such inability arises from an event of Force Majeure, provided that the Party affected by such an event (a) has taken all reasonable precautions, due care and reasonable alternative

measures in order to carry out the terms and conditions of this Contract, and (b) has informed the other Party as soon as possible about the occurrence of such an event.

7.3. Extension of Time

Any period within which a Contractor shall, pursuant to this Contract, complete any action or task, shall be extended for a period equal to the time during which such Party was unable to perform such action as a result of Force Majeure.

7.4. Payments

During the period of their inability to perform the Services as a result of an event of Force Majeure, the Contractor shall be entitled to continue to be paid under the terms of this Contract, as well as to be reimbursed for additional costs reasonably and necessarily incurred by them during such period for the purposes of the Services and in reactivating the Service after the end of such period.

8. Termination

8.1. By the Procuring Agency

The Procuring Agency may terminate this Contract in case of the occurrence of any of the events specified in paragraphs (a) through (e) of this Clause. In such an occurrence the Procuring Agency shall give at least thirty (30) calendar days' written notice of termination to the Contractor in case of the events referred to in (a) through (d); at least sixty (60) calendar days' written notice in case of the event referred to in (e);

8.1.1. If the Contractor fails to remedy a failure in the performance of its obligations hereunder, as specified in a notice of suspension;

8.1.2. If the Contractor becomes (or, if the Contractor consists of more than one entity, if any of its members becomes) insolvent or bankrupt or enter into any agreements with their creditors for relief of debt or take advantage of any law for the benefit of debtors or go into liquidation or receivership whether compulsory or voluntary;

8.1.3. If the Contractor fails to comply with any final decision reached as a result of arbitration proceedings;

8.1.4. If, as the result of Force Majeure, the Contractor is unable to perform a material portion of the Services for a period of not less than sixty (60) calendar days;

8.1.5. If the Procuring Agency, in its sole discretion and for any reason whatsoever, decides to terminate this Contract;

8.2. By the Contractor

The Contractor may terminate this Contract, by not less than thirty (30) calendar days' written notice to the Procuring Agency, in case of the occurrence of any of the events specified in paragraphs (a) through (d) of this Clause.

8.2.1. If the Procuring Agency fails to pay any money due to the Contractor pursuant to this Contract and not subject to dispute within forty-five (45) calendar days after receiving written notice from the Contractor that such payment is overdue;

8.2.2. If, as the result of Force Majeure, the Contractor is unable to perform a material portion of the Services for a period of not less than sixty (60) calendar days;

8.2.3. If the Procuring Agency fails to comply with any final decision reached as a result of arbitration;

8.2.4. If the Procuring Agency is in material breach of its obligations pursuant to this Contract and has not remedied the same within forty-five (45) days (or such longer period as the Bidder may have subsequently approved in writing) following the receipt by the Procuring Agency of the Contractor's notice specifying such breach.

C. Obligations of the Contractor

1. General

1.1. Standard of Performance

1.1.1. The Contractor shall perform the Services and carry out the Services with all due diligence, efficiency and economy, in accordance with generally accepted professional standards and practices, and shall observe sound management practices, and employ appropriate technology and safe and effective equipment, machinery, materials and methods. The Contractor shall always act, in respect of any matter relating to this Contract or to the Services, as a faithful adviser to the Procuring Agency, and shall at all times support and safeguard the Procuring Agency's legitimate interests in any dealings with the third parties;

1.1.2. The Contractor shall employ and provide such qualified and experienced Experts and Sub-Contractors as are required to carry out the Services.

1.2. Law Applicable to Services

The Contractor shall perform the Services in accordance with the Contract and in accordance with the Law of Pakistan and shall take all practicable steps to ensure that any of its Experts and Sub-Bidders, comply with the Applicable Law.

2. Conflict of Interests

2.1. Contractor Not to Benefit from Commissions and Discounts

The remuneration of the Contractor shall constitute the Contractor's sole remuneration in connection with this Contract or the Services, and the Contractor shall not accept for their own benefit any trade commission, discount, or similar payment in connection with activities pursuant to this Contract or to the Services or in the discharge of their obligations under the Contract, and the Contractor shall use their best efforts to ensure that the Personnel, any Subcontractors, and agents of either of them similarly shall not receive any such additional remuneration.

2.2. Contractor and Affiliates Not to be Otherwise Interested in Project

The Contractor agree that, during the term of this Contract and after its termination, the Contractor and its affiliates, as well as any Subcontractor and any of its affiliates, shall be disqualified from providing Services (other than the Services and any continuation thereof) for any project resulting from or closely related to the Services.

2.3. Prohibition of Conflicting Activities

Neither the Bidder nor its Subcontractors nor the Personnel shall engage, either directly or indirectly, in any of the following activities:

- 2.3.1. during the term of this Contract, any business or professional activities in the Government's country which would conflict with the activities assigned to them under this Contract;
- 2.3.2. during the term of this Contract, neither the Contractor nor their Subcontractors shall hire public employees in active duty or on any type of leave, to perform any activity under this Contract;
- 2.3.3. after the termination of this Contract, such other activities as may be specified in the **SCC**.

3. Insurance to be Taken Out by the Contractor

3.1. The Contractor(a) shall take out and maintain, and shall cause any Subcontractors to take out and maintain, at its (or the Sub-contractors', as the case may be) own cost but on terms and conditions approved by the Procuring Agency, insurance against the risks, and for the coverage, as shall be specified in the **SCC**; and (b) at the Procuring Agency's request, shall provide evidence to the Procuring Agency showing that such insurance has been taken out and maintained and that the current premiums have been paid.

4. Contractor's Actions Requiring Procuring Agency's Prior Approval

4.1. The Contractor shall obtain the Procuring Agency's prior approval in writing before taking any of the following actions:

- 4.1.1. appointing such members of the Personnel not provided by the Contractor;
- 4.1.2. changing the Program of activities; and
- 4.1.3. any other action that may be specified in the **SCC**.

5. Reporting Obligations

5.1. The Contractor shall submit to the Procuring Agency the reports and documents in the numbers, and within the periods as prescribed by the Procuring Agency.

6. Liquidated Damages

6.1. Payments of Liquidated Damages

The Contractor shall pay liquidated damages to the Procuring Agency at the rate per day stated in the **SCC** for each day that the Completion Date is later than the Intended Completion Date. The total amount of liquidated damages shall not exceed the amount defined in the **SCC**. The Procuring Agency may deduct liquidated damages from payments due to the Contractor. Payment of liquidated damages shall not affect the Contractor's liabilities.

6.2. Correction for Over-payment

If the Intended Completion Date is extended after liquidated damages have been paid, the Procuring Agency shall correct any overpayment of liquidated damages by the Contractor by adjusting the next payment certificate. The

Contractor shall be paid interest on the overpayment, calculated from the date of payment to the date of repayment, at the rates specified in **SCC**.

6.3. Lack of performance penalty

If the Contractor has not corrected a Defect within the time specified in the Procuring Agency's notice, a penalty for Lack of performance will be paid by the Contractor. The amount to be paid will be calculated as a percentage of the cost of having the Defect corrected, assessed as specified in the Contractor

7. Performance Guarantee

7.1. Within the time stipulated in the acceptance letter from the Procuring Agency, the successful Bidder shall furnish the Performance Guarantee in shape and amount **specified in SCC**.

7.2. The proceeds of the Performance Guarantee shall be payable to the Procuring agency as compensation for any loss resulting from the Supplier's failure to complete its obligations under the Contract.

7.3. The Performance Guarantee shall be denominated in the currency of the Contract, or in a freely convertible currency acceptable to the Procuring agency and shall be in the acceptable form as specified in **SCC**.

7.4. The Performance Guarantee will be discharged by the Procuring agency and returned to the Supplier not later than thirty (30) days following the date of completion of the Supplier's performance obligations under the Contract, including any warranty obligations, unless otherwise **specified in SCC**.

8. Sustainable Procurement

8.1. The Contractor shall conform to the sustainable procurement contractual provisions, if and as specified in the **SCC**.

D. Contractor's Personnel

1. Description of Personnel

1.1. The titles, agreed job descriptions, minimum qualifications, and estimated periods of engagement in the carrying out of the Services of the Contractor's Key Personnel. The Key Personnel listed by title as well as by name are hereby approved by the Procuring Agency.

2. Removal and / or Replacement of Personnel

2.1. Except as the Procuring Agency may otherwise agree, no changes shall be made in the Key Personnel. If, for any reason beyond the reasonable control of the Contractor, it becomes necessary to replace any of the Key Personnel, the Contractor shall provide as a replacement a person of equivalent or better qualifications.

2.2. If the Procuring Agency finds that any of the Personnel have (i) committed serious misconduct or have been charged with having committed a criminal action, or (ii) have reasonable cause to be dissatisfied with the performance of any of the Personnel, then the Contractor shall, at the Procuring Agency's written request specifying the grounds thereof, provide as a replacement a person with qualifications and experience acceptable to the Procuring Agency.

2.3. The Contractor shall have no claim for additional costs arising out of or incidental to any removal and/or replacement of Personnel.

E. Obligations of the Procuring Agency

1. Change in the Applicable Law

1.1. If, after the date of this Contract, there is any change in the Applicable Law with respect to taxes and duties which increases or decreases the cost of the Services rendered by the Contractor, then the remuneration and reimbursable expenses otherwise payable to the Contractor under this Contract shall be increased or decreased accordingly by agreement between the Parties, and corresponding adjustments shall be made to the amounts referred in the SCC.

2. Services and Facilities

2.1. The Procuring Agency shall make available to the Contractor and the Experts, for the purposes of the Services and free of any charge, the services, facilities and property described in the Terms of Reference, at the times and in the manner specified in the Terms of Reference.

2.2. In case that such services, facilities and property shall not be made available to the Contractor, the Parties shall agree on (i) any time extension that it may be appropriate to grant to the Contractor for the performance of the Services, (ii) the manner in which the Contractor shall procure any such services, facilities and property from other sources, and (iii) the additional payments, if any, to be made to the Contractor as a result thereof.

F. Payments to the Contractor

1. Contract Price

1.1. The price payable shall be in Pakistani Rupees unless otherwise specified in the SCC.

2. Terms and Conditions of Payment

2.1. Payments will be made to the Contractor according to the payment schedule stated in the SCC and as per actual invoice submitted by the Contractor.

2.2. Unless otherwise stated in the SCC, the advance payment shall be made against the provision by the Contractor of a bank guarantee for the same amount, and shall be valid for the period stated in the SCC. Any other payment shall be made after the conditions listed in the SCC for such payment have been met, and the Contractor have submitted an invoice to the Procuring Agency specifying the amount due.

3. Quality Control Identifying Defects

3.1. The principle and modalities of Inspection of the Services by the Procuring Agency shall be as indicated in the SCC. The Procuring Agency shall check the Contractor's performance and notify him of any Defects that are

found. Such checking shall not affect the Contractor's responsibilities. The Procuring Agency may instruct the Contractor to search for a Defect and to uncover and test any service that the Procuring Agency considers may have a Defect. Defect Liability Period is as defined in the **SCC**.

3.2. A {INSPECTION}

4. Correction of Defects, and Lack of Performance Penalty

4.1. The Procuring Agency shall give notice to the contractor of any Defects before the end of the Contract. The Defects liability period shall be extended for as long as Defects remain to be corrected.

4.2. Every time notice a Defect is given; the contractor shall correct the notified Defect within the length of time specified by the Procuring Agency's notice.

4.3. If the contractor has not corrected a Defect within the time specified in the Procuring Agency's notice, the Procuring Agency will assess the cost of having the Defect corrected, the contractor will pay this amount, and a Penalty for Lack of Performance.

5. Settlement of Disputes Amicable Settlement

5.1. The Parties shall use their best efforts to settle amicably all disputes arising out of or in connection with this Contract or its interpretation.

6. Dispute Settlement

6.1. Arbitration

If any dispute of any kind whatsoever shall arise between the procuring agency and the contractor in connection with or arising out of the Contract, including without prejudice to the generality of the foregoing, any question regarding its existence, validity or termination, or the execution of the contract, the parties shall seek to resolve any such dispute or difference by mutual consultation. If the parties fail to resolve such a dispute or difference even after negotiations or mediation, then the dispute shall be referred within fourteen (14) days in writing by either party to the Arbitrator, with a copy to the other party.

Any dispute in respect of which a notice of intention to commence arbitration has been given, in accordance with **GCC sub-clause 32.1**, shall be finally settled by arbitration. Arbitration may be commenced prior to or after completion of the Contract. Arbitration proceedings shall be conducted in accordance with Arbitration Act 1940. Notwithstanding any reference to arbitration herein, the parties shall continue to perform their respective obligations under the Contract unless otherwise agreed. The Procuring Agency shall continue to pay the Contractor any undisputed amounts due under the Contract during the resolution of any dispute.



Special Conditions of Contract

SECTION VIII. SPECIAL CONDITIONS OF CONTRACT

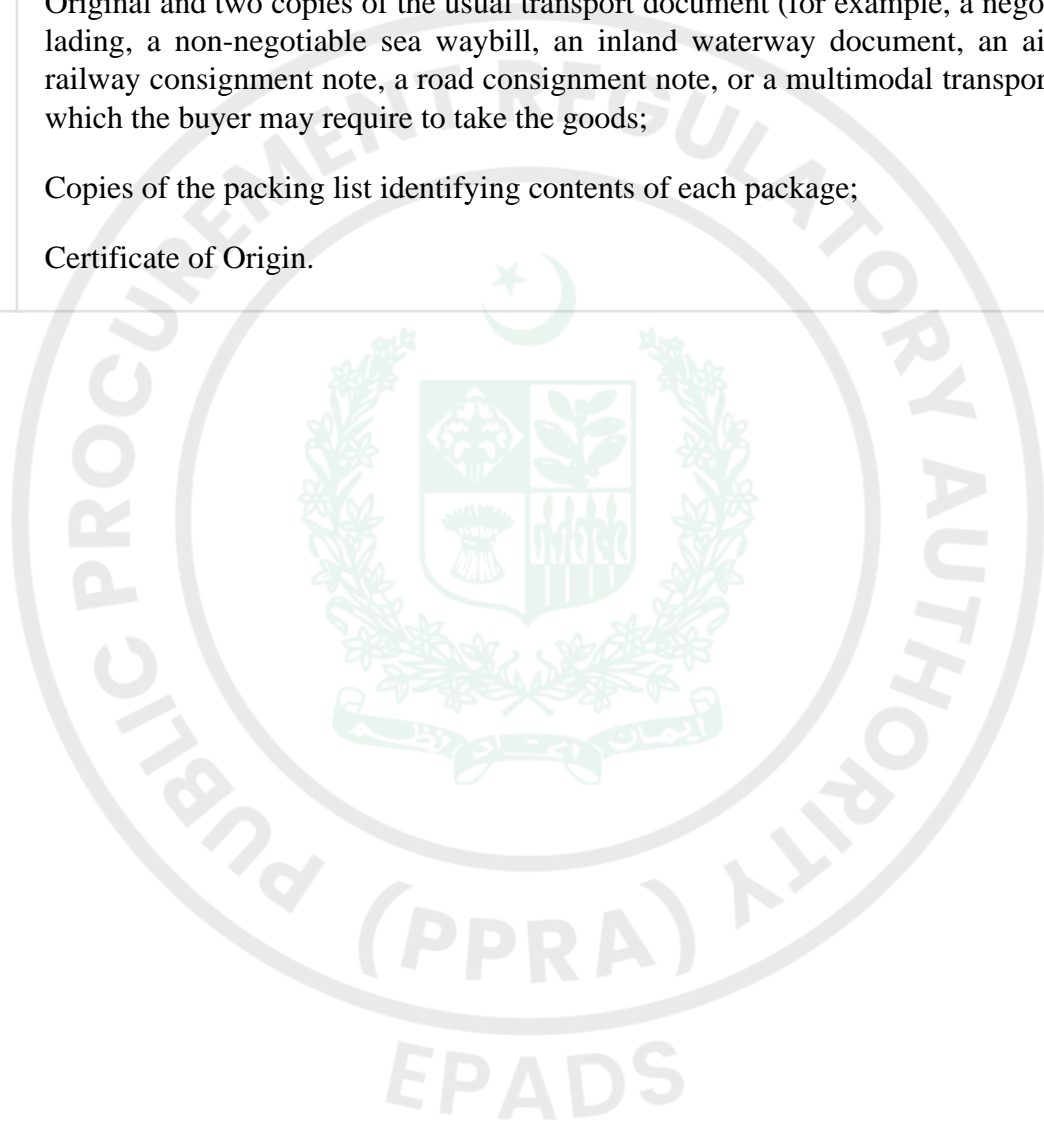
The following Special Conditions of Contract shall supplement the General Conditions of Contract. Whenever there is a conflict, the provisions herein shall prevail over those in the Conditions of Contract. The corresponding clause number of the GCC is indicated in parentheses.

Number of GC Clause	Amendments of, and Supplements to, Clauses in the General Conditions of Contract
	<p>Definitions</p> <p>The Procuring Agency is:Allama Iqbal International Airport (Pakistan Airports Authority (PAA)),Divisional EngineerOffice of Divisional Engineer E&M, Level-IV, Allama Iqbal International Airport., Lahore City, Lahore (District), Lahore Division (Division), Punjab (Province).</p> <p>The Supplier is:</p> <p>The title of the subject procurement is:Provisioning / Installation and Replacement of outlived cooling towers with allied works at Allama Iqbal International Airport (AIAP) Lahore</p>
GCC 2	<p>Applicable/Governing Law:</p> <p>The Contract shall be interpreted in accordance with the laws of Islamic Republic of Pakistan</p>
GCC 3	<p>Language:</p> <p>The language of the Contract, all correspondence and communications to be given, and all other documentation to be prepared and supplied under the Contract shall be in English.</p>

<p>GCC 4</p>	<p>Notices:</p> <p>The addresses for the notices are:</p> <p>Procuring Agency:</p> <p>Allama Iqbal International Airport (Pakistan Airports Authority (PAA)),Divisional Engineer Office of Divisional Engineer E&M, Level-IV, Allama Iqbal International Airport., Lahore City, Lahore (District), Lahore Division (Division), Punjab (Province). +92-341-577-5777 imran.n@paa.gov.pk</p> <p>Contractor/ Bidder:</p> <p>[Name, address and telephone number].</p> <p>The Contractor/ Bidder’s Representative(s)</p> <p>[Name, address, telephone number and e-mail address]</p>
<p>GCC 6.1</p>	<p>The Authorized Representatives are:</p> <p>For the Procuring Agency:</p> <p>Allama Iqbal International Airport (Pakistan Airports Authority (PAA)),Divisional Engineer Office of Divisional Engineer E&M, Level-IV, Allama Iqbal International Airport., Lahore City, Lahore (District), Lahore Division (Division), Punjab (Province). +92-341-577-5777 imran.n@paa.gov.pk</p> <p>For the Bidder:</p> <p>Name:</p> <p>Designation:</p> <p>Address:</p>
<p>GCC 7</p>	<p>Effectiveness of the contract</p> <p>The Contractor/Bidder shall be effective within days from the date of signature of the Contract by both parties</p>

GCC 8	<p>Commencement of Contract:</p> <p>The Contractor/ Bidder shall provide Non-Consultancy Services from the effective date of contract.</p>
GCC 10.2	<p>Expiration of Contract:</p> <p>The time period shall be</p>
GCC 14	<p>Termination</p> <p>In the event of termination of the contract due to any reason as already defined in the General Conditions of Contract, the Bidder shall be responsible for providing to the Authority the Goods till the time of alternate arrangements.</p>
GCC 16	<p>Conflict of Interest:</p> <p>The Procuring Agency reserves the right to determine on a case-by-case basis whether the Bidder should be disqualified from providing goods or services due to a conflict of a nature described in Clause GCC 17.</p>
GCC 20	<p>Liquidated Damages</p> <p>If the Bidder fails to provide services as required under the contract or in case of any data loss/data breach or any incident compromising the data security or other such failures related to any services, the Bidder shall pay to the Procuring Agency as Liquidated Damages at a rate of 0.02% to 5.00% of the Contract value, in accordance with the extent of performance failure & the cost of investigating such incidents as judged by the Authority.</p>
GCC 21	<p>Performance Guarantee:</p> <p>The amount of performance guarantee shall be 5.00% of the contract price in acceptable form of Pay Order, Banker's Cheque, Call at Deposit, Bank Guarantee, Demand Draft</p>
GCC 27	<p>Currency of Payment:</p> <p>All the payment to be released to the contractor/Bidder shall be in Pakistani Rupees.</p>
GCC 28	<p>Payment terms:</p> <p>Payment will be made to the Bidder against the procured Goods and services according to the actual invoice or running bills submitted by the Bidder against the services provided within the time given in the conditions of the contract.</p>

GCC 29	<p>Identifying Defects:</p> <p>The Authority reserves the right at any time to inspect the premises of the provider to inspect the goods and monitor the goods being provided.</p> <p>Delivery & Documents</p> <p>Original and two copies of the usual transport document (for example, a negotiable bill of lading, a non-negotiable sea waybill, an inland waterway document, an air waybill, a railway consignment note, a road consignment note, or a multimodal transport document) which the buyer may require to take the goods;</p> <p>Copies of the packing list identifying contents of each package;</p> <p>Certificate of Origin.</p>



Following is the guidance for Dispute Resolution

1. If any dispute of any kind whatsoever shall arise between the Authority and the Bidder in connection with or arising out of the Contract, including without prejudice to the generality of foregoing, any question regarding its existence, validity, termination and the execution of the Contract – whether during developing phase or after their completion and whether before or after the termination, abandonment or breach of the Contract – the parties shall seek to resolve any such dispute or difference by mutual diligent negotiations in good faith within 14 (fourteen) days following a notice sent by one Party to the other Party in this regard.
2. At future of negotiation the dispute shall be resolved through mediation and mediator shall be appointed with the mutual consent of the both parties.
3. At the event of failure of mediation to resolve the dispute relating to this contract such dispute shall finally be resolved through binding Arbitration by sole arbitrator in accordance with Arbitration Act 1940. The arbitrator shall be appointed by mutual consent of the both parties. The Arbitration shall take place in Islamabad, Pakistan and proceedings will be conducted in English language.
4. The cost of the mediation and arbitration shall be shared by the parties in equal proportion however the both parties shall bear their own costs and lawyer's fees regarding their own participation in the mediation and arbitration. However, the Arbitrator may make an award of costs upon the conclusion of the arbitration making any party to the dispute liable to pay the costs of another party to the dispute.
5. Arbitration proceedings as mentioned in the above clause regarding resolution of disputes may be commenced prior to, during or after completion of the contract.

Notwithstanding any reference to the arbitration herein, the parties shall continue to perform their respective obligations under the Contract unless they otherwise agree that the Authority shall pay the Bidder any monies due to the Bidder.

Arbitrator's fee:

The fee shall be specified in Pak Rupees, as determined by the Arbitrator, which shall be shared equally by both parties.

Appointing Authority for Arbitrator:

By the Mutual Consent or in accordance with the provisions of Arbitration Act, 1940, in case the parties fail to reach a consensus on the name of sole arbitrator, any party may submit an application to the Chief Justice Islamabad High Court for appointment of sole arbitrator. The Chief Justice IHC may appoint a former judge of any High Court or Supreme Court as the sole arbitrator to resolve the dispute between the parties.

Rules of procedure for arbitration proceedings:

Any dispute between the Authority and a Bidder who is a national of the Islamic Republic of Pakistan arising in connection with the present Contract shall be referred to adjudication or arbitration in accordance with the laws of the Islamic Republic of Pakistan including Arbitration Act 1940, however above provision shall prevail in referring the case to the Arbitrator.

Place of Arbitration and Award:

The arbitration shall be conducted in English language and place of arbitration shall be at



Bid Securing Declaration

Form 9: Bid Securing Declaration

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

Bid No.: **P37508**

To: **Allama Iqbal International Airport (Pakistan Airports Authority (PAA)), Divisional Engineer Office of Divisional Engineer E&M, Level-IV, Allama Iqbal International Airport., Lahore City, Lahore (District), Lahore Division (Division), Punjab (Province).**

We, the undersigned, declare that:

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

We accept that we will be blacklisted and henceforth cross debarred for participating in respective category of public procurement proceedings for a period of (not more than) six months, if fail to abide with a bid securing declaration, however without indulging in corrupt and fraudulent practices, if we are in breach of our obligation(s) under the Bid conditions, because we:

1. have withdrawn or modified our Bid during the period of Bid Validity specified in the Form of Bid;
2. Disagreement to arithmetical correction made to the Bid price; or
3. having been notified of the acceptance of our Bid by the Procuring Agency during the period of Bid Validity, (i) failure to sign the contract if required by Procuring Agency to do so or (ii) fail or refuse to furnish the Performance Security or to comply with any other condition precedent to signing the contract specified in the Bidding Documents.

We understand this Bid Securing Declaration shall expire if we are not the successful

Bidder, upon the earlier of (i) our receipt of your notification to us of the name of the successful Bidder; or (ii) twenty-eight (28) days after the expiration of our Bid.



Contract Form

SECTION IX: CONTRACT FORMS

THIS AGREEMENT made the _____ day of _____ 20____ between **Allama Iqbal International Airport (Pakistan Airports Authority (PAA)), Divisional Engineer Office of Divisional Engineer E&M, Level-IV, Allama Iqbal International Airport., Lahore City, Lahore (District), Lahore Division (Division), Punjab (Province).**

(hereinafter called “the Procuring Agency”) of the one part and [name of Bidder] of [city and country of Bidder] (hereinafter called “the Bidder”) of the other part:

WHEREAS the Procuring Agency invited Bids for provision of goods, viz., **Provisioning / Installation and Replacement of outlived cooling towers with allied works at Allama Iqbal International Airport (AIIAP) Lahore (P37508)** and has accepted a Bids by the Bidder for the provision of Goods in the sum of [contract price in words and figures] (hereinafter called “the Contract Price”).

NOW THIS CONTRACT WITNESSETH AS FOLLOWS:

1. In this Contract words and expressions shall have the same meanings as are respectively assigned to them in the Conditions of Contract referred to.

2. The following documents shall be deemed to form and be read and construed as part of this Contract, In the event of any ambiguity or conflict between the Contract Documents listed below, the order of precedence shall be the order in which the Contract Documents are listed below:-

1. This form of Contract;
2. the Form of Bids and the Price Schedule submitted by the Bidder;
3. the Schedule of Requirements;
4. the Technical Specifications;
5. the Special Conditions of Contract;
6. the General Conditions of the Contract;
7. the Procuring Agency’s Letter of Acceptance; and
8. [add here: any other documents]

3. In consideration of the payments to be made by the Procuring Agency to the Bidder as hereinafter mentioned, the Bidder hereby covenants with the Procuring Agency to provide the Goods related services and to remedy defects therein in conformity in all respects with the provisions of the Contract.

4. The Procuring Agency hereby covenants to pay the Bidder in consideration of the provision of Goods and the remedying of defects therein, the Contract Price or such other sum as may become payable under the provisions of the contract at the times and in the manner prescribed by the contract.

IN WITNESS whereof the parties hereto have caused this Contract to be executed in accordance with their respective laws the day and year first above written.

Signed, sealed, delivered by _____ the _____ (for the Procuring Agency)

Witness to the signatures of the Procuring Agency:

.....

Signed, sealed, delivered by _____ the _____ (for the Procuring Agency)

Witness to the signatures of the Bidder:





Integrity Pact

Integrity Pact

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

Contract Number: Contract Value: Contract Title:

Dated:

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

Without limiting the generality of the foregoing [Name of Supplier] represents and warrants that it has fully declared the brokerage, commission, fee 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 consultations fee or otherwise, with the object of obtaining or inducing the procurement of a contract, right, interest, privilege or other obligation or benefit in whatsoever form from GoP, except that which has been expressly declared pursuant hereto.

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

[Name of Supplier] accepts full responsibility and strict liability for making and false declaration, not making full disclosure, misrepresenting fact 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 right and remedies available to GoP under any law, contract or other instrument, be voidable at the option of GoP.

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



Performance Guarantee Form

Performance Guarantee Form

To: **Allama Iqbal International Airport (Pakistan Airports Authority (PAA)), Divisional Engineer Office of Divisional Engineer E&M, Level-IV, Allama Iqbal International Airport., Lahore City, Lahore (District), Lahore Division (Division), Punjab (Province).**

WHEREAS *[name of Bidder]* (hereinafter called “the Bidder”) has undertaken, in pursuance of Contract No. *[reference number of the contract]* dated *[insert date]* for provision of Goods (hereinafter called “the Contract”).

AND WHEREAS it has been stipulated by you in the said Contract that the Bidder shall furnish you with a Bank Guarantee by a reputable bank for the sum specified therein as security for compliance with the Bidder’s performance obligations in accordance with the Contract.

AND WHEREAS we have agreed to give the Bidders guarantee:

THEREFORE, WE hereby affirm that we are Guarantors and responsible to you, on behalf of the Bidder, up to a total of *[amount of the guarantee in words and figures]*, and we undertake to pay you, upon your first written demand declaring the Bidder to be in default under the Contract and without cavil or argument, any sum or sums within the limits of *[amount of guarantee]* as aforesaid, without your needing to prove or to show grounds or reasons for your demand or the sum specified therein.

This guarantee is valid until the: *[insert date]*

Signature and seal of the Guarantors

[name of bank or financial institution]

[address]

[date]



Annexure

Appendix-I: Additional Instructions to Bidders

Information (Read-Only)

See Form Under Additional Forms and Documents: **Appendix-I: Additional Instructions to Bidders** (page number: 107)

Appendix-II: PAA GCC and PAA SCC

Information (Read-Only)

See Form Under Additional Forms and Documents: **Appendix-II: PAA GCC and PAA SCC** (page number: 110)

Appendix-III: Scope of Work and Technical Specifications

The bidder is required to fill and upload this document alongwith relevant literature/certificates

Technical Submission (Vendor)

Document Required

See Form Under Additional Forms and Documents: **Appendix-III: Scope of Work and Technical Specifications** (page number: 133)

Appendix-IV: Performance Bond Guarantee, Mobilization Advance and Agreement Forms

Information (Read-Only)

See Form Under Additional Forms and Documents: **Appendix-IV: Performance Bond Guarantee, Mobilization Advance and Agreement Forms** (page number: 150)

Appendix-V: List of Banks

Information (Read-Only)

See Form Under Additional Forms and Documents: **Appendix-V: List of Banks** (page number: 153)

Appendix-VI: List of Approved Manufacturers

Information (Read-Only)

See Form Under Additional Forms and Documents: **Appendix-VI: List of Approved Manufacturers** (page number: 154)

Appendix-VII: PAA HSE Manual

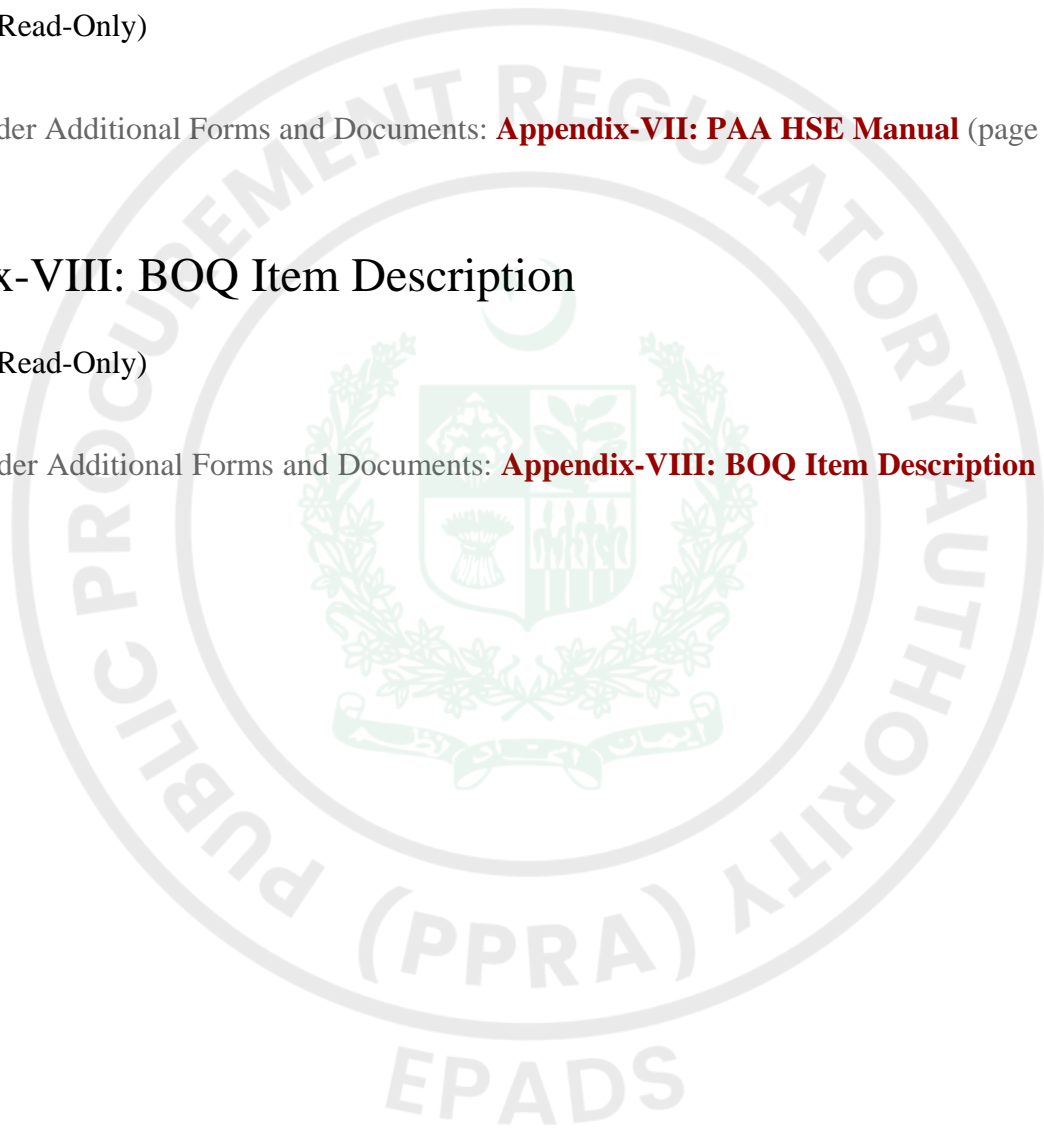
Information (Read-Only)

See Form Under Additional Forms and Documents: **Appendix-VII: PAA HSE Manual** (page number: 157)

Appendix-VIII: BOQ Item Description

Information (Read-Only)

See Form Under Additional Forms and Documents: **Appendix-VIII: BOQ Item Description** (page number: 169)





Procurement Forms

Past Experience and Completed Contracts

See Form Under Additional Forms and Documents: **Past Experience and Completed Contracts** (page number: 174)

Historical Contract Non-Performance, and Pending Litigation and Litigation History

See Form Under Additional Forms and Documents: **Historical Contract Non-Performance, and Pending Litigation and Litigation History** (page number: 175)

Current Contracts and Their Progress

See Form Under Additional Forms and Documents: **Current Contracts and Their Progress** (page number: 177)

Financial Capacity and Net Worth Evaluation Form

See Form Under Additional Forms and Documents: **Financial Capacity and Net Worth Evaluation Form** (page number: 178)

Average Annual Turnover

See Form Under Additional Forms and Documents: **Average Annual Turnover** (page number: 180)





Additional Forms and Documents

ADDITIONAL INSTRUCTIONS TO BIDDERS

Note: The appended additional instructions to bidders, PAA General Conditions (PAAGCC) of the Contract and PAA Special Conditions (PAA SCC) of the Contract and forms with allied documents shall prevail for the subject E/M works

1. The invitation to bids shall contain the name of work to be carried out as well as the date for submitting and opening the bids and the time allowed for carrying out the work; also the amount of *bid security* to be deposited with the bid. Copies of the specifications, designs and drawings and any other documents required in connection with the work signed for the purpose of identification by Pakistan Airports Authority (PAA) shall also be open for inspection by the Contractor at the office of the Additional Director / Project Manager / Divisional Engineer during office hours.
2. Where a bid is being submitted by a firm, it must be signed separately by each partner thereof, or in the event of the absence of any Partner, it must be signed on his behalf by a person holding a power of attorney authorizing him to do so, such power-of-attorney to be produced with the bid and a Photostat of the Partnership Deed should accompany the bid.
3. Where a firm of Contractors is an incorporated company registered under the Companies Act, the Contractors shall furnish the following documents:
 - a) Memorandum and Articles of Association together with a copy of certificate of incorporation.
 - b) In case the Contract is to be signed by one of the Directors of the Contractor's Company, a certified copy of the resolution of the Board of Directors or a Photocopy of the General Power of Attorney executed by the Company authorizing such Directors to enter into and sign the Contract with PAA.
4. The memorandum of work and the schedule of materials to be supplied by the PAA and their issue rates, shall be filled, and completed in the office of Divisional Engineer before the bidding document is uploaded on EPADS.
5. The bidder shall also produce a certificate of registration with the Income Tax Authority, and proof of being Active Taxpayer and attach it with the bid.
6. Bidders may request clarification of the Bidding Documents by sending a written query to the PAA through EPADS. The PAA may, if deemed appropriate, respond to the request at least two days before the bid submission deadline.
7. PAA may, at its discretion convene a pre-bid meeting to provide clarifications on the Bidding Documents. If held, the date, time, and venue of the meeting shall be specified on the EPADS. Bidders are encouraged to submit any queries in writing no later than seven (7) days prior to the scheduled meeting. The minutes of the meeting, including all questions raised and responses provided, shall be promptly circulated to all recipients of the Bidding Documents.
8. Bidders are advised to visit and inspect the Site and its surroundings at their own risk and cost, and to conduct all necessary due diligence to obtain sufficient information for the preparation of their bids and execution of the Contract. PAA shall permit such visits, subject to prior coordination; however, bidders and their representatives shall enter the site entirely at their own risk and shall indemnify and hold harmless the PAA, its personnel, and agents from any liability, loss, damage, injury, or expense arising from or related to such visits.
9. PAA may amend the Bidding Documents at any time before the bid submission deadline, either on their own or in response to a bidder's request for clarification, by issuing a written addendum. Each addendum will become part of the Bidding Documents and will be shared with all purchasers, who must

acknowledge receipt in writing. If needed, PAA may extend the bid submission deadline to allow bidders sufficient time to consider the changes.

10. Bidders who propose any alteration in the work specified in the said form of an invitation to bid, or in the time allowed for carrying out the work, or which contain any other condition of any sort, will be liable to rejection. No single bid shall include more than one work, but Contractors who wish to bid for two or more works shall submit a separate bid for each work.

11. No alterations or additions shall be made by the Contractor in the schedule of quantities and rates must be filled in ink (blue or black) or typed out both in figures and words clearly and legibly in the columns provided in the schedule of Quantities. All corrections must be signed by the Contractors.

12. Bidders shall not be reimbursed any cost of any kind whatsoever incurred by them in connection with preparation and submission of their Bids.

13. Arithmetical errors in the bid will be rectified on the following basis:

- a) If there is a discrepancy between the amounts in figures and in words, the amount in words will govern; and if 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 PAA 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.
- b) If the bidder quotes different rates for the same items across sub-heads, or attaches page(s) containing items with varying rates for the same item(s), the lowest unit rate will be considered for evaluation.
- c) If the bidder does not accept the corrected / evaluated amount of bid, their bid will be rejected, and bid security shall be forfeited.

14. Bids shall be accompanied by a Call Deposit Receipt, Pay Order, or a Banker's Cheque of the amount given in the Memorandum as Bid Security. The Bid Security shall be returned to the unsuccessful bidders, after the work has been awarded.

15. The quoted bid rates or amounts shall be inclusive of all taxes (but excluding provincial sales tax on services), duties, and cess, etc as applicable fourteen (14) days prior to the date of bid opening, and no claim on this account shall be entertained by PAA.

16. The completed Bid form shall be submitted in accordance with the instructions prescribed by PPRR for submitting electronic bids through EPADS on or before the closing date and time. Electronic bids will be opened by using EPADS on the same day 30 minutes after bid closing time.

17. Original bid submitted electronically shall also be submitted physically along with *Bid Security* in a Sealed Envelope and addressed and delivered in person or sent by Registered post / courier so that it reaches well in time before the opening date, as notified by the PAA. The sealed envelope shall have the name of work, as mentioned in invitation to bids, written on top of it. In case of any discrepancies between the bid submitted physically and on EPADS, the latter shall prevail. The instrument of Earnest Bid Security shall compulsorily be submitted in physical form on the opening date and time, whereas submission of the bid physically is recommended but not mandatory.

18. When a bid is accepted, a receipt for the *bid security* forwarded therewith shall thereupon be given to the Contractor. In the event of a bid being rejected the *bid security* forwarded with such unaccepted bid shall thereupon be returned to the Contractor.

19. The receipt given by an accountant or clerk for any money paid by the Contractor will not be considered as an acknowledgement of payment to the PAA and the Contractor shall be responsible for seeing that he procures a receipt signed by the Divisional Engineer or his authorized officer.

20. Bids will be opened and read in public on the date and time for the opening. Bids whose bid security is received after the time set for receipt shall be rejected. Bidders who submit their bid security, but their bids are not uploaded on EPADS or fail to show on EPADS will be considered and held as non-participants.
21. Additional Director / Project Manager / Divisional Engineer or his duly authorized representative shall open bids in the presence of intending Contractor who may be present at the time and will enter the amounts of all the bids in a Comparative Statement in a suitable form.
22. PAA reserves the rights to postpone the date or time of submission and opening of Bids. Should the date of opening the Bids be postponed, PAA shall give notice of such postponement.
23. The bid shall remain valid for a period of One Hundred & eighty (180) days from the date of bid opening. In exceptional cases, before this period expires, PAA may request an extension—no longer than the original validity period. Bidders may refuse to extend the bid validity without losing their Bid Security. Those who agree must extend the Bid Security accordingly but cannot change their bids.
24. PAA is not bound to award the Contract to the lowest or to any Bidder and reserves the right to reject any or all Bids and to waive any formalities in the Bids received such as deviations in the use and presentation of the specified Bidding Documents and forms, if it appears to be in the interest of the PAA.
25. Bid shall be accepted by the competent officer of PAA. The acceptance of the Bid shall bind the Bidder to execute the Contract Agreement within the specified period failing which the Bidder shall forfeit his Bid Security not as penalty, but as liquidated damages.
26. For works costing more than Rs. 10 Million, the Contractor shall furnish to the PAA within fourteen (14) days after receipt of Letter of Acceptance, a Performance Security in the form of an irrevocable Bank Guarantee from the Banks approved by PAA (as per the list provided in Appendix-E to Bidding Documents) for an amount equalling to five percent (5%) of the total amount of bid at the time of signing the agreement. The irrevocable Performance Security shall have validity till thirty (30) days after the date of final completion of works. The bond for Performance Security shall be executed on non-judicial stamp paper of appropriate value.
27. For works costing more than Rs. 65 Million, the Contractor may be given a Mobilization Advance of up to 10% of the bid cost by PAA on production of an irrevocable bank guarantee of an equivalent amount from Banks approved by PAA (as per the list provided in Appendix-E to Bidding Documents). The same will be recovered at the rate of 10% of gross amount of the running bills of the Contractors.
28. Prior to engaging in the bidding process, the bidders should at their own cost, read and acquaint themselves with the PAA's procedure for blacklisting of contractors and suppliers available on PAA website: (<https://paawebadmin.paa.gov.pk/media/fdpcknji/caao-003-escw.pdf>)
29. Client may, at its discretion, waive any minor non-conformity or any minor irregularity in bid. This shall be binding on all competitors and client reserves the right for such waivers.

PAA GENERAL CONDITIONS OF CONTRACT

1 Definitions

In the Contract (as hereinafter defined) the following words and expressions shall have the meanings assigned to them except where the context otherwise requires:

- 1.1 **“PAA”** means Pakistan Airports Authority and includes its duly authorized agents, successors and assigns.
- 1.2 **“Competent authority”** means an officer of PAA under whose competence the acceptance of bid lies.
- 1.3 **“Contractor”** means the person or persons, firm or Company whose Bid (as hereinafter defined) has been accepted by PAA and includes the Contractor’s personal representatives, successors and permitted assigns, but does not include any sub-contractor.
- 1.4 **“Divisional Engineer”** means an Engineer duly authorized by the PAA for execution of work.
- 1.5 **“Representative of Divisional Engineer”** means any duly authorized officer or officers appointed by the PAA to perform the duties set forth.
- 1.6 The expression **“Works”** means all the works specified or set forth and required in and by the said specifications, drawings and schedule hereto or to be hereafter specified or required in such explanatory instructions and drawings and also in such additional Instructions and drawings as such from time to time, during the progress of the work hereby contracted for, be supplied by PAA.
- 1.7 **“Contract”** means the Conditions of Contract specifications, Drawings, priced schedule of Quantities, Bid and the Contract Agreement.
- 1.8 **“Contract Price”** means the amount / sum stated in the letter of Acceptance, subject to such additions thereto or deductions there from as may be made under the provisions hereinafter contained.
- 1.9 **“Construction Plant”** means all appliances, equipment or things of whatsoever nature required in or about the execution, completion or maintenance of the Works or Temporary works.
- 1.10 **“Temporary Works”** means all temporary works of every kind required in or about the execution completion or maintenance of the work.
- 1.11 **“Drawings”** means the drawings referred to in the Specifications and any modifications of such drawings approved in writing by the PAA and such other drawings as may from time to time be furnished or approved in writing by the Divisional Engineer.
- 1.12 **“Site”** means the lands and other places on, under, in, through which the works are to be executed or carried out and any other lands or places provided by the PAA for purposes of the Contract.
- 1.13 **“Approved”** means approved in writing including subsequent written confirmation of previous verbal approval and “Approval” means approved in writing including as aforesaid.

1.14 **“Bid”** means a tender, bid, or proposed remuneration, price, or cost submitted by a natural person, firm, corporation, or other legal entity in response to an invitation to bid, expressing the intent to undertake a specifically defined scope of works in conformity with the prescribed specifications, designs, drawings, instructions, and materials as stipulated under the Contract, and in compliance with all other applicable terms and conditions, including any and all annexures, schedules, or supplementary documents attached to or referenced in the offer.

- 2 Extent of Contract** The Contract comprises the construction, completion and maintenance of the Works and except in so far as the Contract otherwise provides, the provision of all labour, materials, construction plant, temporary works and everything whether of temporary or permanent nature required in and for such construction, completion and maintenance so far as the necessity for providing the same as specified in or reasonably to be inferred from the Contract.
- 3 Documents Mutually Explanatory** The several documents forming the Contract are to be taken as mutually explanatory of one another and in case of ambiguities or discrepancies, the same shall be explained by the Divisional Engineer whose explanation in this respect shall be final.
- 4 Sufficiency of Bid** The Contractor shall be deemed to have satisfied himself before bidding as to the correctness, completeness and sufficiency of his Bid for the works and of the rates and prices stated in the priced schedule of Quantities which rates and prices shall except in so far as otherwise provided in the Contract cover all his obligations under the Contract and all matters and things necessary for the proper completion and maintenance of the Works.
- 5 Inspection of Site** The Contractor shall inspect and examine the Site and its surroundings and shall satisfy himself before submitting the bid, as to the nature of ground and sub soil, the form and nature of the Site, the quantities and nature of the work and materials necessary for the completion of the works and the means of access of the Site, the accommodation he may require and in general shall himself obtain all necessary information as to risk, contingencies and other circumstances which may influence or affect his Bid.
- 6 Possession of Site** The Divisional Engineer, with the written order to commence the works will give to the Contractor possession of the Site as may be required to enable the Contractor to commence and proceed with the construction of the works in accordance with the program referred to in clause 10 hereof and otherwise in accordance with such reasonable proposals of the Contractor as he shall by notices in writing to the Divisional Engineer make and will from time to time as the works proceed give to the Contractor possession of such further portions of the Site as may be required to enable the Contractor to proceed with the construction of

Works with due diligence in accordance with the said programme or proposals (as the case may be).

- 7 Drawings** Three copies of each of the approved Drawings shall be furnished by PAA to the Contractor free of cost. The Contractor shall provide and make at his own expense any further copies required by him.
- 8 Drawings to be kept on Site** One copy of each of the Drawings furnished to the Contractor as aforesaid shall be kept by the Contractor on the Site and the same shall at all times be available for inspection and use by the Divisional Engineer the representative of the Divisional Engineer.
- 9 Further Drawing and Instructions** The Divisional Engineer shall have full power and authority to supply to the Contractor from time to time during the progress of the works such further Drawings and instructions as shall be necessary for the purpose of the proper and adequate execution and maintenance of the works and the Contractor shall carry out and be bound by the same.
- 10 Programme to be furnished** As soon as practicable after the acceptance of his Bid, the Contractor shall submit to the Divisional Engineer for his approval a programme showing the order of procedure and method in which he proposes to carry out the Work and shall furnish for his information, particulars in writing of the Contractor's arrangements for carrying out of the works and the constructional plant and temporary works which the Contractor intends to supply, use or construct, as the case may be. The submission to and approval by the Divisional Engineer or the Representative of the Divisional Engineer of such programme or the furnishing of such particulars shall not relieve Contractor of any of his duties or responsibilities under the Contract.
- 11 Commencement** The Contractor shall commence the Works on Site after the receipt by him of an order in writing to commence work from the Divisional Engineer and shall proceed for the same with due diligence (time being the essence of the Contract on the part of the Contractor).

**12 Contractor's
Superintendence**

The Contractor shall give or provide all necessary superintendence during the execution of the Works and as long thereafter as the Divisional Engineer may consider necessary for the proper fulfilling of the Contractor's obligations under the Contract. The Contractor or his competent, qualified and authorized agent or representative approved by the Divisional Engineer in writing (which approval may at any time be withdrawn) is to be constantly on the Works and shall give his whole time to the superintendence of the same if such approval shall be withdrawn by the Divisional Engineer, the Contractor shall without any delay, after receiving written notice of such withdrawal, remove the Agent from the site and shall not thereafter employ him again on the Site in any capacity and shall replace him by another agent approved by the Officer, Such authorized agent or representative shall receive, on behalf of the Contractor directions and instructions from the Divisional Engineer or the representative of the Divisional Engineer. The Contractor shall also employ full time Engineer / Sub-Engineer, duly qualified in Civil / Electrical / Mechanical Engineering and having professional experience of at least three years for the purpose of execution of the proposed works and giving full time engineering / technical superintendence during all phases of execution and for receiving technical directions and instructions from the Divisional Engineer.

**13 Contractor's
Employees**

The Contractor shall provide and employ on the Site in connection with the execution and maintenance of the Works:

- 13.1 Only such technical personnel as are skilled and experience in their respective fields and such sub-agents, foremen and leading hands as are competent to give proper supervision to the work they are required to supervise.
- 13.2 Such skilled and semi-skilled and unskilled labour as is necessary for the proper and timely execution and maintenance of the Works.

**14 Removal of
Contractor's
Employees**

The Divisional Engineer shall have the power to object in writing to and require the Contractor to remove forthwith from the Work any person employed by the Contractor in or about the execution or maintenance of the works who in the opinion of the Divisional Engineer is misconducting himself or is incompetent or negligent in the proper performance of his duties or whose employment is otherwise considered reasonably by the Divisional Engineer to be undesirable. Any person so removed from the works shall be replaced without delay by a competent substitute approved by the Divisional Engineer. The Contractor shall not demand the reasons from the Divisional Engineer for requiring the removal of any one of his employees.

**15 Supply of Plant
Materials and
Labour**

Except where otherwise expressly specified, the Contractor shall at his own expense supply and provide all the Constructional plants, work materials, both for temporary and for permanent works, labour (including the supervision thereof) transport to or from the site and in and about the works and other things of every kind required for the construction, completion and maintenance of the works.

- 16 Works to be executed in accordance with specifications drawings etc.** The Contractor shall execute the whole and every part of the work in the most substantial and workman-like manner and both as regards materials and otherwise in every respect in strict accordance with the specifications. The Works executed by the Contractor shall also conform exactly, fully and faithfully to the designs, drawings and instructions in writing relating to the work issued by the Divisional Engineer.
- 17 Action where no specification** In the case of any class of work for which there is no such specifications, such work shall be carried out in accordance with the written instructions, and requirements of the Divisional Engineer.
- 18 Quality of Material, Workmanship and Tests** All materials and workmanship shall be of the respective kinds described in the Contract and in accordance with the instructions of the Divisional Engineer and shall be subjected from time to time to such tests as the Divisional Engineer may direct at the place of manufacture or fabrication on the Site or at all or any of such places. The Contractor shall provide such assistance, instruments, machines, labour and materials as are normally required for examining, measuring and testing any work and the quality, weight or quantity of any materials used and shall supply samples of materials before incorporation in the works for testing as may be selected and required by the Divisional Engineer. All samples shall be supplied by the Contractor at his own cost. The cost of making all tests specified in the Contract shall be borne by the Contractor.
- 19 Delegation of Power to Divisional Engineer's Representatives.** The Divisional Engineer may from time to time in writing delegate to the representatives of the Divisional Engineer any of the powers and authorities vested in the Divisional Engineer. Any written instruction or approval given by the representative of the Divisional Engineer to the Contractor within the term of such delegation (but not otherwise) shall bind the Contractor and the PAA, as though it has been given by the Divisional Engineer provided as follow:
- 19.1 Failure of the representative of the Divisional Engineer to disapprove any work or materials shall not prejudice the power of the Divisional Engineer thereafter to disapprove such work or materials and to order the pulling down, removal or breaking up thereof.
- 19.2 If the Contractor shall be dissatisfied by reason of any decision of the representative of the Divisional Engineer he shall be entitled to refer the matter to the Divisional Engineer who shall thereupon confirm, reverse or vary or modify such decision, and whose decision shall be final.
- 19.3 The Agreement shall be rescinded by the PAA and the final measurements shall be recorded by the Divisional Engineer or his any authorized representative shall record the final measurement and Contractor will not claim for any item not recorded by the Divisional Engineer or his representative.

- 20 Access to Site** The Divisional Engineer and any person authorized by him shall at all times have access to the Works and to the Site and to all Workshops and places where work is being done or where materials, manufactured articles or machinery are being obtained for the Works and the Contractor shall afford every assistance in or obtaining the right to such access.
- 21 Way leave etc.** The Contractor shall bear all expenses and charges for special or temporary way leaves required by him in connection with access to the Site. The Contractor shall also provide with the written approval of Divisional Engineer at his own cost any reasonable additional accommodation at Site required by him for the purposes of the Works.
- 22 Rate of Progress and permission to work during Night.** The whole of the materials, plant and labour to be provided by the Contractor and the mode, manner and speed of execution and maintenance of the works are to be of a kind and conducted in a manner approved by the Divisional Engineer. Should the rate of progress of the Works or any part thereof be at any time in the opinion of the Divisional Engineer too slow to ensure the completion, the Divisional Engineer shall so notify the Contractor in writing and the Contractor shall thereupon take such steps as may be necessary and the Divisional Engineer may approve to expedite progress so as to complete the Works by the prescribed time or extended time for completion. If the work is not being carried on by day and by night and the Contractor shall request permission to work by night as well as by day, then, if the Divisional Engineer shall grant such permission, the Contractor shall not be entitled to any additional payments. The contractor shall indemnify the PAA from and against all claims, liabilities, demands, proceedings, costs and expenses whatsoever in regard or in relation to such permission. All work at night shall be carried out without unreasonable noise and disturbance.
- 23 Time for Completion** Subject to any requirement in the Specification of any portion of the Works before completion of the whole of the works, the whole work shall be completed within the stipulated time.
- 24 Extension of time for completion** Should the amount of extra or additional work of any kind or other special circumstances of any kind whatsoever (acts of God and events beyond the control of PAA etc.) which may occur be such as fairly to entitle the Contractor to an extension of time for the completion of the work, the Divisional Engineer shall determine and grant such an extension of time. Provided that the Divisional Engineer is not bound to take into account any extra additional work or other special circumstances unless the Contractor has within fourteen (14) days after such work has been commenced or such circumstances have arisen, delivered to the representative of the Divisional Engineer full and detailed particulars of any claim for extension of time to which he may consider himself entitled in order that such claim may be investigated at the time.

- 25 Termination of Contract for slow progress**
- If in the opinion of the Divisional Engineer the progress of the Works is slow that it cannot be completed within the prescribed period or within the extended period granted to the Contractor, the Divisional Engineer shall give a notice in writing to the Contractor calling upon him to speed up the work by employing more labour and by increasing the rate of supply of material, equipment and plant to an extent to be mentioned in the notice. In case the Contractor fails to comply with the requirements of the notice within ten days from its issue, the Divisional Engineer shall have the power to have the works completed through any other agency at the risk and cost of the Contractor. In any such event, the work executed by the Contractor shall be measured up and all plant, machinery, equipment and material at Site will be taken over by the Divisional Engineer after preparing and inventory thereof, such stores to be used for the completion of the work will be at the cost of the Contractor. All payments due to the Contractor shall be withheld till the completion of the work and any loss suffered by the PAA or expenditure incurred in getting the works executed, shall be recovered from the Contractor.
- 26 Action and Compensation payable in case of works below specification**
- If it shall appear to the Divisional Engineer or his representative, that any work has been executed with unsound, imperfect or unskilled workmanship or with materials of any inferior description or that any materials or articles provided by him for the execution of the work are unsound or of a quality inferior to that contracted for or otherwise not in accordance with the contract, the Contractor shall on demand in writing from the Divisional Engineer specifying the work, materials or articles complained of notwithstanding that the same may have been inadvertently passed, certified and paid for, forth-with rectify, or remove and reconstruct the work so specified and provide other proper and suitable materials or articles at his own cost; and in the event of his failing to do so with in a period to be specified by the Divisional Engineer in his demand aforesaid, then the Contractor shall be liable to pay compensation at the rate of one percent on the total cost of work for every day not exceeding ten days apart from the cost of rectification, while his failure to do so, shall continue and in the case of any such failure the Divisional Engineer may rectify or remove, and re-execute the work which may include additional work necessary to strengthen or set right the unsound work carried out by the Contractor or remove and replace with others, the materials or articles complained of as the case may be at the risk and cost of the Contractor in all respect.
- 27 Security Deposits**
- The Contractor shall permit the PAA at the time of making any payment to him for work done under the contract to deduct such sum as will amount to be five per cent (5%) of all money so payable; such deductions to be held by PAA by way of security deposit. The sum five per cent (5%) of the amount of the bills including the earnest money held by the PAA by way of security deposit shall be paid back to the Contractor after the satisfactory expiration of Period of Maintenance as defined in the clause 49 hereof.

**28 Forfeiture of
Security deposit**

28.1 In any case in which under any clause, or clauses of this agreement the Contractor shall have rendered himself liable to pay compensation amounting to the whole of his security deposit (whether paid in one sum or deduction by installments) the PAA shall have the power in its own discretion to adopt any of the following courses, best suited to the interest of the PAA.

- a) To rescind the Contract (of which recession notice in writing by the Divisional Engineer to the Contractor shall be conclusive evidence) and in which case the security deposit of the Contractor as available with the PAA shall stand forfeited and be absolutely at the disposal of PAA.
- b) To employ labour paid by PAA and to supply materials to carry out the work or any part of the work debiting the Contractor with the cost of the labour and the price of the materials (of the amount of which cost and price a certificate of the Divisional Engineer shall be final and conclusive against the Contractor) and crediting him with the new value of the work done, in all respect in the same manner and at the same rates as if it had been carried out by the Contractor under the terms of his Contract, the certificates of the Divisional Engineer as to the value of work done shall be final and conclusive against the Contractor.
- c) To measure up the work of the Contractor and to take such part thereof as shall be unexecuted out of his hand, and to give it to another contractor to complete, in which case any expenses which may be incurred in excess of the sum which would have been paid to the original Contractor, if the whole work had been executed by him (of the amount of which exceed, the certificate in writing to the Divisional Engineer shall be final and conclusive) shall be borne and paid by the original Contractor and may be deducted from any money due to him by the PAA under the contract or otherwise or from his security deposit, or the proceeds of sale thereof or a sufficient part thereof.

28.2 In the event of any of the above courses being adopted by the PAA, the Contractor shall have no claim to compensation for any loss sustained by him by reason of his having purchased or procured any materials, or entered into any engagements or made any advance on account of or with a view to the execution of the work or the performance of the Contract. And, in case the Contract is rescinded under the aforesaid provisions, the Contractor shall not be entitled to recover or be paid any sum for any work therefore actually performed under this contract. Unless and until the Divisional Engineer will have certified in writing the performance of such work and the value payable in respect thereof, and he shall only be entitled to be paid the value so certified. Again, the Contractor will not in any manner hinder or prevent the owner or Divisional Engineer or any of the workmen and other employed by him from proceeding to complete the said buildings and works as aforesaid.

29 Liquidated damages for delay

If the Contractor fails to complete the works within the stipulated time for completion prescribed under the Contract, or any extended time allowed for completion in accordance with the Contract, then the Contractor shall pay to the PAA a sum equal to ten (10) per cent or less of the Contract Price as liquidated damages (and not as a penalty) for the delay beyond the time prescribed in the Contract or the extended time for completion, as the case may be. The said sum shall be payable by the sole fact of the delay without the need for any previous notice or any legal proceedings, or proof of damage, which shall in all cases be considered as ascertained. The PAA may, without prejudice to any other method of recovery, deduct the amount of such liquidated damages from any monies in its hands due or which may become due to the Contractor. The payment or deduction of such damages shall not relieve the Contractor from his obligation to complete the Works or from any other of his obligations and liabilities under the Contract.

30 Notice to be given before work is covered up

The Contractor shall give not less than five clear days' notice in writing to the Divisional Engineer or his representative before covering up or otherwise placing beyond the reach of measurement of any work, in order that the same may be measured, and correct dimensions thereof be taken before the same is so covered up or placed beyond the reach of measurement without the consent in writing of the Divisional Engineer or his representative, and if any work shall be covered up or placed beyond the reach of measurement without such notice have been given or consent obtained the same shall be uncovered at the Contractor's expense, or in default thereof no payment or allowance shall be made for such work on the materials, with which the same was executed.

31 Suspension of work

The Contractor shall on the written order of the Divisional Engineer suspend the progress of the works or any part thereof for such time or times and in such manner as the Divisional Engineer may consider necessary and shall during such suspension properly protect and secure the work so far as is necessary in the opinion of the Divisional Engineer. The extra cost (if any) incurred by the Contractor in giving effect to the Divisional Engineer's instructions under this clause shall be borne by the Contractor, if such suspension is:

- a) as per the provision of the contract, or
- b) Necessary for the proper execution of the work or by reason of weather conditions affecting the safety or quality or the Works or by some default on the part of the Contractor, or
- c) Necessary for the safety of the works or any part thereof.

- 32 Care of works** From the commencement to the completion of the Works, the Contractor shall take full responsibility for the care thereof and of all temporary works, and in the event that any damage, loss or injury should happen to the Works or to any part thereof or to any temporary works from any cause whatsoever (save and except the “expected risk(s)” as defined in clause 33 hereof), the Contractor shall at his own cost repair and make good the same so that at completion, the works shall be in good order and condition and in conformity in every respect with the requirements of the contract and the Divisional Engineer’s instructions. The Contractor shall also be liable for any damage to the Works occasioned by him in the course of any operations carried out by him for the purpose of complying with his obligations under Clause 50 hereof. The Contractor shall be fully responsible for the review of the Engineering design and details of the works and shall inform the PAA of any mistakes or incorrectness in such design and details which would affect the works.
- 33 Expected Risk** The “Expected Risk” are hostilities (where war be declared or not) invasion, act of foreign enemies, rebellion revolution insurrection or military or usurped power civil war or (otherwise than among the Contractor’s own employees) riot, commotion or disorder or use by occupation by the PAA of any portion of the Works in respect of which a certificate of completion has been issued or any such operation of the forces of nature as reasonable foresight and ability on the part of the Contractor could not foresee or reasonably provide against (all of which are herein collectively referred as “the expected risk”).
- 34 Damage to persons and property.** The Contractor shall (except if and so far as the Contract provides otherwise) indemnify and keep indemnified the PAA and its Employees from and against all suits, claims, demands, proceedings, and liability of any nature or kind, including costs and expenses, for injuries or damages to any person or any property whatsoever which may arise out of or in consequence of acts or omissions of the Contractor or its agents, employees, servants or subcontractors in the execution of the Contract.
- 35 Accident or injury to Workmen** The PAA shall not be liable for or in respect of any damages or compensation payable at law in respect or in consequence of any accident or injury to any workman or other persons in the employment of the Contractor or any sub-contractor. The Contractor shall indemnify and keep indemnified the PAA against all such damages, compensation and against all claims, demands, proceedings, cost charges and expenses whatsoever in respect thereof or in relation thereto.
- 36 Insurance** The Contractor shall obtain and keep in force policies in respect of Erection All Risks, Contractor’s All Risks and Workmen’s Compensation act, which shall apply specifically and solely to the Contractor and shall fulfil all Contractor’s obligations for Insurance in connection with this Contract from an Insurance Company in Pakistan having at latest AA rating from PACRA / JCR-VIS.

- 37 Compliance with Statutes, Regulations etc.** The Contractor shall conform in all respects with any such Statutes, Ordinances, Laws, Regulations, Bye-laws or requirements of any such local or other authority / authorities which may be applicable to the Works or to any Temporary Works and shall keep the PAA indemnified against all penalties and liability of every kind for breach of any such Statutes, Ordinances, Laws, Regulations, Bye-laws or requirements.
- 38 Fossils etc.** All fossils, coins, article of value or antiquity and structures and other remains or things of geological or archaeological interest discovered on the site of the Works shall as between the PAA and the Contractor be deemed to be the absolute property of the PAA and the Contractor shall take reasonable precautions to prevent his workmen or any other persons from removing or damaging any such article or thing and shall immediately upon discovery thereof and before removal acquaint the PAA of such discovery.
- 39 Variation** The Divisional Engineer may introduce any variations to the form, quality or quantity of the work or any part thereof which he considers necessary and for that purpose or if for any other reasons it shall, in his opinion be desirable, he shall have power to order the Contractor to do and the Contractor shall do any of the following:
- a) increase or decrease the quantity of any work included in the Contract;
 - b) omit any such work;
 - c) change the character or quality or kind of any such work;
 - d) change the levels, lines position and dimension of any part of the Works; and
 - e) execute additional work of any kind necessary for the completion of the works.
- and no such variation shall in any way vitiate or invalidate the Contract nor it will entitle the Contractor of any claims for compensation whatsoever, but the value (if any) of all such variations shall be taken into account in ascertaining the amount of the Contract Price.
- 40 Order for variation to be in writing** No such variation shall be made by the Contractor without an order in writing from the Divisional Engineer. Provided that, subject to the provisions of the Contract, no order in writing shall be required for any increase or decrease in the quantity of any work where such increase or decrease is not the result of an order given under this Clause but is the result of the quantities exceeding or being less than those stated in the Bill of Quantities. If for any reason, Divisional Engineer considers it desirable to give any such order verbally, the Contractor shall comply with such order but shall get it confirmed in writing from the Divisional Engineer within four days of the issue of such verbal order.

- 41 Valuation of Variation**
- 41.1 The Divisional Engineer shall determine the amount (if any) to be added to or deducted from Contract Price in respect of any variation, addition, or omission made by his order. The valuation of any variation, addition or omission shall be calculated on the basis of the unit prices contained in the Bill of Quantities if in the opinion of the Divisional Engineer the same shall be applicable; if not then on the market rates.
- 41.2 No deviation from specifications stipulated in the Contract or additional items of work shall be carried out by the Contractor unless the rates of the substituted, extra, altered or additional item have been approved in writing by the competent authority failing which the PAA will not be bound to entertain any claim on this account.
- 42 Quantities**
- The quantities set out in the Bill of Quantities are the estimated quantities of the work but they are not to be taken as the actual and correct quantities of the works to be executed by the Contractor in fulfilment of his obligation under the Contract.
- 43 Work to be Measured**
- The Divisional Engineer shall except as otherwise stated ascertain and determine by measurement the value of work done in accordance with the Contract. The Divisional Engineer shall, when he requires any part or parts of the Works to be measured, give notice to the Contractor or the Contractor's authorized agent or representative who shall forthwith attend or send a qualified agent to assist the Divisional Engineer or his representative in making such measurement and shall furnish all particulars required by either of them. Should the Contractor not attend or neglect or fail to send such agent, then the measurement made by the Divisional Engineer or approved by him shall be taken to be the correct measurement of the work. The purpose of measuring is to ascertain the volume of work executed by the Contractor and therefore determine the amount of the monthly payments.
- 44 Method of Measurement**
- The works shall be measured, notwithstanding any general or local custom except where otherwise specifically described or prescribed in the Contract.
- 45 Clearance of Site on Completion**
- On the completion of the Works, the Contractor at his own cost shall clear away and remove from the Site all Constructional plant, surplus materials, rubbish and Temporary Works of every kind and leave the whole of the Site and works clean and in a workman-like condition to the satisfaction of the Divisional Engineer, rubbish should be disposed of in the manner as directed by the Divisional Engineer or his representative.

46 Certificates for Completion of Works

- 46.1 When the whole of the Works have been substantially completed and have satisfactorily passed any test on completion as prescribed by the Contract, the Contractor may give a notice to that effect to the Divisional Engineer accompanied by an undertaking to finish any outstanding work during the Period of Maintenance. Such notice and undertaking shall be in writing and shall be deemed to be a request by the Contractor, for the Divisional Engineer to issue a Certificate of Substantial Completion in respect of the Works. The Divisional Engineer shall, within twenty-one (21) days of the date of delivery of such notice either issue to the Contractor a Certificate of Substantial Completion stating the date on which, in his opinion, the Works were substantially completed in accordance with the Contract or give instructions in writing to the Contractor specifying all the work which, in his opinion, are required to be done by the Contractor before the issuance of such Certificate. The Divisional Engineer shall also notify the Contractor of any defects in the Works affecting substantial completion that may appear after such instructions and before completion of the work specified therein. The Contractor shall be entitled to receive such Certificate of Substantial Completion within twenty-one (21) days of completion, to the satisfaction of the Divisional Engineer, of the work so specified and making good any defect so notified. Upon issuance of the Certificate of Substantial Completion of the Works, the Contractor shall be deemed to have undertaken to complete with due expedition any outstanding work during the Period of Maintenance.
- 46.2 Upon satisfactory completion of the work outstanding on the Works, the Divisional Engineer shall within twenty-eight (28) days of the expiration of the Period of Maintenance issue a Certificate of Final Completion to the Contractor. The Contract shall be deemed to be completed upon issuance of such Certificate, provided that the provisions of the Contract which remain unperformed shall remain in force for as long as is necessary to dispose of any outstanding matters or issues between the Parties.

47 Period of Maintenance

The “Period of Maintenance” shall be of twenty four (24) months duration unless otherwise specified in the Special Conditions of the Contract, calculated from the date of completion of the Works stated in the Certificate of Substantial Completion issued by the Divisional Engineer in accordance with the Clause 46 hereof or, in respect of any Section or part of the Works for which a separate Certificate of Substantial Completion has been issued, from the date of completion of that Section or part as stated in the relevant Certificate. The expression “the Works” shall, in respect of the “Period of Maintenance”, be construed accordingly.

- 48 Completion of Outstanding Works and Remedying Defects etc.** During the Period of Maintenance, the Contractor shall finish the work, if any, outstanding at the date of the Certificate of Substantial Completion, and shall execute all such work of repair, amendment, reconstruction, rectification and making good defects, imperfections, shrinkages or other faults as may be required of the Contractor in writing by the Divisional Engineer during the Period of Maintenance and within fourteen (14) days after its expiration, as a result of an inspection made by or on behalf of the Divisional Engineer prior to expiration of the Period of Maintenance. To the intent that the works shall as soon as practicable after the expiry of the Period of Maintenance be delivered to the PAA in as good and perfect condition (fair wear and accepted tear) to the satisfaction of the Divisional Engineer as that in which they were at the commencement of the Period of Maintenance. All such outstanding work shall be carried out by the Contractor at his own expense if the necessity thereof shall, in the opinion of the Divisional Engineer, be due to the use of material or workmanship not in accordance with the Contract, or to neglect or failure on the part of the Contractor to comply with any obligation expressed or implied, on the Contractor's part under the Contract. In case the Contractor fails to comply with the requirements of the notice within ten days from its issue, the Divisional Engineer shall have the power to have the works completed through any other agency at the risk and cost of the Contractor.
- 49 Refund of Security Deposits** The Security Deposit shall not be refunded prior to twenty four months after the completion of the whole work, unless and until a certificate is issued by the Divisional Engineer for successful and satisfactory passing of the Period of Maintenance with no other liability on the Contractor.
- 50 Contractor's Liability for Damage done** If the Contractor or his workmen or servants shall break, deface, injure or destroy any part of a building, in which they may be working or any building, road, road kerbs, runway, taxiway, apron, culverts, ducts, fence enclosure, water pipes, cables, drains, electric or telephone or wire poles, trees, grass or grassland or cultivated ground contiguous to the premises on which the work or any part of it is being executed, or if any damage shall happen to the work, while in progress from any cause whatsoever, or any imperfections become apparent in it within three (03) months after a certificate, final or otherwise of its completion shall have been given by the Divisional Engineer as aforesaid, the Contractor shall make the same good at his own expense, or in default, the Divisional Engineer may cause the same to be made good by other workmen, and deduct the expense (of which the certificate of the Divisional Engineer shall be final) from any sums that may then, or at any time thereafter may become, due to the Contractor, or from his security deposit or the proceeds of the sale thereof, or a sufficient portion thereof.
- 51 Assignment & Sub-Letting** The Contractor shall not assign or sublet the Contract or any part thereof or any benefit or interest thereon or there under without the prior written consent of PAA. In case of failure, the Divisional Engineer shall by giving Notice in writing rescind the Contract and have the Works executed at the risk and cost of the Contractor.

52 Stores to be supplied by PAA

If the specification or estimate of the work provides for the use of any special description of materials to be supplied by PAA or if it is required that the Contractor shall use certain stores to be provided by the PAA (such materials and stores, and the prices to be charged therefore as hereinafter mentioned being so far as practicable for the convenience of the Contractor, but not so as in any way to control the meaning or effect of this Contract, specified in the schedule of memorandum hereto annexed). The Contractor shall be supplied with such materials and stores as required from time to time to be used by him for the purpose of the Contract only, and the value of the full quantity of materials and stores so supplied at the rates specified in the said schedule or memorandum may be set off or deducted from any sums then due, or thereafter to become due to the Contractor under the contract or otherwise or against or from the security deposit, or the proceeds of sale thereof. All materials supplied to the Contractor shall remain the absolute property of PAA and shall not on any account be removed from the Site of the work and shall at all times be open to inspection by Divisional Engineer. Any such material unused and in perfectly good condition at the time of the completion or termination of the Contract shall be returned to PAA; but the contractor shall not be entitled to return any such materials unless with such consent, and shall have no claim for compensation on account of any such materials so supplied to him, as aforesaid being unused by him, or for any wastage in or damage to any such materials.

53 Bills to be submitted monthly

A bill shall be submitted by the Contractor each month on or before the date fixed by the Divisional Engineer for all works executed in the previous month and the Divisional Engineer shall take or cause to be taken the requisite measurement for purposes of having the same verified, and the claim, as far as admissible, adjusted, if possible, before the expiry of ten days from the presentation of the bill. If the Contractor does not submit the bill within the time fixed as aforesaid, the Divisional Engineer may prepare a bill which shall be binding on the Contractor in all respects.

54 Completion drawings

The completion report of the work along with drawings on prescribed proforma shall be submitted by the Contractor in five copies along with the final bill. In case of failure to submit the completion report and completion drawings by the Contractor on the basis of which the work has been finally completed, the final bill shall be withheld till their submission. The completion report and drawings should be complete in all respects. Works relating to maintenance do not come under the preview of this clause.

55 Final Bills

The final bill shall be submitted by the Contractor within one month from the date of completion of the Works otherwise the Divisional Engineer's certificate of the measurement and of the total amount payable for the work accordingly shall be final and binding on all parties, and will not be called in to question by anyone.

- 56 Urgent repair** If by reason of any accident or failure or other event occurring to or in connection with the Works or any part thereof during the execution of the Works or during the Period of Maintenance any remedial or other work on repair shall in the opinion of the Divisional Engineer or his representative be urgently necessary and the Contractor is unable or unwilling at once to do such work or repair, the Divisional Engineer may by his own or other workmen do such work or repair as the Divisional Engineer or his representative may consider necessary. If the work or repair so done by the Divisional Engineer is work which in the opinion of PAA the Contractor was liable to do at its own expense, under the Contract, then all costs and charges properly incurred by the PAA, in so doing shall on demand be paid by the Contractor to the PAA or may be deducted by PAA from any monies due or which may become due to the Contractor. Provided always that the Divisional Engineer shall as soon as after the occurrence of any such emergency as may be reasonably practicable notify the Contractor thereof in writing.
- 57 Bribes, Commission etc.** Any bribe, commission gift or advantage given promised or offered by or on behalf of the Contractor or his partner, agent, or servant in relation to obtaining or to the execution of this or any other Contract with PAA, or given, promised, or offered by, or on behalf of, the Contractor, or his partner, agent, or servant, to any officer or person in the service or employment of PAA, who shall be in any way connected with the obtaining or the execution of this or any other Contract, shall in addition to any criminal liability, which he may incur subjects the Contractor to cancellation of this Contract, and also to payment of any loss resulting from any such cancellation. Any question or dispute to the commission of any offence under this Clause shall be settled by the PAA, in such manner as it deems fit and sufficient and its decision shall be final and conclusive.
- 58 Law governing the contract** This Contract shall be governed by and construed in accordance with the laws of the Islamic Republic of Pakistan, and the obligations, rights and remedies of the parties hereunder shall be determined in accordance with such laws. Resort to litigation by either of the parties in respect of any disputes should be had only before a court of appropriate and competent jurisdiction.
- 59 Increase or Decrease of Cost.** 59.1 The Contractor is deemed to have quoted rates given in the Contract (Bill of Quantities) based on the prices of certain specified materials

Appendix-II
PAA General and Special Conditions of the Contract
PAAGCC & PAASCC

prevalent in the month during which the last day of the submission of Bid fell.

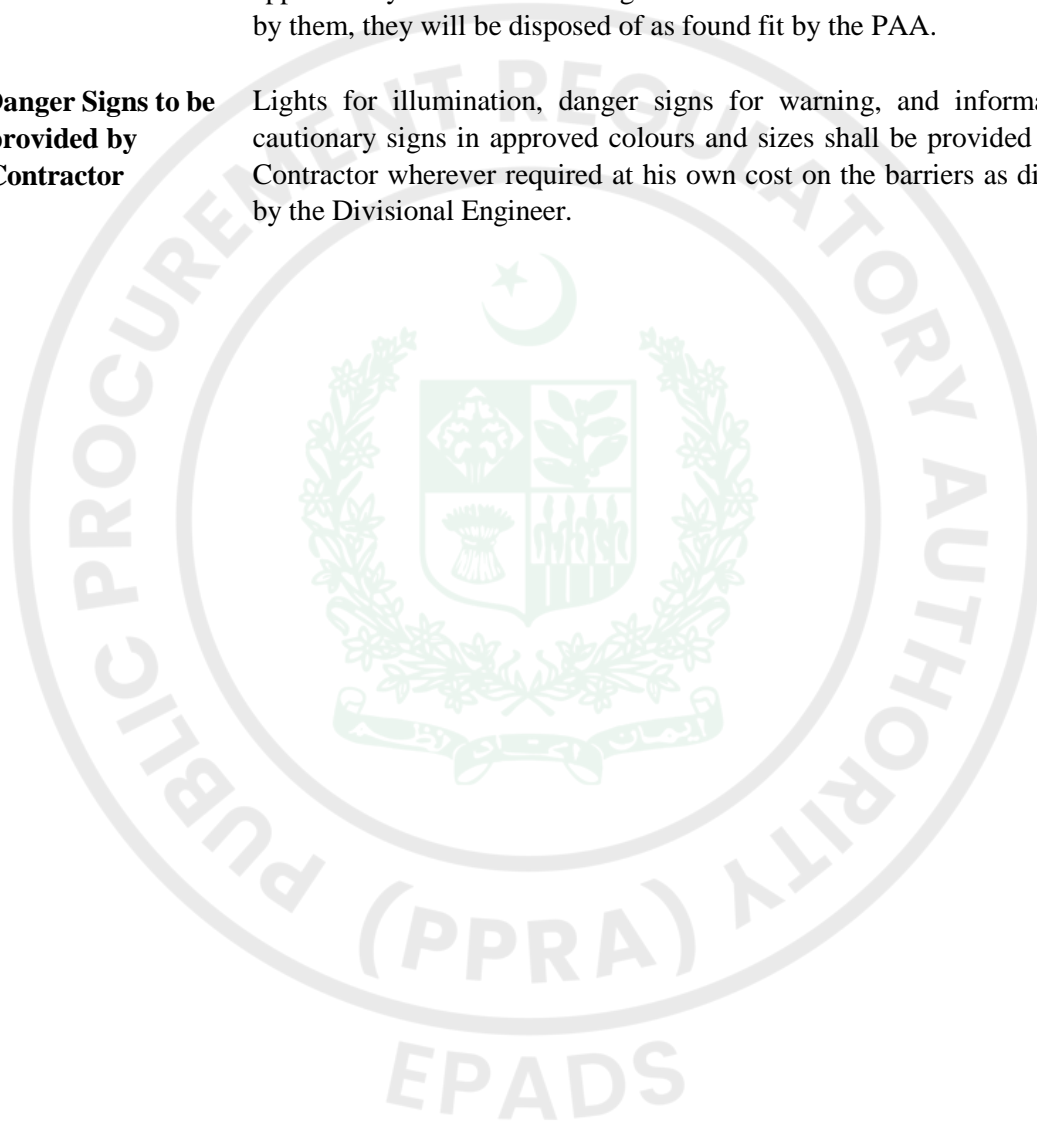
- 59.2 No price adjustment shall be allowed under this clause except in respect of the materials specified in Appendix-A to Bidding Document which have actually been incorporated in the Permanent Works during the corresponding period of increase or decrease.
- 59.3 Adjustment shall be allowed for the specified materials according to the method prescribed in the Appendix-A to Bidding Document.
- 59.4 All claims for additional payments under this Clause shall be lodged by the Contractor with the Divisional Engineer within such reasonable time from the date of occurrence of the event which, according to the Contractor, entitles him to such additional payments by PAA, but in no case after the expiry of twenty-eight (28) days thereof, such claims shall invariably be supported with all relevant necessary details and particulars required for proper verification thereof and the Divisional Engineer shall be entitled to require the Contractor to provide such further details / information as may be required for due and effective verification of such claims.
- 59.5 The Divisional Engineer shall verify and certify for payment, if any, claims lodged by the Contractor under this Clause within a period not exceeding twenty-eight (28) days from the date on which the same are submitted by the Contractor as aforesaid.
- 59.6 In case the PAA is entitled to recover from the Contractor any sum or sums under this Clause arising from any decrease in the said prices for materials, the provisions of this Clause shall apply mutatis mutandis to such recoveries by the PAA.
- 59.7 If the Contractor fails to complete the works within the time for completion, adjustment of prices therefore until the date of completion of the works shall be made using either the indices or prices, whichever are more favourable to the PAA, provided that if extension of time is granted the above provision shall apply only to adjustments made up to the expiry of such extension of time.
- 59.8 No escalation shall be allowed to the Contractor in respect of the period extended for the completion of the work due to his own fault.

**60 Water Supply/
Power Supply etc.**

The Contractor should make his own arrangement for water and power supply required for execution of work and nothing will be paid for the same, by the PAA. Provided that in case water supply is allowed by the PAA to the Contractor from water mains passing through areas where the work is required to be carried out, the Contractor shall pay the cost of water to the department at one-half (1/2) per cent of the total cost of work for drinking purpose and one (01) per cent of the total cost of the items of work involving use of water (that is for constructional purposes). The Contractor shall bear full charges for laying its water lines of all length and size / dimensions from the mains to the site of his underground tanks as he may require and construct for storage purposes at its own cost.

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- 61 Abandonment of work by PAA.** PAA shall have the power to abandon any work whether in progress or otherwise and in such an event, the Contractor shall have no claim for any compensation of any kind whatsoever from PAA except the actual cost of the work executed at the Site under the Contract for which the contract requires payment to be made.
- 62 Materials obtained from excavation & dismantling.** All materials (e.g. stone and other materials) obtained in the work of dismantling, excavation etc., will be considered PAA property and may be issued to Contractor (if they require the same for their own use) at rates approved by the Divisional Engineer. If these materials are not required by them, they will be disposed of as found fit by the PAA.
- 63 Danger Signs to be provided by Contractor** Lights for illumination, danger signs for warning, and information / cautionary signs in approved colours and sizes shall be provided by the Contractor wherever required at his own cost on the barriers as directed by the Divisional Engineer.



PAA SPECIAL CONDITIONS OF CONTRACT

6 Possession of Site

(Substitute the clause 6 with following text)

- 6.1 The Divisional Engineer shall, together with the written order to commence the Works, grant the Contractor possession of such portions of the Site as are necessary to enable the Contractor to commence and carry out the Works in accordance with the programme referred to in Clause 10, subject to any sequencing or phasing requirements prescribed in the Contract.
- 6.2 Thereafter, and from time to time as the Works progress, the Divisional Engineer shall grant possession of further portions of the Site, as required for execution of the Works with due dispatch, provided such possession aligns with the Contractor's reasonable proposals as approved by the Divisional Engineer.
- 6.3 The Contractor shall submit any such proposals for staging of site possession in writing to the Divisional Engineer for review and approval, and no right to possession shall arise unless and until expressly granted by the Divisional Engineer.
- 6.4 PAA shall not be liable for any delay or claim arising from staged or partial possession of the Site, provided such staging is consistent with the Contract or approved programme.

10 Programme to be furnished

(For works with a contract price exceeding the financial limit prescribed for PEC Constructor Registration Category C-3, as revised from time to time, Clause 10 shall be substituted with the following text)

- 10.1 The Contractor shall, within fifteen (15) days of receiving the Letter of Acceptance, submit a detailed Programme of Works to the Divisional Engineer for approval. The Programme shall include all activities, including mobilization, and clearly identify critical path items using a computerized Critical Path Method (CPM) format. The Programme shall be updated monthly, incorporating a chart of forecasted principal activities, an updated cash flow schedule for payments, and any revisions necessary to reflect actual progress. It shall serve as the baseline for assessing progress and determining Liquidated Damages under Clause 29. Monthly progress reports shall include an up-to-date analysis of actual versus planned progress, identification of current or emerging critical items, and the Contractor's proposed measures for mitigation.

18 Quality of Material, Workmanship and Tests

- 18.2 Expenditure on account of laboratory testing to ascertain suitability of materials and all other required tests etc. shall be borne by the Contractor.

24 Extension of time for completion

(For works with a contract price exceeding the financial limit prescribed for PEC Constructor Registration Category C-3, as revised from time to time, Clause 24 shall be substituted with the following text)

24.1 In the event of:

- (a) the amount or nature of extra or additional work,
- (b) exceptionally adverse climatic conditions,
- (c) any delay, impediment or prevention by the PAA, or
- (d) other special circumstances which may occur, other than through a default of or breach of contract by the Contractor for which he is responsible, being such as fairly to entitle

the Contractor to an extension of the Time for Completion of the Works, or any Section or part thereof,

the Divisional Engineer shall, after due consultation with the Contractor, determine the amount of such extension and shall notify the Contractor accordingly. Provided that the Divisional Engineer is not bound to take into account any extra additional work or other special circumstances unless the Contractor has within fourteen (14) days after such work has been commenced or such circumstances have arisen, delivered to the representative of the Divisional Engineer full and detailed particulars of any claim for extension of time to which he may consider himself entitled in order that such claim may be investigated at the time.

25 Termination of Contract for slow progress

25.1 In the event of termination by the Divisional Engineer, the Contractor shall have the right to file an appeal before the Director General PAA, within seven (07) days from the receipt of such termination notice. The decision of the Director General PAA shall be final and binding.

29 Liquidated damages for delay

29.2 The amount of Liquidated Damages for each day of delay in completion of the whole of the Works, or if applicable for any Section thereof, shall be imposed at the rate of 0.05% of Contract Price as stated in Letter of Acceptance for each day of delay in completion of the Works. Provided that the amount of Liquidated Damages for delay shall not exceed ten (10) per cent of the Contract Price as stated in Letter of Acceptance in all cases.

29.3 In cases where liquidated damages have been imposed or have been proposed to be imposed, the amount to be retained in lieu of Security Deposit during the Maintenance Period shall be based on the cost of works executed, and not the reduced amount to be paid to the Contractor after imposition of liquidated damages.

29.4 Where a work has been delayed beyond the stipulated date of completion, the Contractor shall be required to extend the securities and insurances as per the revised dates at his own cost.

31 Suspension of Works

31.2 Partial / complete suspension in work is likely to take place during emergency operations and VIP movements etc. labour, equipment, and material, etc. shall be removed from the site of work during such suspension periods to a distance for essential security requirements. No compensation whatsoever on this account shall be claimed by the Contractor for those losses likely to occur. All such unforeseen disruptions during working hours may result in idleness of manpower and equipment and waste of material, etc. for which no compensation shall be paid to the Contractor.

31.3 No compensation is payable for interruption in the work due to any reason beyond the control of PAA.

32 Care of Works

32.2 The Construction materials should be stacked at a suitable place as per the direction of the Divisional Engineer or his representative.

32.3 The work shall be so arranged as not to cause any disturbance to the passengers / functionaries and other agencies working at the airport.

41 Valuation of Works

41.3 For works items described in the priced bill of quantities (BoQ), the valuation of works shall be made as per the evaluated rates provided in the corrected priced BoQ, and

- 41.4 For work items not described in the priced bill of quantities (BoQ) but available in the Pak PWD Schedule of Rates (SoR), the valuation of works shall be made on pro rata basis, and
- 41.5 For work items neither described in the priced bill of quantities (BoQ) nor available in the Pak PWD Schedule of Rates (SoR), the valuation of works shall be made on the basis of actual cost (market rates) plus a lumpsum of twenty-five per cent (25%) as overheads and profit.

47 Period of Maintenance

- 47.2 Period of Maintenance or Defects Liability Period shall be of twenty four months duration.

59 Increase or Decrease of Cost

- 59.9 The Price Adjustment shall be applicable only for the Contracts having stipulated completion period greater than eighteen months and contract price exceeding financial limit of PEC Constructor's Registration Category C-3 as amended from time to time. Contracts having stipulated completion period less than or equal to eighteen months and value equal to or less than the above said limit will be considered as fixed price contracts.

64 Payments to Contractor

- 64.1 PAA shall release payment to the Contractor within fifty-six (56) calendar days from the date of certification of the Contractor's bill by the Divisional Engineer. Should payment be delayed beyond this period, a simple interest at the rate of zero-point zero five percent (0.05%) per annum shall accrue on the unpaid amount, calculated from the day immediately following the due date until the date of actual payment.

65 Settlement of Disputes

- 65.1 Any difference or dispute arising between the PAA and the Contractor regarding the interpretation, execution, or performance of any provision of this Contract shall be referred exclusively to the Director General PAA, whose decision shall be final, conclusive, and binding on both parties. The Contractor shall not initiate or pursue any legal proceedings or remedies in relation to such matters. This shall be without prejudice to the rights of the parties under the applicable laws.

66 Authenticity of Financial Instruments

- 66.1 Any financial instrument, submitted by the Contractor as Bid Security, and Performance Guarantee, if found fake or dishonored by the issuing bank / financial institution at any pre- / post-contractual stage shall, in addition to any criminal liability, call for blacklisting of the Contractor.

67 Obligations of the Contractor

- 67.1 The Contractor, during the execution of works, shall be responsible for following the instructions and directions of the Divisional Engineer or his representative only.
- 67.2 The Contractor shall be responsible to provide and use quality construction material as per the specifications, and to the satisfaction of the Divisional Engineer.
- 67.3 The Contractor shall strictly adhere to all design requirements and technical specifications established by the Design Engineer and approved by PAA. The charges of which shall be borne by the Contractor, but the additional quantity of any materials used in executing the Works shall be paid as per Contractor's quoted rate.
- 67.4 The Contractor shall clean the existing rusty steel by approved means at his own cost and no compensation whatsoever shall be given to the Contractor.
- 67.5 The Contractor will be fully responsible to arrange security clearance of his workmen employed on the job in accordance with the rules requirements enforced at the time of

execution and shall not be entitled for any compensation whatsoever on account of wastage of time and labour due to any reason.

- 67.6 The Contractor shall enclose the work / site area as per direction of the Divisional Engineer or his representative at his own cost. He will also ensure safety of workers as well as passenger(s) and airport staff during and after the work hours.
- 67.7 The Contractor shall submit a list of fittings, fixtures, equipment etc. to be dismantled as approved by Engineer In charge accordingly.
- 67.8 Generally, the works will be carried in accordance with Electrical Act 1910 read with Electricity Rules 1937 and any amendments thereto, Pak PWD Specifications for Electrical Works & latest editions of I.E.E rules of Building Equipment.
- 67.9 All wires & Cables to be used for executions of work will be copper conductors.
- 67.10 Damages done by the contractor during execution of work will be made good by the Contractor as per engineering specifications and to the complete satisfaction of the Divisional Engineer.
- 67.11 The contractor will perform all types of tests as directed by E&M Engineer In charge after / before executions of his work & will submit test reports in this regard if required.
- 67.12 Cost of samples of materials will not be claimed & test charges for all required tests as instructed by the E&M Engineer from Govt. or other authorities will be borne by the contractor without any extra claim of this effect.
- 67.13 The Contractor will submit warranty / guarantees & literature of the Air-Conditioning equipment, Electrical equipment or Mechanical equipment etc as desired by Engineer In charge.
- 67.14 The approved makes of materials, accessories & equipment are provided in Appendix-F. Works shall be executed subject to approval of submittals/samples from Engineer In charge.
- 67.15 Any equipment / items during execution / testing / commissioning & during maintenance period if burnt out / malfunctioning or broken will be replaced by the contractor without any extra cost.
- 67.16 The special terms & conditions specific for this project are provided in Appendix-G. The Contractor is liable to comply these terms & conditions during the concurrency of the contract.

67.17 LOCAL/SITE TRAINING

The contractor shall be responsible to design, organize and conduct structured technical training for the nominated officers/officials (12-15 Nos.) of ES E&M, particularly those engaged in the operation, control and maintenance of the HVAC system including water cooled cooling towers and associated allied equipment being supplied, installed and commissioned under this project.

The training program shall be conducted by OEM-certified institution/engineers or duly qualified HVAC specialists having expertise in large scale air conditioning and cooling systems. The training shall completely cover system operational, performance optimization, energy efficiency enhancement, fault detection and diagnostics, preventive and predictive maintenance practices, as well as emergency response procedures to ensure

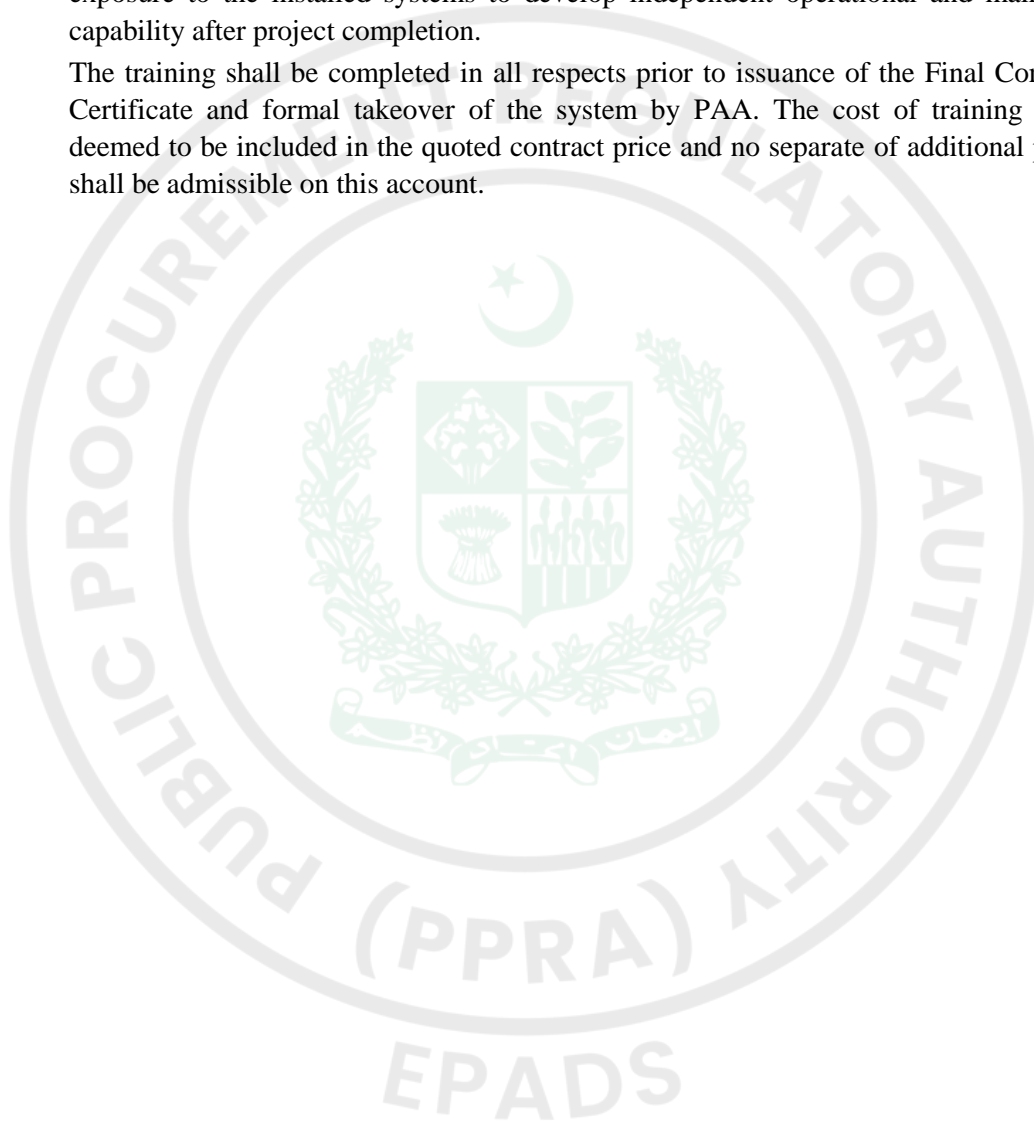
Appendix-II
PAA General and Special Conditions of the Contract
PAAGCC & PAASCC

safe, efficient and uninterrupted operation of the HVAC system.

The contractor shall ensure that the training is delivered (in-land) through a combination of classroom instruction and hand-on practical sessions at site during installation, testing, commissioning and initial operational stages of the system. All necessary training aids, technical documentation, operation & maintenance manuals and Standard Operating Procedures (SOPs) shall be provided in both hard copy and electronic formats.

It shall further be ensured that relevant PAA officers/staff are provided adequate hands-on exposure to the installed systems to develop independent operational and maintenance capability after project completion.

The training shall be completed in all respects prior to issuance of the Final Completion Certificate and formal takeover of the system by PAA. The cost of training shall be deemed to be included in the quoted contract price and no separate or additional payment shall be admissible on this account.



SCOPE OF WORK & TECHNICAL SPECIFICATIONS

(Note: These under mentioned scope of works & technical specifications shall have to be read in conjunction with the whole contract/ bidding document)

1.0 Scope of Work

The Contractor shall furnish all labour, materials, equipment, tools, appurtenances, services, temporary work and storage, protection including loading, unloading, shifting, lifting upto the final locations/foundations as shown in relevant design/shop drawings necessary to completely supply, install, test, commission, and maintain the ventilating and air-conditioning system all in perfect operating condition in accordance with these Specifications and Drawings and as per manufacturer recommendation with Engineer's approval. The Contractor shall also adjust, balance and readjust all the air and water systems as specified elsewhere in these specification and drawings. The Contractor shall commission, operate and maintain all the systems for a period specified as Defect Liability Period (DLP).

Specifications are only general guidelines and by no means cover details of the equipment. These only spell out the intent of the requirement. The details have to be provided by the Bidders along with details of performance, construction and technical literature with the Bid. The specifications are to be read in conjunction with HVAC and all specialties Drawings.

All equipment and materials shall be brand new bearing stamped ratings as required and must be approved by the Engineer prior to their use for installation or alike. Any doubts about the practicability and implementation of Specifications and details shown on Drawings must be expressed and clarification sought before submission of Bid. Inability of the Contractor to implement these specifications after the acceptance of the contract shall be considered breach of contract.

Bidder shall visit and thoroughly study the site prior to bid / quote for the clear intent of the understanding of the existing building and adjacent areas related scope of works and appropriate cost shall be deemed to be included in the relevant BOQ item.

Dismantling job of the old existing / installed cooling towers along with major & minor equipment and material shall be properly dismantled, loading / unloading, shifting, lifting uplifting, transportation etc. upto store / final location and properly handed over to Client after specified period of time as per approval of the Employer and restoring the areas, equipment and systems etc. to their original forms, conditions, and operations. All relevant equipment and piping works are required to be re-adjusted for the required flow, capacity and outputs for whatever measures are required to be taken by the Contractor by themselves in coordination by the manufacturer's recommendation without any additional cost.

2.0 Services by the Contractor

2.1.1 Erection Supervisor

The Contractor shall provide competent Erection Supervisor to direct and be responsible for the erection, starting and operation of the Equipment supplied by the Contractor until such Commissioning Tests and Reliability Trial Tests as required by the Engineer are completed. In

addition, the Contractor shall also provide services of Factory Engineer authorized by manufacturer to direct and supervise the installation, testing and commissioning of the cooling towers and allied equipment.

2.1.2 Maintenance during Defect Liability Period:

The Contractor shall maintain the installed equipment for a period mentioned as “Defect Liability Period”.

2.1.3 Training of Employer’s Operative Personnel

The Contractor shall arrange free of cost training of at least 03 personnel from operations team, nominated by the Employer, in the operations and maintenance of cooling towers and allied system at OEM’s manufacturing facility.

Additionally, refer clause 67.17 of SCC for local training.

2.1.4 Erection Plant

The Contractor shall furnish special erection plant and tools in accordance with the requirements of HVAC Works.

2.1.5 Related Works

The Contractor shall execute all works related to HVAC system, whether specifically mentioned or not. These related works shall include, but not limited to:

- i. All electrical works required to complete the job.
- ii. Providing written information regarding Concrete Pads and foundations for HVAC equipment.
- iii. Providing steel frames and springs for inertia pads and cork sheet/neoprene sheet for other pads.
- iv. All PVC conduit /sleeve and uPVC pipe sleeve through masonry & concrete, etc.

3.0 Design Conditions

Cooling towers shall be designed for the conditions listed here under. These conditions unless stated otherwise are being given for the information of the Contractor to enable him to select the equipment, material and to perform specified tests under these conditions. Tolerance limits are given to perform specified tests only. The atmospheric Conditions are highly Hot and Humid. The wind loading shall also be considered as per applicable local codes and standards.

Heat Rejection Capacity (Minimum)	625 TR / 2200 kW
Water Flow Rate Per Tower	105 liters/sec
Hot Water in Temperature	38 °C

Cold Water Out Temperature	33 °C
Web Bulb Temperature	29°C

4.0 Drawings, Equipment Submittals, Information Manuals & Contractor's other Submissions

4.1 General

All drawings, other information and samples must be supplied to the Engineer as laid down in these provisions and as and when agreed during site meetings, in the Progress Chart or as instructed by the Engineer.

The Contractor shall submit for approval, detailed submittals as specified and no material or equipment may be delivered to the job site or installed until the Contractor has in his possession the approved Data Sheet, Catalogue cuts or samples of particular material. All submittals shall be in English Language and shall be supplied free of cost.

Submittals shall be proper and shall be giving full information as to capacity; performance at different operating and ambient conditions, dimensions, materials, electrical data and all other information pertinent to the adequacy of the submitted equipment or material shall be submitted for approval. Proper Specification and Comments Confirmation / Compliance / Response sheets shall also be submitted along with each submittal.

All submittals shall be proper, complete in all respects and shall be made in triplicate in hard and soft formats with at least one in Original.

Approval rendered on submittals shall not be considered as a guarantee of measurements or building conditions. Where submittals are approved, said approval does not in any way relieve the Contractor from his responsibility for necessity of furnishing material or performing work as required by the Drawings and Specifications.

Failure of the Contractor in providing submittals in ample time for checking and reviewing shall not entitle him to an extension of Contract time and no claim for extension by reason of such default will be allowed.

4.1.1 Omitted Particulars

All works and materials omitted from the Contract but which may reasonably be implied or inferred from them and in the opinion of the Engineer obviously are necessary for the efficiency, stability, completion and maintenance of the works and which are ordered by the Engineer to be carried out shall be executed by the Contractor accordingly as if they had been expressly described in or shown on the Contract documents and the costs thereof shall be deemed to be included in and covered by the Contract Price.

4.2 Drawings

4.2.1 Shop Drawings

The Contractor shall make a detailed analysis of the requirements of work. Based upon such analysis he shall prepare detailed shop Drawings of the cooling towers and allied systems/equipment to be installed. Initially he shall submit 2 preliminary copies each of all such Shop Drawings to the Engineer for obtaining approval. Once basic agreement is reached with the Engineer regarding the details then the Contractor shall submit 6 (six) copies each of all such Shop Drawings and one sepia to the Engineer for obtaining approval of the Engineer. After obtaining approval and after having in possession these approved Shop Drawings, the Contractor shall use these Shop Drawings for fabrication, construction and installation. Approval rendered on shop drawings shall not be considered as a guarantee of measurements or building conditions. Where shop drawings are approved, said approval does not in any way relieve the Contractor from his responsibility for necessity of furnishing material or performing work as required by the Drawings and Specifications.

The work described on any shop drawing submitted shall carefully be checked by the Contractor for all clearances, field conditions, maintenance of architectural conditions and proper coordination with other services on the job. No payment shall be made for any variations or alterations on site due to lack of knowledge of other services.

Equipment layout is to be detailed on shop drawings, showing the exact method of installing and clearly illustrating components to be used in making all connections. Piping drawings must be fully detailed, showing all piping in double line and indicating the precise sizes of fittings, valves and equipment.

The Contractor shall be responsible for any discrepancies, errors or omissions in the drawings and other particulars supplied by him whether such drawings and particulars have been approved by the Engineer or not.

Failure of the Contractor in providing complete shop drawing in ample time for checking and reviewing shall not entitle him to an extension of Contract time and no claim for extension by reason of such default will be allowed.

All submissions of the shop drawings along with comments confirmation/compliance/response sheets shall be made in hard and soft editable formats in proper forms complete in all respects up to stratification of the Engineer.

4.2.2 As-Built Drawings

The Contractor shall supply to the Engineer a set of "As-Built" drawings showing the Contract works as installed, together with any other information necessary for operation and maintenance. As-Built Drawings shall show all information of the Contract works as installed complete in all respects and up to the satisfaction of the Engineer. Six hard copies of each drawing and other information shall be supplied, along with a reproducible copy in the form of soft sets in CAD and PDF formats in CDs and in USB Flash drives.

4.3 Manufacturer's Data

Manufacturer's performance data, certified factory drawings and/or curves of apparatus giving full information as to capacity, performance at different operating and ambient conditions, dimensions, materials electrical data and all information pertinent to the adequacy of the submitted equipment shall be submitted for approval. Initially the Contractor shall submit one original published catalogue with other papers and one copy thereof. Once basic agreement is reached with the Engineer regarding the details then the Contractor shall submit four copies each of all approved material.

Manufacturers' names, sizes, catalogue numbers and/or samples of all materials shall also be submitted for approval. Samples of imported materials and devices, literature of which has been approved, will not be required. All submittals shall be made in English language and shall be easily readable.

Orders for equipment submitted for approval must be accompanied by relevant drawings, curves, technical data, catalogues and samples. Where data, certified drawings or other required information is not available until after orders have been placed, the Engineer shall give provisional approval until all requested drawings and information have been supplied to the Engineer and approved by him. It is the Contractor's responsibility to ensure that all necessary information is supplied to the Engineer in accordance with the progress of works.

Should the Engineer give provisional approval only for an order due to lack of complete information and should the missing information not eventually meet with the approval, the Engineer shall not be held responsible for any delay incurred. For equipment where information from the manufacturers is likely to be delayed, it is essential that the Contractor places provisionally approved orders at the earliest possible date so as to ensure approval of orders in complete conformity with the progress of the works.

Submittals and shop drawings should, as far as possible, be complementary so that drawings and submittals can be cross-checked.

5.0 Standards and Code Requirements

All equipment and materials under HVAC Scope of Works shall be furnished in conformity with latest edition of applicable Standards of ASME, ASHRAE, AHRI, CTI, SMACNA, TIMA, AMCA etc. and applicable Government and Local Codes governing the same. In case of conflict, the stricter requirements shown / specified shall govern. All equipment shall be rated and tested as per standards listed in ASHRAE Handbook.

Abbreviations for Codes and Standards referred in the Contract are as under:

ASME - American Society of Mechanical Engineers, USA

ASTM - American Society for Testing Materials, USA

ASHRAE - American Society of Heating, Refrigeration and Air-conditioning Engineers, USA

CTI - Cooling Tower Institute, USA

EUROVENT-

JCI - Japan Cooling Tower Institute

JIS - Japan Industrial Standards

NFPA - National Fire Protection Association, USA

AHRI - Air-conditioning, Heating and Refrigeration Institute, USA

SMACNA - Sheet Metal and Air-conditioning Contractors National Association, USA

GOVERNMENT - Government of Pakistan

LOCAL - Local authorities of Lahore

I.E.E. - Institute of Electrical Engineers, London.

NEMA - National Electrical Manufacturers Association, USA

AMCA - Air Moving and Control Association Inc. USA.

P.S. - Pakistan Standards

B.S. - British Standards

TIMA - Thermal Insulation Manufacturer's Association, USA.

6.0 Cooling Tower Manufacturers

- As mentioned in the technical specifications.

6.1 Quality Assurance and Qualification

If the equipment is supplied other than recommended manufacturers as per the list above, then to guarantee a high quality standard in the field of designing, fabricating, installing and maintaining the said equipment; only manufacturers and installer / supplier with a proven record of following criteria will be considered as approved equivalent:

6.1.1 Manufacturer:

Unless otherwise mentioned in the list of recommended manufacturers (listed above in clause 6.0), the country of manufacture of Cooling Tower shall be USA or Western Europe and must fulfill following criteria to be considered as approved equivalent:

- i. The manufacturer must have a track record of having produced and supplied no less than 500 Cooling Tower units during the last 10 years.
- ii. The manufacturer of the equipment shall have a minimum of 30 years' experience in the design and manufacture of similar type of equipment.

- iii. The manufacturer shall be regularly engaged in the manufacture of cooling towers whose products have been in satisfactory use in similar service for not less than (10) years.

All devices, components and equipment shall be new, standard products of the manufacturer's latest design and suitable to perform the functions intended.

6.1.2 Contractor:

The contractor should have PEC Registration Certificate in the relevant category and NTN certificate.

The contractor shall be regularly engaged and qualified with at least 5 years' experience in installation and service of similar equipment. The contractor must have a track record of having supplied and erected no less than 10 Cooling Tower units of similar capacities during the last 05 years in Pakistan.

The contractor will carry out all installation under the direct supervision of manufacturer's site supervisor.

Provide references of projects of similar scope that have been successfully completed within Pakistan and abroad. References shall include project name, scope description, cost of works, address, date of substantial completion and contact details of facility manager to verify the manufacturer's and contractor's experience.

7.0 Permits

The Contractor shall secure and pay for any necessary approvals, permits and inspections from Government or other controlling agencies where applicable as required by law, before commencing any work so as to avoid all delays during erection and turn over the official records of granting of permits to the Engineer. No reimbursements shall be made for such payments.

8.0 INSPECTION, TESTING, DAMAGES AND MATERIAL ORDERS

8.1 Inspection and Testing at Manufacturer's Shop

All equipment (including pumps, fans mechanism and other key components) to be supplied under this Contract shall be subject to witnessing of inspection and testing by two technical representatives of Employer at its point of original manufacture or final shop assembly before its dispatch to site. The Contractor shall make necessary arrangements and provide all the facilities required for conducting such inspection, at Contractor's cost. The cost of traveling including overseas travel, arranging of business visas, boarding and lodging shall be the responsibility of the Contractor.

In addition, for overseas inspection, the Contractor shall provide (for two persons) daily allowance at approved DSA rates by GoP, for out-of-pocket expenses, per day per person for each visit. The number of days shall be actual days spent in travel calculated from the dates of travel from and to the hometown of the concerned representative nominated for inspection, but not less than five (5) days. The US\$ in cash shall be provided before start of travel from hometown.

The Contractor shall give at-least 3 (three) to 5 (five) weeks' notice to the Engineer/Employer for attending such inspections/tests.

8.2 Inspection at Site of Works

All equipment / materials supplied by the Contractor shall be inspected by the Engineer after

delivery of the same at site to assess any damage or short of quantities and any other requirements of the specifications. The Engineer will issue an inspection certificate if the supplied items of equipment and material are found to be satisfactory.

8.3 Damages, During Transportation, Storage & Installation

The Contractor shall be responsible for any damage of the Equipment/material during transportation to site, storage and installation until satisfactory handling over the works to the Employer. The Contractor shall replace any damaged equipment/ materials at his own cost.

8.4 Acceptance of Materials

The acceptance of any material or equipment prior to shipment shall in no way relieve the Contractor of any of his responsibilities for meeting all of the requirements of the specification's / Contract document and shall not prevent subsequent rejection if such material or equipment is later found to be defective.

9.0 Name Plates

Each piece of equipment shall bear a Factory supplied durable and adequate embossed metal name plate giving the name and address of the manufacturer, date of manufacturer and rating data and details. Name plates of Equipment Installed in outside environment shall be able to withstand severe weather and environment effects without any loss or damage to its data or information embossed on it. All ratings and data shall be in the Measurement unit system adopted for the Project, unless otherwise authorized by the Engineer.

10.0 Installation, Erection and Maintenance Plant & Tools

The Contractor shall furnish all plant and tools including special plant and tools for the complete and proper installation erection and maintenance of the cooling towers and allied equipment. Tools shall include the type of tools not normally available in the market as standard tools and are generally manufactured especially for use with the Equipment. All lifting devices shall be accurately machined to fit the parts to be handled. The wrenches and tools for maintenance, in so far as practicable, shall be mounted on a suitable hardwood or steel board arranged for wall mounting and provided with means for ready identification. The Contractor may withdraw the Plant and Tools after its use.

The contractor will provide list of tools and plants including special tools and plants required for maintenance of the cooling towers with Technical Proposal/Bid. A complete set of brand-new tools in proper tool boxes shall be supplied for use of the employer as per the list provided without any additional cost to PAA.

11.0 Erection Instructions, Operation & Maintenance Manual

Erection Instructions, Operation and maintenance instructions, in form of published manuals, as furnished by the manufacturer of the cooling towers and allied equipment shall be provided by the Contractor.

These instructions shall include full and detailed instructions for the guidance of the Erection Supervisor as to all procedures and precautions to be observed in erecting, assembling and adjusting the Equipment and as to the use of the Erection Plant. It shall include or be accompanied by drawings, clearly showing erection marking and particularly any match making and shall embody in

particular a full statement as to erection tolerances to be observed.

Operation and maintenance manuals shall include full instructions for operation and maintenance of the Equipment not only during the period of Contractor's liability but more specifically during its operating life. The directions shall be set out simply, clearly and systematically. In particular this section shall include a full list of all routine checks and their timing, directions as to fault finding, detail of all routine attentions (such as greasing), in the form of check sheets for daily, weekly, monthly, quarterly, half- yearly, yearly and any other periodic checks recommended by the manufacturer. This section should also provide detailed and complete instructions for trouble shooting, maintenance and all necessary adjustments to the Equipment. Technical leaflets and brochures in respect of all equipment supplied under the Contract including all relays, instruments, switches, controllers, regulators etc, should be supplied with the erection instruction. This should also include complete catalogue of spare parts with exploded views of the equipment and relevant part numbers to facilitate identification and ordering of spares throughout the operating life of the Equipment.

The Contractor shall submit 1 (one) copy of all manuals to the Engineer for approval. After approval and incorporating all requirement pointed out by the Engineer, the Contractor shall submit 3 (three) sets of these manuals in proper folders and CDs and USB Flash Drives in Hard and Soft forms for use of the Employer.

All Erection manuals, operation and Maintenance manuals, drawings, and other Standard operating procedures etc., shall be supplied in original and free of cost.

12.0 Spare Parts

The Contractor shall furnish a list of critical spares, as per recommendations of the OEM with technical bid/proposal, to be maintained at site for smooth operation of the cooling towers for approval of the Engineer. The spare parts listed shall be provided by the Contractor at no additional cost to the Employer.

These spare parts shall not be used during Defects Liability Period, or earlier, unless otherwise authorized by the Engineer/ Employer, in which case these shall be replenished by the Contractor at his cost before issue of final completion certificate.

The complete spare parts manual shall be submitted which shall indicate the parts numbers and show exploded view.

The Contractor shall supply, free of cost any spare parts required during the Defects Liability Period.

All spare parts shall be with proper packing / boxes and tagging.

13.0 Defect Liability Period

The Contractor shall maintain complete cooling tower System for a period of 24 months after date of issuance of Taking Over Certificate (TOC). This service shall include supply of all necessary adjustments, consumables including but not limited to; chemicals, greasing, oiling and cleaning and the furnishing of necessary tools, instruments, supplies and spare parts to keep the system in perfect operating condition. All costs incidental to Maintenance shall be deemed to be included in the relevant item of the Bill of quantities.

14.0 Performance Guarantee

The Contractor shall guarantee the performance of the equipment in conformity with the Provisions of the Contract.

15.0 Sufficiency of Rates And Currency of Payment

All rates and amounts filled in the BOQ and Appendices by the Contractor for equipment/material whether locally procured or imported shall be deemed to include, but not limited to, the cost of items, custom duties, sales tax and surcharges, freight, marine insurance, local duties, sales tax and surcharges, clearance charges, inland transport and insurance, L/C opening charges, bank charges, etc (**except provincial sales tax on services**). Payments to the Contractor shall be made in local currency.

16.0 Import License & Foreign Exchange for Import of Equipment and Materials

The Contractor shall arrange on his own the import license and foreign exchange for import of all equipment and materials.

17.0 Packing of Equipment and Materials

All material /components/equipment shall be marked and boxed in rugged export / shipment crating, shipping skid designed for fork lift or similar transport. Units shall be specially cleaned pre-shipment with all openings closed and sealed. Material / components / equipment shall be packaged with reinforced air tight and weather resistant wrapping or PVC Coated Plastic Tarpaulins as required protecting these from in-transit rain, dust, corrosion, moisture, scratching, damage and debris during handling, transportation and storage. Manufacturer's Maintenance and assembly and installation instructions in English language shall be provided. Material /components/equipment shall be stored at site as per manufacturer's instructions and as per the details given elsewhere in these specifications and provisions. The packaging shall be rigid enough to withstand normal service incidental to shipping and handling. Wherever necessary, crates/boxes shall be provided with lifting hooks attached by means of vertical rods or plates to strong bottom supports to enable rigging.

The following information shall appear inside all packages:

Stock or identification number
Description of contents/ packing list
Quantity of each item
Invoice number
Year of manufacture

18.0 Warranty Period

The Contractor shall provide warranty of equipment as specified under the respective section of specification for the period defined in the specifications. Effectiveness of duration of warranty from Original Equipment Manufacturer (OEM) shall commence from the effective date of Taking Over Certificate issued by the Engineer. All warranties are to be endorsed in the name of the Employer and an undertaking shall be submitted from Original Equipment Manufacturer (OEM) and local

representatives for ensuring compliance of services to the Employer during Warranty Period.

19.0 Inspection and Tests at Site

19.1 Inspection by Engineer

The Engineer shall inspect the works in progress as and when considered necessary by the Engineer and the Contractor shall provide full access and assistance to the Engineer for carrying out inspection to verify the conformity of works to the technical specifications. Such inspection if made shall not relieve the Contractor from any obligations under the Contract.

19.2 Tests

19.2.1 General

All tests as specified shall be carried out by the Contractor's workmen. The Engineer shall witness the tests. The equipment shall be tested as per procedure given and prescribed in codes and standard mentioned in this document as well as according to the manufacturer instructions with approval of the Engineer. Before starting the Tests, contractor shall submit the test procedure, protocols and calculations to the PAA for approval. All tests shall be performed as per the approved procedures, protocols, as mentioned in technical specifications and calculations. Test (witnessed by the Engineers) reports shall be submitted for review and approval of the engineer.

The Contractor shall give the Engineer at least seven days notice in writing of the date on which any equipment will be ready for testing as provided in the Specifications and unless the Engineer shall attend within seven days of the date which the Contractor has stated in his notice, the Contractor may proceed with the tests in the Engineers absence and shall forthwith forward to the Engineer three duly certified copies of test readings, on the forms prescribed by the Engineer. The Engineer shall give twenty four hours notice in writing of his intention to attend any test.

The Contractor shall provide all labor, materials, electricity, fuel, stores, apparatus, machines and instruments as may be necessary to carry out tests.

The cost of all Tests under this Clause shall be borne by the Contractor.

As and when any equipment or part thereof shall have passed any test the Engineer shall furnish to the Contractor a certificate in writing to that effect.

The Engineer may reject any part or parts of the Equipment which he shall after testing decide is not performing in accordance with the Specifications and Drawings and he shall give to the Contractor within fourteen days of such testing notice in writing of such rejection stating therein the grounds upon which his decision is based.

The results shall be filled out by the Contractor in the forms prescribed by the Engineer. Six copies of filled out forms shall be submitted to the Engineer for review and approval.

19.2.2 Pre-Start and Commissioning Tests

Pre-start and Commissioning Tests shall be carried out on all equipment, as specified by the OEM in the commissioning manuals when the equipment as a whole is ready for operation.

19.2.3 Performance Tests

These tests as specified by the OEM shall be carried out after successful completion of Commissioning Tests, during appropriate season. Performance Tests may be carried out during Maintenance Period.

19.2.4 Reliability Trial Tests

On successful completion of Performance Tests on all equipment, and after having obtained certificate to that effect the Contractor shall inform the Engineer in writing of his readiness to commence the Reliability Trial Test of the cooling towers and allied equipment. Cooling Tests shall be carried in appropriate season and the Engineer shall, within fourteen days of receipt of such information forward his consent for commencement of Reliability Trial Test, after having satisfied that all the requirements for such Tests have been completed.

If any Reliability Trial Test is not to the satisfaction of the Engineer, such test shall be repeated at such time at the Engineer may direct.

20.0 Office Equipment

The contractor shall provide following office equipment to the the Divisional Engineer E&M, AIIAP for official use at no additional cost to PAA. These items will be considered institutional asset and will not be returned to the contractor upon the completion of the subject project/ scheme. The details are as follows:

- One (01) laptop having specs: Core-ultra7, 16 GB RAM DDR5, 1 TB SSD NVMe, FHD 14” display.
- The contractor shall provide following premium quality hand held meters from reputed and reliable Japanese, Western Europe or USA manufacturer for O&M monitoring by PAA:
 - i. Digital TDS meter (industrial type)
 - ii. Digital thermometer (industrial type)Both suitable for use at cooling tower basin & other areas.

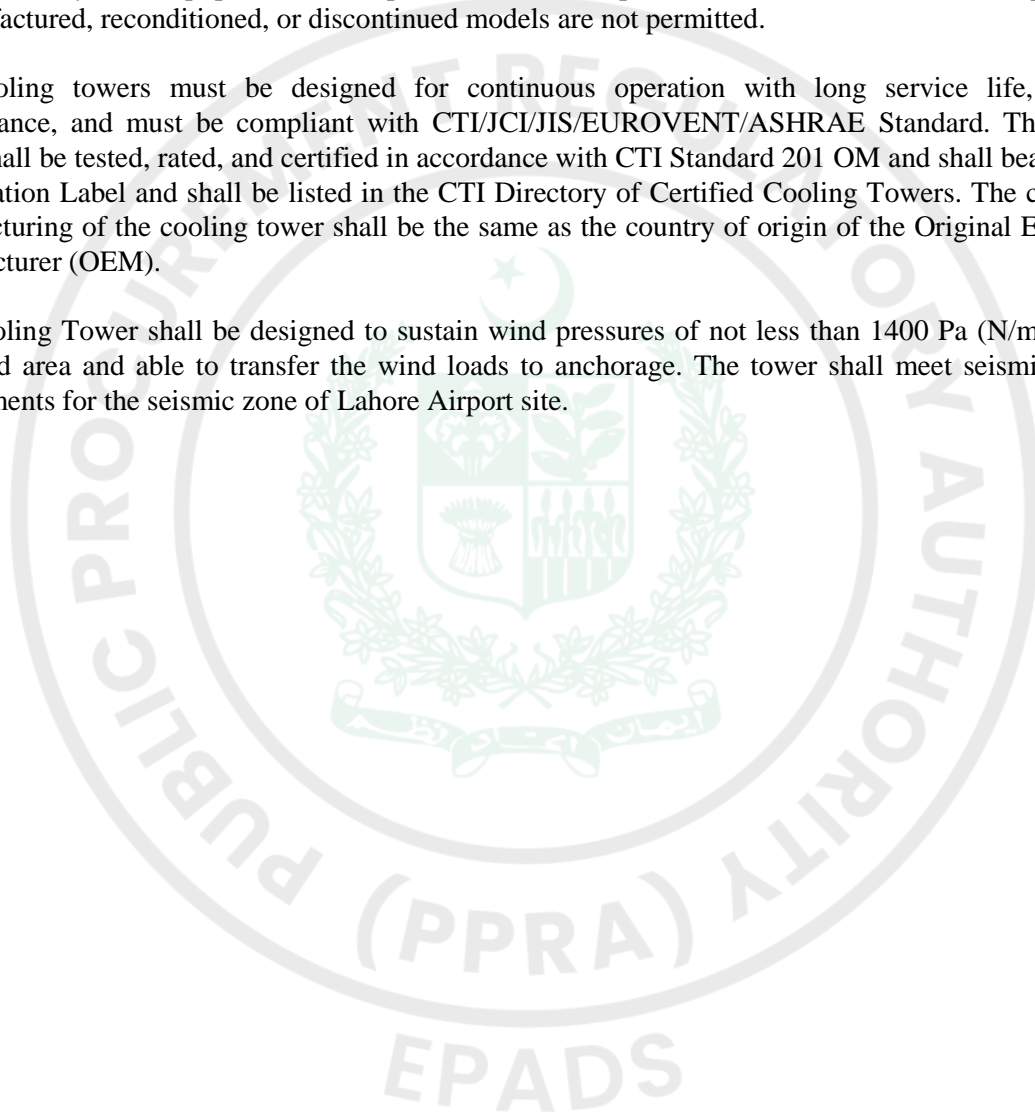
DETAILED TECHNICAL SPECIFICATIONS OF THE COOLING TOWERS

These technical specifications define the requirements for induced draft, crossflow cooling towers with hot water basin distribution. The proposed cooling towers shall be heavy duty and ensure high thermal performance, energy efficiency, and minimal water loss with built-in piping connections and axial fans for vertical air discharge.

The cooling towers shall be current production model, characterized by quality workmanship and materials. Only new equipment is acceptable under this specification; used, demonstrator, prototype, remanufactured, reconditioned, or discontinued models are not permitted.

The cooling towers must be designed for continuous operation with long service life, minimal maintenance, and must be compliant with CTI/JCI/JIS/EUROVENT/ASHRAE Standard. The cooling tower shall be tested, rated, and certified in accordance with CTI Standard 201 OM and shall bear the CTI Certification Label and shall be listed in the CTI Directory of Certified Cooling Towers. The country of manufacturing of the cooling tower shall be the same as the country of origin of the Original Equipment Manufacturer (OEM).

The Cooling Tower shall be designed to sustain wind pressures of not less than 1400 Pa (N/m²) on any projected area and able to transfer the wind loads to anchorage. The tower shall meet seismic restrain requirements for the seismic zone of Lahore Airport site.



Appendix-III-b
Scope of Work & Technical Specifications

Sr. No	PAA Specifications	Specifications of Offered Unit	OEM Literature/ Certificate Reference
1. KEY PERFORMANCE REQUIREMENTS			
a.	Type: Cross flow, induced draft, twin cell with hot water basin distribution		
b.	Heat Rejection Capacity (Minimum): 625 Tons/ 2200kW		
c.	Water Flow Rate: 378 Cubic meter per Hour (105 Lit./sec)		
d.	Design Wet Bulb: 29 °C at corresponding DBT 34 °C		
e.	Water In/Out Temperatures: Hot water in 38 °C and cooled water out 33 °C		
f.	Drift Loss: Maximum 0.1% of the circulated water flow.		
g.	Operating Conditions: 10 °C to 55 °C, designed for continuous operation.		
h.	Material of Hot and Cold-Water Basins: Stainless Steel Grade 304 or better		
i.	Fan Drive System: Gear Drive or Direct Drive		
j.	Material of Structural Elements Including Gearbox & Motor Foundations: Stainless Steel Grade 304 or better		
k.	Material of Casing: Minimum 14 SWG Hot Dipped Galvanized Steel with galvanizing of minimum 700 g/m ²		
l.	Material of Infills: Polyvinyl Chloride (PVC)/ Polypropylene (PP)		
m.	Material of Fan: Corrosion Resistant Aluminum Alloy		
n.	Fan Motor: IP-65 or better, Minimum Energy Efficiency Class IE-4, Insulation Class-F 400V, 3-Phase, 50 HZ or equivalent for direct drive.		
2. CONSTRUCTION REQUIREMENTS			
a.	Hot Water Distribution Basin: The Hot Water distribution basin shall be gravity-fed with plastic diffusing type metering orifices for uniform water distribution over the entire fills for maximum heat transfer. Balancing arrangements shall be provided for hot water adjustments to achieve equal flow across all cells. PVC louvers, fills, and eliminators shall be self-extinguishing, impervious to rot, decay, fungus, or biological attack		

Appendix-III-b
Scope of Work & Technical Specifications

b.	Retaining Frame: Retaining frame and positioning rods of stainless SUS 304 or better material, shall be provided for holding and keeping the fill in correct position.		
c.	Fasteners: All fasteners shall be of stainless steel, all the hot dipped galvanized steel shall have special corrosion protection coating for longer life.		
3. FAN AND MOTOR SYSTEM			
a.	Fan Type and Material: The Fan/s shall be low-noise axial type made from high strength die cast aluminum alloy with fine finish. Fan blades shall be adjustable and individually attached to the hub. The fan shall be direct driven or through a gearbox to achieve optimum RPM. Fan shall be statically and dynamically balanced. The entire fan system, including motor and coupling shall be heavy duty and robust for cooling tower application.		
b.	VFD Compatible Motor: The motor shall be VFD compatible.		
c.	Motor RPM: The motor shall have nominal 1500 RPM energized through 400VAC/3-P/50 Hz or equivalent for direct driven.		
d.	Motor Protection and Safeties: The entire assembly shall be protected against water splash and moisture accumulation. A heavy duty and corrosion resistant bird mesh shall be provided for Fan & Motor. Cooling Tower fan motor safeties shall include built-in thermal overload protection.		
e.	Sound Level: The maximum permissible noise level at a distance of 2 meters shall not exceed 80 dB(A).		
4. OTHER CONSTRUCTION AND OPERATION REQUIREMENTS			
a.	Vibration isolation pads and foundation anchoring bolts shall be factory supplied with all cooling towers. Float operated make-up valve and sump complete with suction screen and anti-cavitation device shall be provided. Adequate arrangement to counter the possible Vortex shall be factory provided.		
b.	The cooling towers shall be supplied completely with galvanized steel access ladder for safe access to fan deck and access door for access to inside of tower and G.I checkered plate internal walkways. Galvanize steel handrails, knee rails and toe boards shall be provided around tower perimeter. Cooling Towers shall have a factory provided provision of suitable size equalizer line/pipe. Cooling tower shall be statically and dynamically (with all fans on) balanced after assembly.		
5. CONTROL & SAFETY FEATURES			
a.	Each cell of the cooling tower shall be factory supplied with		

Appendix-III-b
Scope of Work & Technical Specifications

	mechanical or electronic type vibration cut-out switches and interfaced by the successful bidder during site execution.		
b.	A temperature sensor shall be provided independently with each tower to control the fan operation and shut-off one fan.		
c.	Preferably a control panel compliant to JIS C 4620 and IP-65 rated shall be provided at field for housing the above control components in case not opted for installation in the Operator's / Panel Room.		
6. INSTALLATION, TESTING, MAINTENANCE & MISC. REQUIREMENTS			
a.	The successful bidder shall make arrangements for positioning, erection, installation, testing and commissioning of the cooling towers at site, under complete supervision by OEM Engineer. The responsibility for delivering a fully compliant and defect-free equipment remains solely with the Supplier. PAA shall only witness the positioning, erection, installation, testing and commissioning of cooling towers.		
b.	Site Acceptance Tests shall be conducted in accordance with the provisions of OEM. The Commissioning of the cooling towers shall be conducted in accordance with the OEM proforma duly agreed by PAA. On successful testing, a testing report duly signed and stamped by OEM or his representative shall be submitted to PAA. After successful trial operations for 01 month and necessary field arrangements, the system shall be Hand-Over to PAA.		
c.	Additionally, the Cooling System Data Sheet, Water Treatment Program, Maintenance Schedule, Daily, Weekly, Fortnightly, Monthly, Quarterly, Semi-Annual and Annual Checklists shall also be provided.		
d.	The contractor shall arrange the 01-week Factory Training for 03 PAA personnel at OEM designated Training Facility after approval from PAA.		
e.	Successful bidder shall provide one set of maintenance tool kit for cooling tower to perform all the routine and any special maintenance tasks.		
f.	Two sets of printed operation, maintenance, and spare parts manuals (in English), containing illustrated parts lists and operating and service instructions for the unit, shall be delivered with the unit. In addition to the original hard copy manual, an electronic version of the current manuals shall also be provided in the form of a USB/Flash drive.		
g.	The successful bidder shall submit a draft service level agreement, 06 months before the expiry of maintenance/warranty period, for operation and maintenance of cooling towers, for consideration of PAA.		
7. WARRANTY AND AFTER SALES SERVICES			
a.	The complete unit shall be warranted against all defects in material and workmanship for a minimum period of 24 months. The warranty shall include coverage for replacement of defective parts and labor charges.		

Appendix-III-b
Scope of Work & Technical Specifications

b.	The OEM shall have local representative registered under the laws of Pakistan for the provision of technical and after sales support.		
c.	The manufacturer should guarantee that the spares for the cooling towers offered shall remain available for at least 10 years. A certificate from the OEM confirming this guarantee must be provided.		



PERFORMANCE BOND GUARANTEE

Guarantee No:
 Date of Issue:
 Amount of Guarantee: Date
 of expiry:

By this Bond We.....(hereinafter called “THE SURETY”), (1) do hereby bind ourselves and our successors and assign jointly and severally by these presents to pay to the PAKISTAN AIRPORTS AUTHORITY, KARACHI (hereinafter referred to as the PAA which term shall include his successors in office and assigns) unconditionally on demand and without further question, the sum of Rs..... (Rupees.....), sealed with our respective seal and dated this

WHEREAS, M/s.....(hereinafter referred to as “THE CONTRACTOR”) by an agreement made between the PAA of the one part and the Contractor of the part have entered into a Contract hereinafter called “Said Contract” for the Construction, completion and maintenance of” as therein mentioned in conformity with the provisions of the said contract and the sum mentioned in the above written Bond represent the amount of Performance Bond to be furnished by the Contractor for due fulfilment of obligations under the said Contract.

NOW THE CONDITION OF the above written Bond is such that if the Contractor shall duly perform & observe all the terms, provisions, conditions & stipulations of the said contract on the Contractor’s part to be performed & observed according to the true purpose, intent & meaning hereof as determined by the PAA who shall be the sole judge in the matter, or if on default by the Contractor for which the PAA shall be sole judge the Sureties/Surety shall pay the amount of this Bond to PAA without reference to the Contract, then this obligation shall be null and void but otherwise shall be and remain in full force and effect but no alteration in terms of the said Contract made by agreement, between the PAA and the Contractor or in the text or nature of the works to be constructed, completed and maintained thereunder and no allowance of time by PAA under the said Contract nor any forbearance or forgiveness in or in respect of any matter or thing concerning the said Contract on the part of the PAA shall in any way release the Sureties/Surety from any liability under the above written Bond.

AND WE agree that this Bond shall be irrevocable and the Guarantee hereby given shall be valid up toand that a Certificate signed by the Director Engineering Services / Additional Director, stating that the Bond has become due will be sufficient proof of its forfeiture and we shall pay the amount so demanded without, any further proof of any kind and that the payment shall be made by us forthwith on the receipt of the Certificate of the Director Engineering Services / Additional Director as aforesaid.

Notwithstanding anything contained hereinabove, the Bank’s liability under this Guarantee shall in no event exceed the sum of Rs (Rupees), and this guarantee shall remain valid up to where after the Bank shall be completely discharged and released from all its liabilities hereunder unless a claim is received before the aforesaid expiry date.

Signed, sealed and delivered by the said in the presences of:

For and on behalf of
 M/s
 CONTRACTOR

For and on behalf of
 SURETY

WITNESSES:

1. Signature.
 Name.
 CNIC:
 Address.

2. Signature.
 Name.
 CNIC:
 Address.

MOBILIZATION ADVANCE GUARANTEE**(Bank Guarantee)**

Guarantee No. _____

Date _____

WHEREAS the Pakistan Airports Authority (hereinafter called PAA) has entered into a Contract for _____ (Particulars of Contract), with Constructor "M/s _____" (hereinafter called the "Contractor").

AND WHEREAS, PAA 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 this Contract.

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

AND WHEREAS, _____ (Scheduled Bank) (hereinafter called the "Guarantor") at the request of the Contractor and in consideration of the PAA 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 PAA for payment not exceeding the aforementioned amount.

Notice in writing of any default, of which the PAA shall be the sole and final judge, on the part of the Contractor, shall be given by the PAA to the Guarantor, and on such first written demand, payment shall be made by the Guarantor forthwith of all sums then due under this Guarantee as determined by the PAA 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 Bills of the Contractor or until (Date) _____ whichever is earlier.

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

This Guarantee which is unconditional and irrevocable, 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 Bills 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 as payments from interim Payment Bills of the Contractor.

GUARANTOR

For _____

(Bank Limited)

1. Signature _____
2. Name _____
3. Title _____

FORM OF AGREEMENT

THIS CONTRACT AGREEMENT (hereinafter called the “Agreement”) made on the _____ day of _____ 20____ between **PAKISTAN AIRPORTS AUTHORITY**, established under the Pakistan Airports Authority Act, 2023, having its Head Office at Terminal-I, JIAP, Karachi, through its duly authorized officer (hereinafter called the “PAA”) of the one part;

AND

M/s. _____ registered with Pakistan Engineering Council as a licensed Constructor / Operator, having its office at _____ “through its duly authorized person namely _____ (designation) (hereinafter called the “Contractor”) (which term shall include its successors-in-interest, authorized representatives and executors) of the other part.

WHEREAS the PAA is desirous that certain Works, viz

_____ should be executed by the Contractor and has accepted a Bid by the Contractor for the execution and completion of such Works and the remedying of any defects therein.

NOW this Agreement witnesseth as follows:

1. In this Agreement words and expressions shall have the same meanings as are respectively assigned to them in the General Conditions of Contract hereinafter referred to.
2. The following documents after incorporating addenda, if any, shall be deemed to form and be read and construed as part of this Agreement, viz:
 - (a) The Letter of Acceptance;
 - (b) The completed Letter of Offer for Execution of Works;
 - (c) The General Conditions of Contract;
 - (d) The Special Conditions of Contract (if attached).
 - (d) The Bill of Quantities;
 - (e) The Specifications; and
 - (f) The Drawings
3. In consideration of the payments to be made by the PAA to the Contractor as hereinafter mentioned, the Contractor hereby covenants with the PAA to execute and complete the Works and remedy defects therein in conformity and in all respects within the provisions of the Contract.
4. The PAA 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 Contract Agreement to be executed on the day, month, and year first before written in accordance with their respective laws.

(For and on behalf of Contractor)
CNIC No. _____

(For and on behalf of PAA)

Signed, Sealed and Delivered in the presence of:

Witness (1):

Witness (2):

(Name, CNIC No. and Address)

(Name, CNIC No. and Address)

LIST OF BANKS

Following is the list of approved schedule banks (financial institutions) acceptable to PAA for obtaining Bank Guarantee(s):

Public Sector

- 1) National Bank of Pakistan
- 2) Sindh Bank Limited
- 3) The Bank of Punjab

Private Sector

- 4) Allied Bank Limited
- 5) Askari Bank Limited
- 6) Bank Al Habib Ltd.
- 7) Faysal Bank Ltd.
- 8) Habib Bank Ltd.
- 9) Habib Metropolitan Bank Ltd.
- 10) JS Bank Ltd.
- 11) MCB Bank Ltd
- 12) Samba Bank Ltd.
- 13) Soneri Bank Ltd.
- 14) Standard Chartered Bank Ltd.
- 15) United Bank Ltd.
- 16) Industrial and Commercial Bank of China Ltd.

Islamic Banks

- 17) Al Baraka Bank (Pakistan) Limited
- 18) BankIslami Pakistan Limited
- 19) Dubai Islamic Bank (Pakistan) Limited
- 20) Meezan Bank Limited

LIST OF APPROVED MANUFACTURERS / SOURCES

This list of recommended manufactures / suppliers of different materials / equipment with brand names have been provided in order to establish a standard level of performance. The Contractor is supposed to provide and fix the materials / equipment of acceptable quality from the list or equivalent as approved by the Engineer. Whereas the preference of brand and model will be decided by the Engineer. Material from approved list shall stand rejected, if it fails in any of the specified tests or quality standards.

Sr. No.	Description	Manufacturer/Supplier/Source
Civil Works		
1	Cement (OPC, SR)	Lucky, Pioneer, Maple Leaf, Fauji, Askari, Power, Cherat, DG Khan, Dewan
2	Cement (White)	Kohat, Maple Leaf, Zealpak
3	Construction Chemicals & Sealants	Sika, Fosroc, BASF, Ultra, Fastchem, Vertex, MAPEI, KALON, Mitchell
4	Anchoring / Fixing Systems	Strong hold, Strong force, Hilti, Fischer
5	Sand	Bholari, Lawrencepur or from any other approved source as per Mix Design.
7	Aggregate	From approved source.
8	Steel Reinforcement	Amreli, FF Steel, AFCO, Ittehad, Ittefaq, Fazal, PECO, Razzaque, Metropolitan, Mughal, Pak Steel, Model Steel, Nizami Brothers, Moiz Steel, Poiner, Tayyaba Steel or approved equivalent.
9	Bitumen (Cold)	National Refinery, Attock Petroleum, PARCO
10	Bricks/Blocks	Local (Brand / source to be approved by the Engineer)
11	Ceramic / Porcelain Tiles	Shabbir, Master, Time Ceramic, National, or equivalent imported
12	Vinyl Tiles	Decora, Marflex, A.T.S. Synthetic
13	Wooden Flooring	Sarina, Firstfloor or equivalent
14	Textured Decorative Wall Coating	Rockwall, Wall Tec, Rock Shield, Sand Tec, Graffito, Jotun
15	Aluminium Doors / Windows	ALCOP, Pakistan Cables, Chawla, Prime, Ittehad Aluminium, Thermec, Eng: Co, Alhali Aluminum Co (Pvt) Ltd, Krudson, Lucky or equivalent
16	Aluminium Composite Panel	ALCOP, Chawla, Pakistan Safety Glass (Alucobond), AKB (EuroBond – Exterior. & DuBond – Interior)
17	Paint	ICI (Dulux, Paintex), Berger Robbialac, Brighto, Master, Kansai (Japan), Nippon, Jotun, Diamond, Buxly, Pakistan Phthalates Limited (Kalon Chemicals Company) or equivalent.
18	Powder Coating	Jotun or approved equivalent
19	Concrete Pavers	Tuff Tiles, Izhar, Envicrete, National Pavers, Banu Mukhtar, Magnacrete or equivalent
20	Insulation	Diamond (Jumbolon), Pakistan Insulations, Safe line, Insugreen

Appendix-VI
Approved Manufacturers

Sr. No.	Description	Manufacturer/Supplier/Source
21	Membranes for Roof and Basement walls	Polytec (Henkel Polybit), Hygrip, Roof Grip, A.T.S. Synthetic, Petro Seal, Bitumat (Saudi Arabia), Pakistan Phthalates Limited (Kalon Chemicals Company), Sika Raingard
22	uPVC Doors / Windows	Framez, Uniwin, Nasar Steel, U-Tech, Green Door, V- Make, Chawla
23	Steel Doors and windows	SECCO or any other approved equivalent
24	Termite Proofing	Agenda (Termidor), Biflex, Fiprokil, Mirage, Termicure, Ability
25	Terrazzo Tiles	As approved by Engineer
27	Pre-Engineered Steel Buildings	Zamil, Mammut, Mabani, Kirby, Banu Mukhtar, Izhar, SACHAL
28	Gypsum False Ceiling	Elephant, Lodhia (Arish), DFB, United
29	Glass	Pakistan Safety Glass, Ghani, Al-Fattah, Khawaja, Nowshera Prince or equivalent.
30	Door hardware	Kolf, Sitara Hardware, Jb.Saeed, IM Hardware (Yale), Alpha, Khas, Babar, or approved equivalent.
32	SS Railing	Dah Shi (Taiwan), IIL, or equivalent
33	Medium Density Fibreboard	Al-Noor, ZRK, Nuboard or equivalent.
34	High Density Fibreboard	Patex, Sonitex or equivalent
35	Plywood	Patex, Marineplex or equivalent.
PUBLIC HEALTH WORKS		
1	Sanitary Ware (WC Indian, WC European, Basin / Vanity, Urinal, Flushing Cistern)	Porta, Marachi, Master, ICL, Finecera, Karam, Cera and 3 Star or equivalent.
2	Bottle trap	Porta, Master, Faisal, Sonex, Asia and Super Asia or equivalent.
3	Bath / Kit. Fittings	Porta, Master, Faisal, Sonex or equivalent.
4	PPR-C Pipes & Fitting	Dadex, Beta, Master, Plasco, Turk Plast, Popular Pipe, Accufit, Minhas, Dura Built, IIL, Builtec, Euro Gulf, YAH Plastic Industry, Pelikan Pipe Industry (Civic)
5	uPVC Pipes & Fittings	Dadex, Shavyl, Galco, Beta, Turk Plast, Jamal, Fast Flow, Plasco, Popular Pipe, Master, Accufit, Dura Built, Builtec, Euro Gulf, YAH Plastic Industry, Newtech, Pelikan Pipe Industry (Civic), Prime Star Industries or approved equivalent.
6	RCC Pipe	Shalimar, Pakistan Pipes, National Pipe Industry
7	G.I. Pipes	International Industries Ltd. (IIL), Master Pipe, Jamal, Victory, Steelex or equivalent
8	C.I. Pipes	C.I. Engineering / Corp: Teepu, Alpine, NPC and CME or equivalent.
9	Gate / Sluice Valves ASME Compliant	KITZ (Japan), GALA, Crane Co., KSB (Western Europe), Sawamura Valve Co. (Japan), Tianjin Galaxy Valve Co. or approved equivalent

Appendix-VI
Approved Manufacturers

Sr. No.	Description	Manufacturer/Supplier/Source
10	G.I. Fittings	KITZ (Star Corporation), Health Engineering (HE)
11	C.I. Fittings & Valves	Teepu, Alpine, Sirajia Trading co.
12	C.I. Manhole Cover	CME, Teepu, Alpine, Turk Plast
17	MS Seamless Pipe	As approved by the Engineer Incharge (ASME/API class required)
18	PVC Water Stop	Fosroc, Sika, Decora, Marflex
19	HDPE pipe and Fittings	Dadex, Jamal, Plasco, Turk Plast, Beta, Popular Pipe, Accufit, IIL, DURA BUILT, Bultec, Fast Flow, YAH Plastic Industry, Newtech, Pelikan Pipe Industry (Pelikan), Prime Star Industries
21	Water Tank	Master, Super Tuff, Dura, Accufit, Prime Master
22	Kitchen Sink	Porta, Atlas, Asia or approved equivalent
ELECTRICAL & MECHANICAL WORKS		
1	Wires and Cables	Pakistan Cables, Fast, AGE, Newage, GM & cooling tower OEM
2	Air Switch Breaker, Load brake switches, MCCB and MCB etc.	Terasaki Japan, Siemens, ABB, MG, Hager, EATON, Schneider Electric (Western Europe or USA)
3	Switches and Sockets	Schneider, Philips
4	Down Light/ Batten Lights	Philips / Signify, Osram, GE,
5	Flood Lights	Philips/ Signify, Osram, GE, Thorn
6	Fans Ceiling/Exhaust/Bracket	As per technical specifications.
7	UPS	Huawei, Homage, Inverex, Goodwee, Crown, Fronius, APC
8	Tubular batteries	AGS, Phoenix, Osaka, Exide, Volta
9	AC Units	Gree, Haier, Orient, Green Air, Dawlance, PEL, Kenwood
10	Air Curtains	Gree, Haier, Orient, Green Air, Dawlance, PEL, Kenwood or Equivalent
11	PVC Conduits and Pipes	Polupar, Galco, Sheval, Adamjee, GM, Dadex
12	PVC Cable Trunk	Adamjee, Jeddah or equivalent
13	Termination Kit / Straight Jointing Kit	Raychem (Germany), 3M (USA), Elastimod (Egypt)
14	LV main distribution panel	Siemens, PEL, FICO, Schneider Electric, ABB, Sunbeams, Engineers & Engineering, Libra, Hussein & Co., BLS



Chapter 1

INTRODUCTION

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1.1 INTRODUCTION

Integrated Management System comprising International Management System standards ISO 9001: 2008 (Quality Management System), ISO 14001: 2004 (Environmental Management System), OHSAS 18001: 2007 (Occupational Health and Safety Management System), and ICAO's SMS (Safety Management System) has been implemented in Pakistan CAA. These standards require adherence from all the stakeholders to fulfill their respective obligations towards vital aspects of Safety, Quality, Occupational Health and Environment. This HSE Manual outlines the responsibilities of contractors, suppliers and concessionaires working for CAA or on the areas under CAA's jurisdiction

1.2 CAA IMS POLICY

Top Management commitment is demonstrated in IMS Policy, attached as **Appendix-A** (English version) and **Appendix-B** (Urdu version).

1.3 RESPONSIBILITY & AUTHORITY

1.3.1 RESPONSIBILITY FOR HSE COMPLIANCE:

- 1.3.1.1 CAA shall require Contractors and/or Sub-contractors / Suppliers / Concessionaires to affirm that all supervisors are responsible for ensuring that the works / activities are performed in accordance with all applicable health, safety and environmental rules, regulations and good working practices with equal diligence being paid to the fulfillment of the contractual technical specifications. CAA will require Contractors and Sub-contractors to advise such personnel of their safety responsibilities. Contractors / Suppliers / Concessionaires shall also provide CAA with their organizational setup for a particular contract / subcontract / renewal / bid invitation document, where applicable, specifying the areas of safety responsibilities of their supervisors.
- 1.3.1.2 **All DDGs** shall ensure imparting necessary directions and establish requisite monitoring & evaluation mechanism in their respective area of responsibilities to fulfill the vision and the objectives contained in this manual.
- 1.3.1.3 **The concerned Directors / Additional Directors / Airport Managers / Chief Operations Officers / Location Heads / Sectional Heads**, involved / engaged in the purchase of materials, services and contracts (including subcontracts, if any), shall ensure effective implementation of this manual. They shall also be responsible to designate **Contract Coordinators** where applicable especially on large scale projects.
- 1.3.1.4 **Contract Coordinator** (a designated CAA Employee) shall be responsible for the on-site implementation of HSE requirements by the contractors and their officials / workers. He shall also be responsible to record on-site management activities and meetings specific to the HSE issues.
- 1.3.1.5 **Deputy Management Representatives (DMRs)** shall be responsible to oversee the implementation and effectiveness of this manual at their respective Airports / ATS Units / Locations.
- 1.3.1.6 The concerned **Directors / Additional Directors / Airport Managers / Chief Operations Officers / Location Heads / Sectional Heads**, involved / engaged in the purchase of materials, services and contracts (including subcontracts, if any), shall ensure incorporation of specific clause(s) on Safety, Health & Environment in the contract agreements or their renewals / bid invitation documents indicating the need for compliance with the detailed guidelines as outlined in this manual.

1.3.1.7 All Safety, Health and Environment requirements contained in this manual shall also be made part of the bid invitation documents / contracts.

1.3.1.8 Any specific requirements not covered in this manual and in the existing HSE clause of the contract / lease agreement may be specified in the contract / lease documents by the respective CAA functions, in consultation with Additional Director SQMS (REG/CF), Additional Director SQMS (ANS/APS) at HQCAA and concerned DMRs at Airports / ATS Units / Locations. These may include but not limited to:

- a. Working procedures
- b. Risk / impact assessment of the job
- c. Requirements of transporting carrier, machinery / equipment and tools
- d. Handling / packaging identification requirements
- e. Information about the product composition
- f. Compliance to the related Safety, Health & Environment procedures for performing the activity
- g. Usage of Personal Protective Equipment (PPE)
- h. Competence / training requirements of workers
- i. Handling and disposal of waste, etc
- j. The need to obtain Permit To Work (PTW), where required
- k. Emergency procedures
- l. Accident / incident reporting
- m. Legal requirements

1.3.1.9 The **concerned Directors / Additional Directors / Airport Managers / Chief Operations Officers / Location Heads / Sectional Heads** may ask the supplier / contractor / concessionaire to carry out a **risk assessment** before awarding a contract for high-risk tasks, where applicable.

1.3.2 ONSITE MANAGEMENT OF CONTRACTORS FOR MEGA / MAJOR PROJECTS:

1.3.2.1 The **concerned DDGs / Directors / Additional Directors / Airport Managers / Chief Operations Officers / Location Heads / Sectional Heads** shall ask the contractor / supplier / concessionaire to designate a **Safety Officer** wherever applicable, depending upon the quantum of contract, who shall be the focal person and responsible for on-site implementation of HSE requirements on part of contractors / suppliers / concessionaires. For Contracts / Agreements of smaller quantum, the contractor / supplier / concessionaire shall be directly responsible in this regard without having the need to designate such representatives.

1.3.2.2 The **concerned Directors / Additional Directors / Airport Managers / Chief Operations Officers / Location Heads / Sectional Heads** shall be responsible to nominate a representative (**Contract Coordinator**) for on-site management of contractors for mega / major projects. The contract coordinator / representative shall monitor the HSE compliance by the contractor / supplier. This includes monitoring of:

- a. Controls to prevent HSE risks
- b. Contractor equipment for appropriateness
- c. Compliance of work procedures
- d. Waste Disposal & Record keeping

- e. Compliance of regulatory requirements, to this HSE Manual or their own HSE Manual(s) if exceeding the requirement stipulated by the CAA and PTW by contractors / suppliers / concessionaires
- 1.3.2.3 **Regular on-site meetings with the contractor** must be convened / held to discuss the HSE compliance and related aspects of the job. Records of such meetings and on-site management activities must be maintained by the Contract Coordinator.
- 1.3.2.4 **HSE audit or on-site inspections** shall be carried out randomly by the authorized Inspectors of SQMS Directorate in coordination with the concerned Directorate / Branch at HQCAA and concerned Section at airports / locations for checking HSE compliance. IAR (Improvement Action Report) on **CAAF-002-MSXX** shall be raised / generated in case any non-conformity is observed or if any corrective or preventive action is required. All proceedings of the audit or on-site inspections shall be documented by the respective inspectors.
- 1.3.2.5 All the works, purchase / supplies and services being carried out / rendered by Contractors / Suppliers / Concessionaires shall be liable to monitoring and supervision by CAA's authorized / designated official(s) to ensure their HSE-worthiness. Surprise inspection may be carried out at any time by SQMS Officials.
- 1.3.2.6 The monitoring / supervision so required shall be made under the relevant clause(s) of the contract. The performance monitoring data of contractors with regard to compliance to HSE manual and CAAO will be collected / maintained and documented on periodical basis by the respective DDGs as well as by SQMS Directorate / SQMS teams at locations, to develop necessary corrective / preventive actions accordingly. This significant data of a particular contractor / supplier / concessionaire, will be critically observed and be given due consideration at the time of awarding / continuation / renewals etc of any contract.
- 1.3.2.7 All potential Contractors, Suppliers and Concessionaires shall be informed about the availability of HSE manual which would require compliance from them. The latest version of this Manual shall be posted on the CAA's Official Website www.caapakistan.com.pk.
- 1.3.2.8 The concerned Directorate / Branch / Airport / Location shall provide the hard copy of the latest version of HSE Manual to the Contractors / Suppliers / Concessionaires at the time of signing of the Contract Agreements / License Agreements / Lease Deeds / Purchase Orders / Supply Orders, etc.
- a. No work be executed without supervision of concerned representation of OPI Section / Branch, especially at aerodrome.
- b. The representation of OPI section / function shall ensure implementation of preventive control measures during execution of work and corrective measures in case of any abnormal / emergency situation.
- c. All food concessionaires shall preferably be certified in Food Safety Management System ISO 22000: 2017.
- 1.3.2.9 In case of existence of any Contractor's, Supplier's and Concessionaire's HSE Manual having provisions more stringent to this HSE manual, those shall be applicable as far as the currency of that particular contract is concerned.
- 1.3.2.10 All the Contractors, Suppliers and Concessionaires shall be responsible to provide and update bare minimum training / awareness on HSE to their employees and subsequent implementation. Any breach / violation thereof by any of such employee(s) shall be construed upon to be on behalf of that very Contractor, Supplier and Concessionaire. Records pertaining to HSE related training / awareness shall be maintained and provided to concerned CAA official(s) designated by the OPI and/or Representative(s) of CAA's SQMS team.

1.3.2.11 The training / awareness described above shall include but not limited to the following: -

- a. Site acquaintance (i.e. Aerodrome / Building layout, Building Evacuation Procedure, etc).
 - b. General aerodrome layout & hazards and handling of standard equipment.
 - c. HSE related operational hazards / environmental aspects and risks / environmental impacts associated and related control measures with the particular contract / agreement.
 - d. Basic First Aid and other corrective measures.
 - e. Application of Permit to Work / Lock Out and Tag Out.
 - f. Special MSDS, classification / composition of hazardous material for handling of hazardous material.
 - g. Incident(s) / accident(s) including environmental incidents (spills, etc) reporting.
 - h. Waste management.
 - i. Basic Fire Fighting.
 - j. Safe driving.
 - k. Response in emergency.
 - l. Personal Protective Equipment (PPE).
-

Chapter 2

GENERAL INFORMATION

2.1 BASIC SAFETY & SECURITY RESTRAINTS

2.1.1 The following are some basic safety & security restraints. In case of violation of any of these, Contractors / Suppliers / Concessionaire shall be dealt with in accordance with **Rule 91 (Section 10) of CARs 94:**

- 2.1.1.1 Possession or use of alcoholic beverages or illegal drugs.
- 2.1.1.2 Possession of un-authorized explosives, firearms, ammunition, and other weapons.
- 2.1.1.3 Violation of any safety or security rules or requirements as laid down in **Part VIII, Section 10 of CARs, 94 (Rule 92-110).**
- 2.1.1.4 Illegal dumping, handling, or disposal of hazardous materials.
- 2.1.1.5 Demolition or removal, without written permission, of any property belonging to CAA.
- 2.1.1.6 Intimidating, threatening, harassing, impeding or interfering with CAA employee(s) or designated representative(s).
- 2.1.1.7 Misuse of fire prevention and protection equipment.
- 2.1.1.8 Unauthorized removal or destruction of a safety barricade, handrail, guardrail, warning sign, fall protection, or other warning devices intended to protect employees or property.

2.2 SAFETY PERMITS

2.2.1 All CAA contractors, suppliers or concessionaires shall obtain prior approval for PTW from CAA's authorized / designated official(s) and follow all the safety requirements, precautions, controls of PPEs classified as PTW related tasks as any of the operations mentioned below may present a hazard to people, property and environment.

- 2.2.1.1 Performing burning, welding, cutting, soldering, or other hot work.
- 2.2.1.2 Working on fire protection / detection systems.
- 2.2.1.3 Working on electrical, steam, chilled water systems or other energized systems.
- 2.2.1.4 Installing a temporary electrical service
- 2.2.1.5 Working with hazardous chemicals (including solvents and paints).
- 2.2.1.6 Handling, transporting or generating hazardous wastes (including hospital biological waste, waste oil, chemicals, condensate, etc).
- 2.2.1.7 Using a gas, diesel, or LPG (such as Propane) powered engines.
- 2.2.1.8 Working on gas pipe lines or associated equipment.
- 2.2.1.9 Operating a power vehicle or self-propelled work platform.
- 2.2.1.10 Excavation / trenching.
- 2.2.1.11 Using radioactive sources or conducting field radiography (x -ray).
- 2.2.1.12 Working with asbestos & asbestos – containing materials.
- 2.2.1.13 Working on security systems.
- 2.2.1.14 Working with compressed air / gases.
- 2.2.1.15 Working on heating, ventilation, or air conditioning equipment.

- 2.2.1.16 Working with chemicals, polishing or grinding.
- 2.2.1.17 Working at heights of more than 06 feet or on roofs.
- 2.2.1.18 Entering or working in confined spaces like fuel tanks, trenches, service shafts, sewer system, etc.
- 2.2.1.19 Lifting or hoisting with cranes or hoists.
- 2.2.1.20 Blasting operations, etc.

2.3 PERFORMANCE MONITORING

- 2.3.1 The Contractors / Suppliers / Concessionaires shall monitor HSE performance of their employees and activities.
- 2.3.2 They shall in addition monitor all those performance monitoring actions agreed between CAA and the Contractors / Suppliers / Concessionaires.

2.4 HOUSE KEEPING

- 2.4.1 All Contractors / Suppliers / Concessionaires shall maintain good housekeeping by keeping work areas neat, clean, orderly, free of excess trash, debris and shall block walkways, stairs, exits, or create a tripping hazard. Poor housekeeping at a job site may lead to an increased potential for safety hazards and an increased frequency of accidents, falls, cuts, spills, leaks, fires or electrocution.
- 2.4.2 Tools, wires, materials shall not be left or haphazardly spread out at the work place.
- 2.4.3 Open holes, trenches, or excavations into which people may fall shall be identified, covered or provided with guardrails.
- 2.4.4 In order to protect the employees and environment, safety blinding shall be provided at all works execution sites, where necessary.

2.5 REPORT OF ACCIDENT, INCIDENT, INJURY OR ILLNESS

- 2.5.1 The area representatives of contractor shall inform fire, electrical, civil inquiries officials each day before start of work.
- 2.5.2 All work related accidents, incidents, fatalities, injuries, and illnesses must immediately be reported to the CAA authorized / designated officials.
- 2.5.3 Every incident / accident happened during execution of contractors work shall properly be analyzed as per **CAA0-015-MSXX** and if fall in Major / Catastrophic categories be published / mentioned in IOU report by the OPI Section / Branch.

Chapter 3

HAZARDOUS WASTE

3.1 HAZARDOUS WASTE MANAGEMENT

- 3.1.1 Hazardous waste generated by a Contractor / Supplier / Concessionaire as part of its work must be properly identified, stored and disposed in accordance with applicable laws / rules / regulations. The Contractor / Supplier / Concessionaire must coordinate with CAA representative(s) of relevant sections to provide a list of hazardous waste(s) which is / are likely to be generated during the project / activity, and to determine the location(s) for hazardous waste storage.
- 3.1.2 The Contractor / Supplier / Concessionaire must also ensure, at a minimum:
- 3.1.2.1 Proper labeling in terms of MSDS.
 - 3.1.2.2 Adequate secondary containment.
 - 3.1.2.3 Segregation of incompatible materials.
 - 3.1.2.4 Routine inspection of storage areas.
- 3.1.3 In addition, all hazardous waste containers shall be constructed of a material compatible with the waste, in sound condition, and kept securely closed to avoid spill or leakage.

3.2 WASTE DISPOSAL DOCUMENTS

The Contractors / Suppliers / Concessionaires shall be responsible for completing all waste disposal documents as per statutory / regulatory requirements, where applicable and as required by CAA. This may relate to CAA's own waste that is periodically removed for further disposal purposes, or waste created by Contractor / Supplier / Concessionaire while performing a task at CAA premises / areas under CAA's jurisdiction. OPI shall also ensure all normal wastes are also removed by the contracts.

3.3 TRAINING

Contractor / Supplier / Concessionaire must ensure that their employees are appropriately trained in hazardous waste management procedures. In the event a Contractor / Supplier Concessionaire encounters unidentified material that is reasonably believed to be hazardous (radioactive, volatile, corrosive, flammable, explosive, magnetic, infectious, toxic), the Contractor / Supplier / Concessionaire shall immediately stop work in the affected area and report the condition to the CAA's authorized / designated official(s). At no time shall such material be disposed in chutes, drains, pipes or in any other unauthorized manner.

3.4 TRANSPORTATION AND DISPOSAL OF HAZARDOUS MATERIALS

- 3.4.1 Transportation of hazardous materials on CAA property shall be conducted in accordance with CAA specified instructions. It shall not be disposed to burn or be used in a manner that is harmful to people or environment. While transporting hazardous materials, Contractor / Supplier / Concessionaire shall ensure that no harm is done to people or environment because of poor containers, packing, covering, lashing, fixing, loading, stacking or improper vehicle or mode of transport.
- 3.4.2 All transportation of dangerous / hazardous goods and materials by air shall be conducted strictly in accordance with provisions of Part XVI, Sections 1-3 and 5-6 of the Civil Aviation Rules, 1994.

3.5 SPILL PREVENTION AND CONTROL

- 3.5.1 Based on the inventory of oil and hazardous chemicals that will be brought on-site, the Contractor / Supplier / Concessionaire shall have available equipment (e.g., secondary containment pallets, absorbent pads, absorbent booms, speed-dry etc.) that is suitable and sufficient to control a potential spill / release.

- 3.5.2 The Contractor / Supplier / Concessionaire is responsible for identifying outlets to the environment (e.g., sumps, sewers, storm / floor drains, etc.) and adequately minimizing spill potential to these areas.
- 3.5.3 The Contractor / Supplier / Concessionaire is responsible for the proper storage of all flammable and combustible chemicals that are brought and/or stored on site to complete the work. Such storage may require the use of safety containers, safety cabinets, and/or secondary containment.
- 3.5.4 The Contractor / Supplier / Concessionaire shall also ensure that any incompatible chemicals are safely segregated. The Contractor / Supplier / Concessionaire is Responsible for maintaining and securing all chemical containers and all chemical storage-areas. This requires selecting locations and methods to minimize exposure to rainfall, surface water, and the ground surface or subsurface.
- 3.5.5 The Contractors / Suppliers / Concessionaires must ensure that their employees are adequately trained in spill control procedures and are aware of the use of spill control kits.
- 3.5.6 In the event of a release or spill, the Contractor / Supplier / Concessionaire must immediately inform CAA's authorized / designated official(s).

3.6 AIR EMISSIONS

- 3.6.1 Any conditions discovered which could result in an increase in air pollutant emissions must immediately be reported to the CAA's authorized / designated official(s).
- 3.6.2 Contractors / Suppliers / Concessionaires activities should not cause unacceptable level of emissions (emissions not meeting NEQS – National Environmental Quality Standards).
- 3.6.3 Contractors / Suppliers / Concessionaires shall immediately notify the CAA's authorized / designated official(s) whenever they become aware of any unintentional or intentional release of CFCs (Chloro-Fluoro Carbons), Halons etc.

3.7 WASTE WATER DISCHARGES

- 3.7.1 Waste water must NOT include any corrosive, flammable, or toxic substances / hazardous liquid, etc.
- 3.7.2 Contractor / Supplier / Concessionaire must ensure no waste water is discharged that violates NEQS.

3.8 BIOLOGICAL / CHEMICAL / RADIOACTIVE HAZARDS

- 3.8.1 Some CAA operations may involve the use of biological, chemical, or radioactive material that can be hazardous to persons or property, if not handled or disposed safely. Contractors / Suppliers / Concessionaire will mark the areas where work with biological, chemical, or radioactive materials is being performed with proper signs.
- 3.8.2 The Contractor / Supplier / Concessionaire shall not disturb damage or otherwise handle any suspected asbestos containing material.
- 3.8.3 The Contractor / Supplier / Concessionaire shall not sweep, dust, vacuum or mop dust / debris which are the product of a suspected asbestos containing material. The Contractor / Supplier / Concessionaire shall also not pick up or throw away any suspected asbestos-containing waste or trash.
- 3.8.4 Sand blasting, grinding, drilling, brazing, scraping, polishing of floors and other dust emitting surfaces will be done by persons wearing appropriate PPEs.

3.9 HAZARDOUS MATERIALS AND HAZARD COMMUNICATION

- 3.9.1 Hazardous materials shall not be handled or used by the Contractor / Supplier / Concessionaire without providing training to the concerned employees.

- 3.9.2 No solvents, paints, or similar flammable, toxic, or irritating materials shall be used in CAA premises / areas under the jurisdiction of CAA unless specifically authorized by CAA.
- 3.9.3 Adequate ventilation shall be maintained when paints or solvents are used.
- 3.9.4 Flammable solvents and materials shall be used with extreme caution.
- 3.9.5 It shall be ensured that flammable paints and solvents are isolated and stored in approved locations, if inside the building.
- 3.9.6 The Contractor / Supplier / Concessionaire shall submit an inventory of all hazardous chemicals / liquids / materials that are brought on-site or sold to CAA. These should be accompanied by MSDS.
- 3.9.7 The Contractor /Supplier / Concessionaire shall also ensure that all containers that are brought on site for the storage of hazardous chemicals (e.g., gas, paint, etc.) are labeled and inspected for correctness.
- 3.9.8 The Contractor / Supplier / Concessionaire shall remove at earliest all hazardous chemicals that it brings on-site when work involving a specific hazardous chemical has been completed.

Chapter 4

SPECIFIC SAFETY REQUIREMENTS

4.1 CONFINED SPACE ENTRY

- 4.1.1 Contractor / Supplier / Concessionaire will obtain Confined Space Entry Certificate before entering / working in confined spaces. If during the course of work, the Contractor / Supplier / Concessionaire encounters a confined space that has not been previously identified by the CAA, it must immediately bring the space to the attention of the CAA's authorized / designated official(s), and delays entry until the space is examined by the CAA's authorized / designated official
- 4.1.2 When CAA and Contractor / Supplier / Concessionaire personnel are working in or near confined spaces, the Contractor / Supplier / Concessionaire shall coordinate all operations, with likely-to-be-affected CAA personnel before entry.
- 4.1.3 Prior coordination shall also be required on entering a confined space with or without a CAA employee

4.2 LOCK-OUT / TAG-OUT (WHERE APPLICABLE)

- 4.2.1 As part of CAA's Electrical Isolation / De-Isolation permit requirement, standard locks and tags are used to control the start-up of equipment that is being serviced or maintained by its employees. At no time shall the Contractor / Supplier / Concessionaire or its employees override any locks or tags that they encounter during the performance of their work.
- 4.2.2 The Contractors / Suppliers / Concessionaires are responsible for developing, implementing and maintaining their own Lock-out / Tag-out Program.
- 4.2.3 The Contractor / Supplier / Concessionaire shall submit a copy of its Lock-out / Tag-out Program to the CAA's authorized / designated official(s) before the start of any work.

4.3 GENERAL ELECTRICAL SAFETY

- 4.3.1 Temporary electrical connection(s), where required, shall be obtained from CAA as per the prescribed procedure only.
- 4.3.2 Only qualified electricians are permitted to work on electrical systems and equipment that use or control electrical / power.
- 4.3.3 Electrical tools or equipment shall not be operated in wet areas or areas where potentially flammable dusts, vapors, gases, or liquids are present, unless specifically approved.
- 4.3.4 Should a circuit breaker or other protective device "trip," it is to be ensured that a qualified electrician checks the circuit and equipment and corrects problem before resetting the breaker. Moreover, there should always be a provision for safety isolation of the circuit where needed
- 4.3.5 Barriers and post warning signs shall be erected to ensure that the non-authorized personnel stay clear of the work area.
- 4.3.6 Hazards (lack of protective guards or covers, damaged equipment, etc.) shall be reported to the CAA's authorized / designated official(s) immediately.
- 4.3.7 Electrical boxes, switch gear, cabinets, or electrical rooms shall not be left open when not directly attended.
- 4.3.8 It shall be ensured to insulate energized parts when have been removed or doors are closed. Use of cardboard, plywood or other flammable to cover energized circuits is prohibited.
- 4.3.9 Proper grounding / earthing and arc quenching, where required, shall be ensured.

4.3.10 The size of the cable / conductor should match with the actual on-site requirement.

4.4 COMPRESSED GAS CYLINDERS

The following measures must be taken for the protection of persons and property:

- 4.4.1 All the cylinders brought in by the Contractors / Suppliers / Concessionaires shall have valid test certificates performed by a certified testing agency.
- 4.4.2 Pressure and leak testing shall invariably be carried out and documented in all jobs associated with compressed gas or liquid handling.
- 4.4.3 Valve protection caps must be in place when compressed gas cylinders are transported, moved, or stored.
- 4.4.4 Cylinder valves must be closed and valve covers must be replaced when work is complete and when cylinders are empty or moved.
- 4.4.5 Compressed gas cylinders must be secured in an upright position in a welding cart or to a solid object (using chains, straps, or a rigid retaining bar).
- 4.4.6 Compressed gas cylinders must be secured on an approved carrier while being transported.
- 4.4.7 Cylinders shall be kept at a safe distance or shielded from welding or cutting operations. Cylinders shall not be placed where they can contact an electrical circuit.
- 4.4.8 It shall be ensured to keep oxygen and flammable gas regulators in proper working order and a wrench in position on the acetylene valve when in use.
- 4.4.9 If a leak develops in a cylinder and it cannot be immediately corrected, the cylinder shall be moved to a safe location outside the building / away from the location of work.
- 4.4.10 Cylinders must not be taken into or stored in confined spaces.
- 4.4.11 Empty & filled cylinders must be kept separately.
- 4.4.12 Hoses and regulators must not be stored in unventilated or closed containers or areas.

4.5 WELDING, CUTTING AND BRAZING

The Contractors / Suppliers / Concessionaires shall ensure the following:

- 4.5.1 Obtain PTW.
- 4.5.2 Inform CAA's authorized / designated official(s) prior to the start of any welding / cutting / brazing work.
- 4.5.3 Remove combustible materials from the area before beginning work.
- 4.5.4 Install anti flashback (safety / check) valves in both the oxygen / acetylene hoses at the regulator.
- 4.5.5 Shield adjacent areas with welding partitions.
- 4.5.6 Persons involved are adequately trained in using portable fire extinguishers.
- 4.5.7 Have a second person trained in basic firefighting as standby with an approved fire extinguisher for welding and cutting operations.

4.6 CRANES AND RIGGING

- 4.6.1 Each crane or hoist brought onto CAA property must have a valid inspection testing performed by a certified testing agency.
- 4.6.2 The operator is responsible for the proper placement of the crane in relationship to the load to be handled and the landing area so as to obtain the best rated lift capacity, and the installation and maintenance of crane swing radius protection.
- 4.6.3 All operators must possess a valid crane / hoist operating / driving license as applicable.

4.7 **FITNESS**

- 4.7.1 Suppliers / Contractors / Concessionaires shall ensure that all their personnel working in CAA premises are medically fit to perform their assigned tasks.
- 4.7.2 If requested by CAA, Contractors / Suppliers / Concessionaires shall provide the fitness / health certificates of their employees.

4.8 **DRIVING**

- 4.8.1 All Contractors' / Suppliers' / Concessionaires' vehicles while in CAA premises or performing CAA duties shall adhere to speed limits (applicable in that particular zone), and also comply with all other traffic and road safety regulations of CAA.
- 4.8.2 The drivers should be in possession of valid driving license.
- 4.8.3 All Contractor / Supplier / Concessionaire vehicles should have:
- 4.8.3.1 Standard seat belts. The seat belts should be neat and clean and in proper working condition.
- 4.8.3.2 Standard fire extinguisher.
- 4.8.3.3 Standard first aid box.

4.9 **INDEMNITY**

Suppliers / Contractors / Concessionaires shall keep harmless and indemnify Pakistan CAA against all losses, damages, injuries, death of any person, claims, actions, third party action arising out of acts and omissions by their employees/ personnel or non-compliance with the terms and conditions as stated herein and/or any applicable laws and regulation. Contractor shall take clearance with concerned offices before handing / taking over the area to be restored on the same condition(s) as was/were before start of work (as per contract agreement).

Appendix-VIII
BOQ Item Description

Ref No.	Description	Unit	Qty	Rate		Amount
1	Dismantling of old/ outlived Marley Make cross flow, induced draft, twin-cell cooling tower using specialized tools/ equipment, and PPEs without damaging the surrounding areas including the existing foundations and pipeline network. Job includes careful planning and arrangement of temporary supports to stabilize the equipment during dismantling or other recommended methods, careful disconnection of the electrical connections and isolating the cooling tower from the system, careful disconnection of the cooling tower from the pipeline network followed by capping or sealing the open ends of pipeline to prevent debris or contaminants from entering the system, marking the pipelines to ensure proper subsequent reconnection with the new equipment, careful draining of the cooling tower to reduce weight and spillage during dismantling and subsequent careful removal of fan assembly, fill media, louvers, casing/ framework, water basins etc. including careful placement of the dismantled equipment on wooden pallets at designated place. Complete job in all respects, and making good the damages as per site requirement and instructions of the Engineer In-Charge.	P/Job	4	848,563.00	(Rupees eight hundred forty eight thousand five hundred sixty three only)	3394252.00
2	Providing, installation/ erection, testing, commissioning and water balancing of induced draft, cross flow, vertical discharge, twin-cell, CTI/ JCI/JIS/EUROVENT/ASHRAE standards certified Cooling Tower. Complete in all respects as per site requirements. The selection of Cooling Tower be based on following parameters and attached technical specifications: Heat Rejection Capacity (Minimum): 2200 kW Water Flow Rate Per Cooling Tower: 105 liters/Sec Hot Water In Temperature: 38 degrees Celsius Cold Water Out Temperature: 33 degrees Celsius Web Bulb Temperature: 29 degrees Celsius	P/Job	5	101,705,000.00	(Rupees one hundred and one million, seven hundred five thousand only)	508525000.00

**Appendix-VIII
BOQ Item Description**

	<p>The work shall be carried out using specialized tools/ equipment/ machinery as per OEM recommendations and integration of the new cooling tower with the existing pipeline network including providing/ fixing/ alteration/ extension of the piping and accessories (reducers, fittings, tees, flanges, washers and high strength fasteners sets etc.), and making electrical connections. Job also includes provisioning and installation of excessive vibration shutdown system and automatic blowdown/ bleed-off system and making good the damages, complete job in all respect as per OEM recommendations, site requirement and instructions of Engineer In-Charge.</p>					
4	<p>Providing, installation, testing and commissioning of inline centrifugal pump ISO 9906 compliant coupled with motor on condenser water supply/ Cooling Tower discharge piping. The selection be based on the following parameters:</p> <ul style="list-style-type: none"> - Location: Outdoor - Flow rate (m³/hr): 378 - Service: Cooling Tower (open cycle) water - Type: Centrifugal, in line, direct driven - Head (kPa): 315 - Water type: Chemically dosed for chiller condenser / open loop - Water Working Temperature Range: 01 to 50°C - Existing Motor Power: 55kW - Volts-Phase-Hz: 400-3φ-50 - RPM: 1450 - Protection class: IP65 - Ambient Temperature: -1 to 55°C - Motor insulation class: F - Efficiency class: IE-4 - Starter Type: Star-Delta - Seal: Mechanical Carbon/Ceramic - Shaft: Stainless Steel 316 - Impeller: Bronze for high TDS water 	P/Job	5	11,929,820.00	(Rupees eleven million, nine hundred twenty nine thousand eight hundred twenty only)	59649100.00

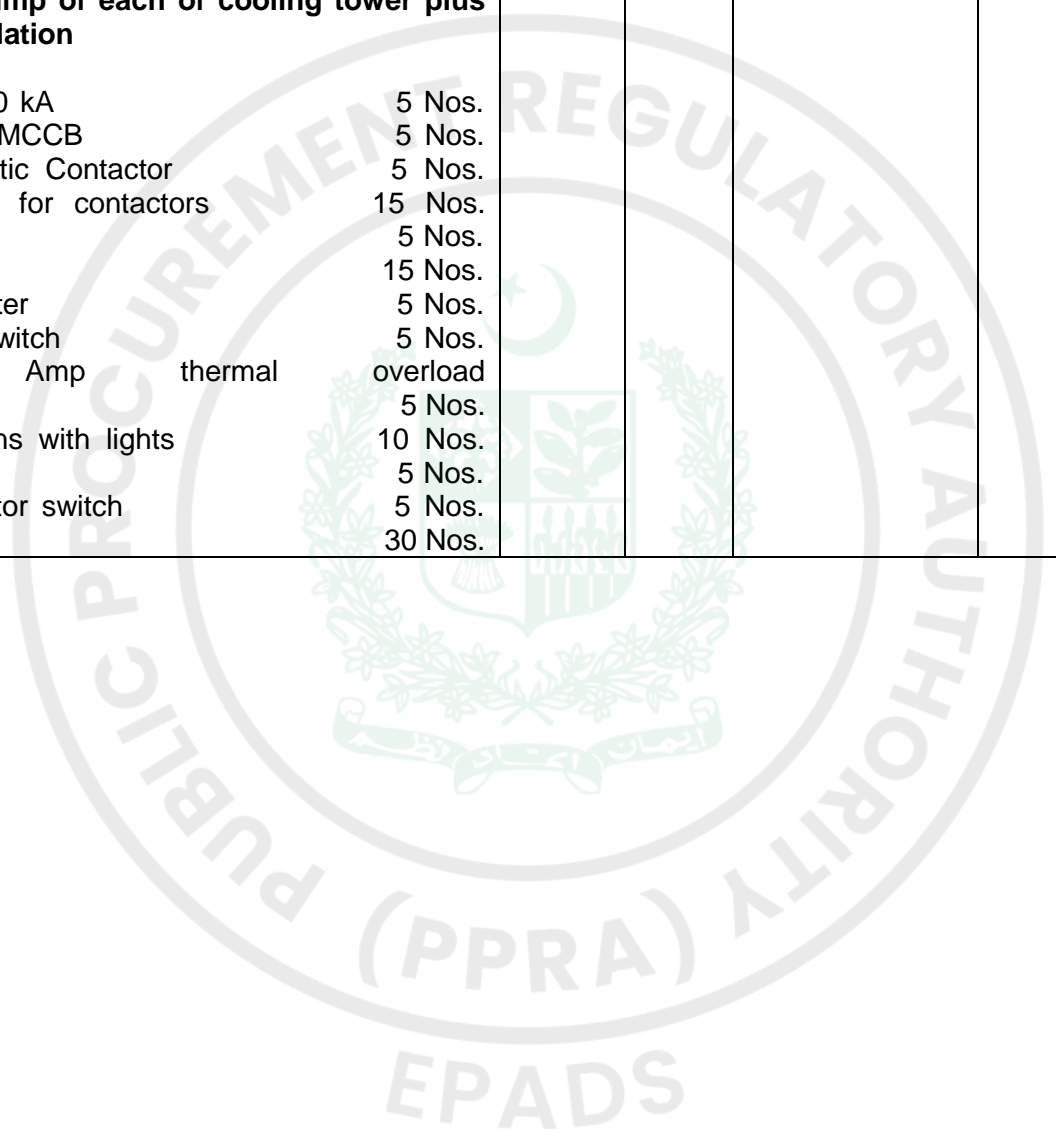
Appendix-VIII
BOQ Item Description

	<ul style="list-style-type: none"> - Flange: standard suction discharge JIS/ISO - Heavy duty Coupling Guard - Lubrication Motor: Through twin grease nipple - Lubrication Pump: through twin grease nipple - Shaft Sleeves: Stainless steel 316 - Liner Ring: Bronze - Drain Plug and Priming plug: Stainless steel/Bronze - Heavy duty bearing housing with support foot - Casing: Heavy duty corrosion resistant and water resistant CI alloy - Priming Detector: To be provided - Compound guage: To be provided <p>Job also includes provisioning and installation of all allied accessories (reducers, flexible connectors, flanges, differential pressure switch, washers and high strength fasteners etc.) as per actual. Complete job in all respects and electrical/ hydronic connections and making good the damages as per actual and as required and up to the satisfaction of Engineer In-Charge.</p>					
34	<p>Rehabilitation and redesigning (as required) of existing electrical cum control panel of cooling towers including dismantling of existing control panel accessories including dismantling of main incoming breaker and star delta panel accessories (MCCBs, magnetic contactors, relays, voltmeters, current transformers, associated wiring housed inside the panel etc.) for cooling tower fans (8 Nos.) and condenser water pumps (4 Nos.). Job includes safely handing over and placing the dismantled accessories at a designated place as per the instructions of the Engineer In-Charge. Job also includes provisioning, installation, testing and commissioning of new main incoming MCCB, new star delta panel accessories and other interconnection materials use in wiring (Shrouds, thimbles, control wires, insulators, lineup channels etc.) for cooling tower fans and pumps in place of dismantled accessories and for one additional cooling tower of imported make as per the following details:</p>	P/Job	1	9,704,465.00	(Rupees nine million seven hundred four thousand four hundred sixty five only)	9704465.00

	<p>MAIN BREAKER</p> <p>a) 800 A TP ACB 65kA 1 No. b) Motor mechanism 1 No. c) Under voltage Trip 1 No. d) Closing coil 1 No. e) Shunt Trip 1 No. f) Indication light R.Y.B. 4 Nos. g) Digital Voltmeter 1 No. h) Volt Selector Switch 1 No. i) Digital Amp meter 3 Nos. j) 800/5 Amp CTs 3 Nos. k) Control fuse with base 8 Nos. l) Line up terminal 6 Nos. m) 14-pin relay with base 1 No. n) Phase failure, sequence, over & under voltage 1 No.</p> <p>16 kW Star Delta Starter Accessories: 2 Nos, for each twin cell cooling tower plus one for additional installation</p> <p>a) 40A TP MCCB 70kA 10 Nos. b) Rotary Handle for MCCB 10 Nos. c) 32A TP magnetic contractor 30 Nos. d) Auxiliary contact for contractor 30 Nos. e) Timer with base 10 Nos. f) 40/5 Amps CTs 30 Nos. g) Digital Ampere Meter 10 Nos. h) Ampere selector switch 10 Nos. i) 5-60 Amp EOCR 10 Nos. j) on-off push button with light 20 Nos. k) Trip indication 10 Nos. l) Auto Manual Selector switch 10 Nos.. m) Line up terminal 60 Nos.</p>							
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**Appendix-VIII
BOQ Item Description**

	<p>55kW Star Delta Starter Accessories: 1 No. for Condenser water pump of each of cooling tower plus one additional installation</p> <p>a) 160A TP MCCB 70 kA 5 Nos. b) Rotary handle for MCCB 5 Nos. c) 140 A TP Magnetic Contactor 5 Nos. d) Auxiliary contacts for contactors 15 Nos. e) Timer with base 5 Nos. f) 160/5 Amps CTs 15 Nos. g) Digital Ampere meter 5 Nos. h) Ampere selector switch 5 Nos. i) 110-140 Amp thermal overload relay 5 Nos. j) On-Off push buttons with lights 10 Nos. k) Trip indication 5 Nos. l) Auto Manual selector switch 5 Nos. m) Line up terminals 30 Nos.</p>					
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Past Experience / Contracts

Contracts over *[insert amount]* during the last three years:

Procuring Agency	Value	Year	Goods/Services Supplied	Country of Destination



Historical Contract Non-Performance, and Pending Litigation and Litigation History

[The following table shall be filled in for the Applicant and for each member of a Joint Venture]

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

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

Joint Venture Member Name: *[insert full name]*

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

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

<input type="checkbox"/> Not debarred due to deviation from commitment of Bid Securing Declaration- <input type="checkbox"/> Not debarred due to non-performance			
Year	Non-performed portion of contract	Contract Identification	Total Contract Amount (current value, currency, exchange rate and PKR equivalent)
<i>[insert year]</i>	<i>[insert amount and percentage]</i>	Contract Identification: <i>[indicate complete contract name/ number, and any other identification]</i> Name of Procuring Agency: <i>[insert full name]</i> Address of Procuring Agency: <i>[insert street/city/country]</i> Reason(s) for nonperformance: <i>[indicate main reason(s)]</i>	<i>[insert amount]</i>
Pending Litigation, in accordance with Section III, Qualification Criteria and Requirements			
<input type="checkbox"/> Pending litigation in accordance with Section III, Qualification Criteria and Requirements, Sub-Factor 2.3 as indicated below.			
Year of dispute	Amount in dispute (currency)	Contract Identification	Total Contract Amount (currency), US\$ PKR Equivalent (exchange rate)

<i>[insert year]</i>	<i>[insert amount]</i>	<p>Contract Identification: [indicate complete contract name, number, and any other identification] Name of Procuring Agency: <i>[insert full name]</i> Address of Procuring Agency: <i>[insert street/city/country]</i> Matter in dispute: <i>[indicate main issues in dispute]</i> Party who initiated the dispute: <i>[indicate "Procuring Agency" or "Supplier"]</i> Status of dispute: <i>[Indicate if it is being treated by the Adjudicator, under Arbitration or being dealt with by the Judiciary]</i></p>	<i>[insert amount]</i>
<input type="checkbox"/> No consistent history of court/arbitral award decisions in accordance with Section III, Qualification Criteria and Requirements, Sub-Factor 2.4. <input type="checkbox"/> Consistent history of court/arbitral award decisions in accordance with Section III, Qualification Criteria and Requirements, Sub-Factor 2.4 as indicated below.			
Year of award	Outcome as percentage of Net Worth	Contract Identification	Total Contract Amount (currency), PKR Equivalent (exchange rate)
<i>[insert year]</i>	<i>[insert percentage]</i>	<p>Contract Identification: [indicate complete contract name, number, and any other identification] Name of Procuring Agency: <i>[insert full name]</i> Address of Procuring Agency: <i>[insert street/city/country]</i> Matter in dispute: <i>[indicate main issues in dispute]</i> Party who initiated the dispute: <i>[indicate "Procuring Agency" or "Supplier"]</i> Court/ arbitral award decision: <i>[Indicate if the award decision was against the Applicant or any member of a joint venture.]y]</i></p>	<i>[insert amount]</i>

Current Contract Commitments / Contracts in Progress Form

1. Name of Contract(s)
2. Procuring Agency Contact Information [insert address, telephone, fax, e-mail address]
3. Value of outstanding contracts [current PKR equivalent]
4. Estimated Delivery Date
5. Average monthly invoices over the last six months (PKR/mon.)

Financial Situation and Performance

[The following table shall be filled in for the Applicant and for each member of a Joint Venture]

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

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

Joint Venture Member Name: *[insert full name]*

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

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

1. Financial data

Type of Financial information in (currency)	Historic information for previous <i>[insert number]</i> years, <i>[insert in words]</i> (amount in currency, currency, exchange rate*, PKR equivalent)				
	Year 1	Year 2	Year 3		
Statement of Financial Position (Information from Balance Sheet)					
Total Assets (TA)					
Total Liabilities (TL)					
Total Equity/Net Worth (NW)					
Current Assets (CA)					
Current Liabilities (CL)					
Working Capital (WC)					
Information from Income Statement					
Total Revenue (TR)					
Profits Before Taxes (PBT)					
Cash Flow Information					
Cash Flow from Operating Activities					

* Refer ITA 14 for the exchange rate

3. Financial documents

The Applicant and in case of JV, members of JV shall provide copies of financial statements for *[number]* years pursuant Section III, Qualifications Criteria and Requirements. The financial statements shall:

- (a) reflect the financial situation of the Applicant or in case of JV member, and not an affiliated entity (such as parent company or group member).
 - (b) be independently audited or certified in accordance with local legislation.
 - (c) be complete, including all notes to the financial statements.
 - (d) correspond to accounting periods already completed and audited.
- Attached are copies of financial statements¹ for the *[number]* years required above; and complying with the requirements.

¹ If the most recent set of financial statements is for a period earlier than 12 months from the date of Application, the reason for this should be justified.

Average Annual Turnover (Annual Sales Value)

[The following table shall be filled in for the Applicant and for each member of a Joint Venture]

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

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

Joint Venture Member Name: *[insert full name]*

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

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

Annual Turnover Data			
Year	Amount Currency	Exchange rate* (If applicable)	PKR equivalent
<i>[indicate calendar year]</i>	<i>[insert amount and indicate currency]</i>		
		Average Annual Turnover **	

* Refer ITA for date and source of exchange rate.

** Total PKR equivalent for all years divided by the total number of years. See Section III, Qualification Criteria and Requirements, ITA.