

CONTRACT FOR CONSULTANT'S SERVICES

Time-Based

Project Name: Punjab Cities Program

Credit No. 6243-PK

Contract No. RFP No: PK-PMDFC-228549-CS-QCBS

**“Hiring of An Engineering Firm for Detailed Design of
Infrastructure**

**Sub-Projects, Sectoral Planning & Resident Supervision in 16
Cities of Punjab-Package No. 3”**

between

Punjab Municipal Development Fund Company

Govt of the Punjab, Lahore, Pakistan

and

MM Pakistan (Pvt.) Ltd.

Dated: 26 February 2022

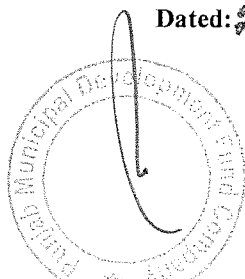
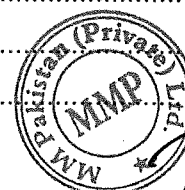
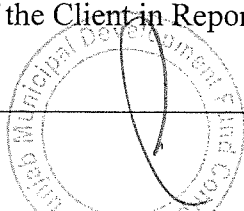


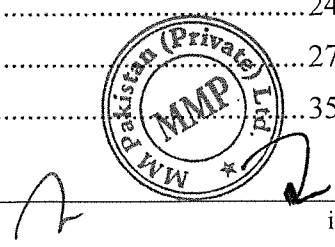
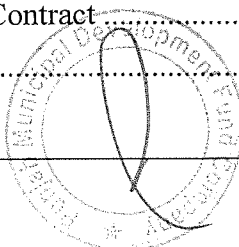
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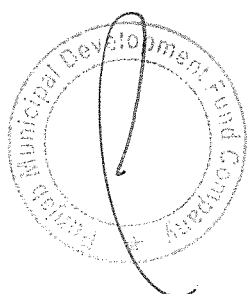
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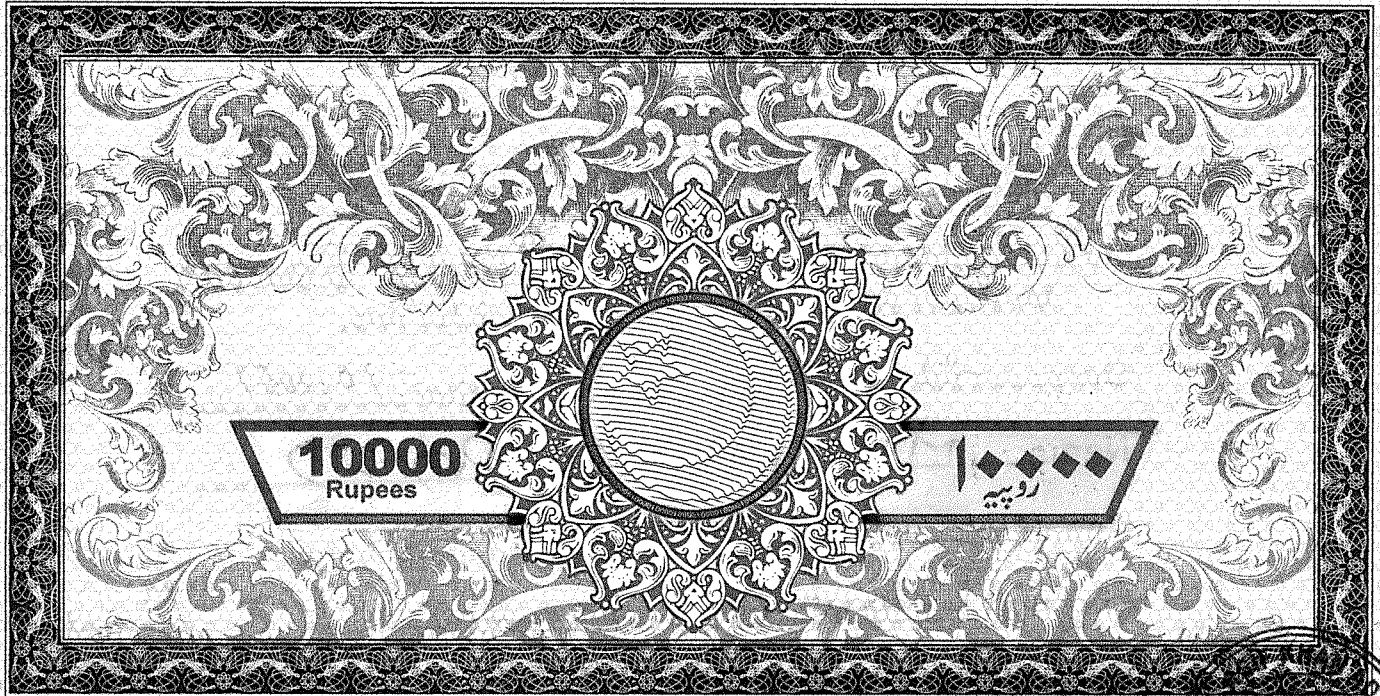
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Form of Contract TIME-BASED



This CONTRACT (hereinafter called the "Contract") is made the [18] day of the month of *February*, 2022, between, on the one hand, Punjab Municipal Development Fund Company, Government of Punjab (hereinafter called the "Client") and, on the other hand, MM Pakistan (Pvt.) Ltd. (hereinafter called the "Consultant").

WHEREAS

- (a) the Client has requested the Consultant to provide certain consulting services as defined in this Contract (hereinafter called the "Services");
- (b) the Consultant, having represented to the Client that it has the required professional skills, expertise and technical resources, has agreed to provide the Services on the terms and conditions set forth in this Contract;
- (c) the Client has received financing in the form of a credit from the International Development Association (IDA) toward the cost of the Services and intends to apply a portion of the proceeds of this credit to eligible payments under this Contract, it being understood that (i) payments by the Bank will be made only at the request of the Client and upon approval by the Bank; (ii) such payments will be subject, in all respects, to the terms and conditions of the financing agreement, including prohibitions of withdrawal from the credit account for the purpose of any payment to persons or entities, or for any import of goods, if such payment or import, to the knowledge of the Bank, is prohibited by the decision of the United Nations Security Council taken under Chapter VII of the Charter of the United Nations; and (iii) no party other than the Client shall derive any rights from the financing agreement or have any claim to the credit proceeds;

NOW THEREFORE the parties hereto hereby agree as follows:

1. The following documents attached hereto shall be deemed to form an integral part of this Contract:

- Appendix A: Terms of Reference
- Appendix B: Key Experts
- Appendix C: Remuneration Cost Estimates
- Appendix D: Reimbursable Cost Estimates
- Appendix E: Form of Advance Payments Guarantee
- Appendix F: Code of Conduct (ES)
- Appendix G: Sexual exploitation and Abuse (SEA) and/or Sexual Harassment (SH) Performance Declaration

In the event of any inconsistency between the documents, the following order of precedence shall prevail: the Special Conditions of Contract; the General Conditions of Contract, including Attachment 1; Appendix A; Appendix B; Appendix C and Appendix D; Appendix E; Appendix F; and Appendix G. Any reference to this Contract shall include, where the context permits, a reference to its Appendices.

2. The mutual rights and obligations of the Client and the Consultant shall be as set forth in the Contract, in particular:
 - (a) the Consultant shall carry out the Services in accordance with the provisions of the Contract; and
 - (b) the Client shall make payments to the Consultant in accordance with the provisions of the Contract.

IN WITNESS WHEREOF, the Parties hereto have caused this Contract to be signed in their respective names as of the day and year first above written.

For and on behalf of Punjab Municipal Development Fund Company, Government of Punjab

MUHAMMAD IFTIKHAR RASOOL MD PMDFC

[Authorized Representative of the Client – name, title and signature]

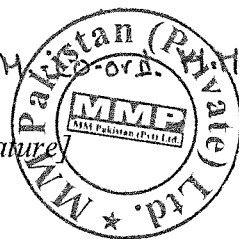
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28.02.2022

For and on behalf of MM Pakistan (Pvt.) Ltd.

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TARIQ MAHMOOD G.H.

G.H.



MM Pakistan (Pvt.) Ltd.

[Authorized Representative of the Consultant – name and signature]

WITNESSES

1- S. SAJJAD. H. ARBIDI
CNIC 3520014583977

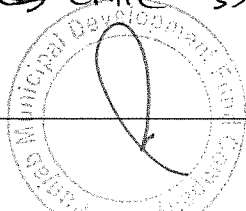
2. M. Ashiq Ch. SDO (ID)
CNIC 35200-2282597 =>

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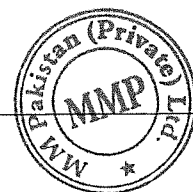
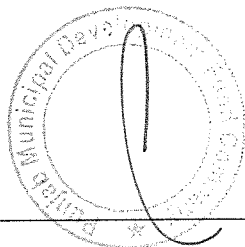
II. General Conditions of Contract

A. GENERAL PROVISIONS

1. Definitions

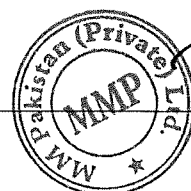
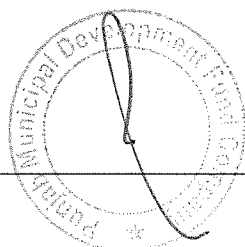
1.1. Unless the context otherwise requires, the following terms whenever used in this Contract have the following meanings:

- (a) **“Applicable Law”** means the laws and any other instruments having the force of law in the Client’s country, or in such other country as may be specified in the **Special Conditions of Contract (SCC)**, as they may be issued and in force from time to time.
- (b) **“Bank”** means the International Bank for Reconstruction and Development (IBRD) or the International Development Association (IDA).
- (c) **“Borrower”** means the Government, Government agency or other entity that signs the financing agreement with the Bank.
- (d) **“Client”** means the implementing agency that signs the Contract for the Services with the Selected Consultant.
- (e) **“Client’s Personnel”** refers to the staff, labor and other employees (if any) of the Client engaged in fulfilling the Client’s obligations under the Contract; and any other personnel identified as Client’s Personnel, by a notice from the Client to the Consultant.
- (f) **“Consultant”** means a legally-established professional consulting firm or entity selected by the Client to provide the Services under the signed Contract.
- (g) **“Contract”** means the legally binding written agreement signed between the Client and the Consultant and which includes all the attached documents listed in its paragraph 1 of the Form of Contract (the General Conditions (GCC), the Special Conditions (SCC), and the Appendices).
- (h) **“Contractor”** means the person named as contractor in the contract to be supervised by the Consultant.
- (i) **“Contractor’s Personnel”** means personnel whom the Contractor utilizes in the execution of its contract, including the staff, labor and other employees of the Contractor and each subcontractor; and any other personnel assisting the Contractor in the execution of the contract to be supervised by the Consultant.
- (j) **“Day”** means a working day unless indicated otherwise.
- (k) **“ES”** means environmental and social (including Sexual Exploitation and Abuse (SEA) and Sexual Harassment (SH)).



- (l) **“Effective Date”** means the date on which this Contract comes into force and effect pursuant to Clause GCC 11.
- (m) **“Experts”** means, collectively, Key Experts, Non-Key Experts, or any other personnel of the Consultant, Sub-consultant or JV member(s) assigned by the Consultant to perform the Services or any part thereof under the Contract.
- (n) **“Foreign Currency”** means any currency other than the currency of the Client’s country.
- (o) **“GCC”** means these General Conditions of Contract.
- (p) **“Government”** means the government of the Client’s country.
- (q) **“Joint Venture (JV)”** means an association with or without a legal personality distinct from that of its members, of more than one entity where one member has the authority to conduct all businesses for and on behalf of any and all the members of the JV, and where the members of the JV are jointly and severally liable to the Client for the performance of the Contract.
- (r) **“Key Expert(s)”** means an individual professional whose skills, qualifications, knowledge and experience are critical to the performance of the Services under the Contract and whose Curricula Vitae (CV) was taken into account in the technical evaluation of the Consultant’s proposal.
- (s) **“Local Currency”** means the currency of the Client’s country.
- (t) **“Non-Key Expert(s)”** means an individual professional provided by the Consultant or its Sub-consultant to perform the Services or any part thereof under the Contract.
- (u) **“Party”** means the Client or the Consultant, as the case may be, and “Parties” means both of them.
- (v) **“SCC”** means the Special Conditions of Contract by which the GCC may be amended or supplemented but not over-written.
- (w) **“Services”** means the work to be performed by the Consultant pursuant to this Contract, as described in Appendix A hereto.
- (x) **“Sexual Exploitation and Abuse” “(SEA)”** means the following:

Sexual Exploitation is defined as any actual or attempted abuse of position of vulnerability, differential power or trust, for sexual purposes, including, but not limited to,



profiting monetarily, socially or politically from the sexual exploitation of another;

Sexual Abuse is defined as the actual or threatened physical intrusion of a sexual nature, whether by force or under unequal or coercive conditions.

- (y) **“Sexual Harassment” “(SH)”** is defined as unwelcome sexual advances, requests for sexual favors, and other verbal or physical conduct of a sexual nature by the Experts with other Experts, Contractor’s or Client’s Personnel.
- (z) **“Site”** means the land and other places where works are to be executed and/or facilities to be installed, and such other land or places as may be specified in the Contractor’s contract as forming part of the Site.
- (aa) **“Sub-consultants”** means an entity to whom/which the Consultant subcontracts any part of the Services while remaining solely liable for the execution of the Contract.
- (bb) **“Third Party”** means any person or entity other than the Government, the Client, the Consultant or a Sub-consultant.

2. Relationship between the Parties

2.1. Nothing contained herein shall be construed as establishing a relationship of master and servant or of principal and agent as between the Client and the Consultant. The Consultant, subject to this Contract, has complete charge of the Experts and Subconsultants, if any, performing the Services and shall be fully responsible for the Services performed by them or on their behalf hereunder.

3. Law Governing Contract

3.1. This Contract, its meaning and interpretation, and the relation between the Parties shall be governed by the Applicable Law.

4. Language

4.1. This Contract has been executed in the language specified in the SCC, which shall be the binding and controlling language for all matters relating to the meaning or interpretation of this Contract.

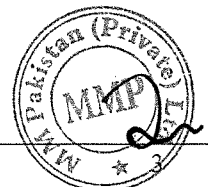
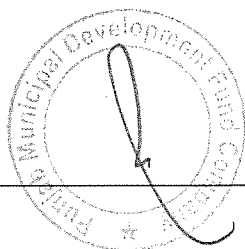
5. Headings

5.1. The headings shall not limit, alter or affect the meaning of this Contract.

6. Communications

6.1. Any communication required or permitted to be given or made pursuant to this Contract shall be in writing in the language specified in Clause GCC 4. Any such notice, request or consent shall be deemed to have been given or made when delivered in person to an authorized representative of the Party to whom the communication is addressed, or when sent to such Party at the address specified in the SCC.


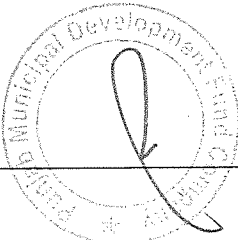
6.2. A Party may change its address for notice hereunder by giving the other Party any communication of such change to the address specified in the SCC.


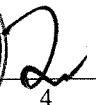


- 7. Location** 7.1 The Services shall be performed at such locations as are specified in **Appendix A** hereto and, where the location of a particular task is not so specified, at such locations, whether in the Government's country or elsewhere, as the Client may approve.
- 8. Authority of Member in Charge** 8.1 In case the Consultant is a Joint Venture, the members hereby authorize the member specified in the **SCC** to act on their behalf in exercising all the Consultant's rights and obligations towards the Client under this Contract, including without limitation the receiving of instructions and payments from the Client.
- 9. Authorized Representatives** 9.1. Any action required or permitted to be taken, and any document required or permitted to be executed under this Contract by the Client or the Consultant may be taken or executed by the officials specified in the **SCC**.
- 10. Fraud and Corruption** 10.1 The Bank requires compliance with the Bank's Anti-Corruption Guidelines and its prevailing sanctions policies and procedures as set forth in the Bank's Sanctions Framework, as set forth in Attachment 1 to the **GCC**.
- a. Commissions and Fee** 10.2. The Client requires the Consultant to disclose any commissions or fees that may have been paid or are to be paid to agents or any other party with respect to the selection process or execution of the Contract. The information disclosed must include at least the name and address of the agent or other party, the amount and currency, and the purpose of the commission, gratuity or fee. Failure to disclose such commissions, gratuities or fees may result in termination of the Contract and/or sanctions by the Bank.

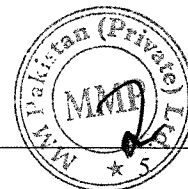
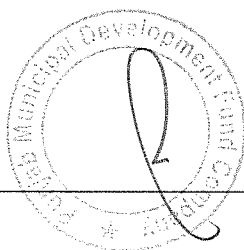
B. COMMENCEMENT, COMPLETION, MODIFICATION AND TERMINATION OF CONTRACT

- 11. Effectiveness of Contract** 11.1. This Contract shall come into force and effect on the date (the "Effective Date") of the Client's notice to the Consultant instructing the Consultant to begin carrying out the Services. This notice shall confirm that the effectiveness conditions, if any, listed in the **SCC** have been met.
- 12. Termination of Contract for Failure to Become Effective** 12.1. If this Contract has not become effective within such time period after the date of Contract signature as specified in the **SCC**, either Party may, by not less than twenty two (22) days written notice to the other Party, declare this Contract to be null and void, and in the event of such a declaration by either Party, neither Party shall have any claim against the other Party with respect hereto.
- 13. Commencement of Services** 13.1. The Consultant 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**.



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- 14. Expiration of Contract** 14.1. Unless terminated earlier pursuant to Clause GCC 19 hereof, this Contract shall expire at the end of such time period after the Effective Date as specified in the SCC.
- 15. Entire Agreement** 15.1. 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.
- 16. Modifications or Variations** 16.1. 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 proposals for modification or variation made by the other Party.
- 16.2. In cases of substantial modifications or variations, the prior written consent of the Bank is required.
- 17. Force Majeure**
- a. Definition** 17.1. For the purposes of this Contract, "Force Majeure" means an event which is beyond the reasonable control of a Party, is not foreseeable, is unavoidable, and makes a Party's performance of its obligations hereunder impossible or so impractical as reasonably to be considered impossible under the circumstances, and subject to those requirements, includes, but is not limited to, war, riots, civil disorder, earthquake, fire, explosion, storm, flood or other adverse weather conditions, strikes, lockouts or other industrial action confiscation or any other action by Government agencies.
- 17.2. Force Majeure shall not include (i) any event which is caused by the negligence or intentional action of a Party or such Party's Experts, Sub-consultants or agents or employees, nor (ii) any event which a diligent Party could reasonably have been expected to both take into account at the time of the conclusion of this Contract, and avoid or overcome in the carrying out of its obligations hereunder.
- 17.3. Force Majeure shall not include insufficiency of funds or failure to make any payment required hereunder.
- b. No Breach of Contract** 17.4. The failure of a Party to fulfil any of its obligations hereunder shall not be considered to be a breach of, or default under, this Contract insofar as such inability arises from an event of Force Majeure, provided that the Party affected by such an event has taken all reasonable precautions, due care and reasonable alternative measures, all with the objective of carrying out the terms and conditions of this Contract.



c. Measures to be Taken

- 17.5 A Party affected by an event of Force Majeure shall continue to perform its obligations under the Contract as far as is reasonably practical, and shall take all reasonable measures to minimize the consequences of any event of Force Majeure.
- 17.6 A Party affected by an event of Force Majeure shall notify the other Party of such event as soon as possible, and in any case not later than fourteen (14) calendar days following the occurrence of such event, providing evidence of the nature and cause of such event, and shall similarly give written notice of the restoration of normal conditions as soon as possible.
- 17.7 Any period within which a Party 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.
- 17.8 During the period of their inability to perform the Services as a result of an event of Force Majeure, the Consultant, upon instructions by the Client, shall either:

- (a) demobilize, in which case the Consultant shall be reimbursed for additional costs they reasonably and necessarily incurred, and, if required by the Client, in reactivating the Services; or
- (b) continue with the Services to the extent reasonably possible, in which case the Consultant shall continue to be paid under the terms of this Contract and be reimbursed for additional costs reasonably and necessarily incurred.

17.9 In the case of disagreement between the Parties as to the existence or extent of Force Majeure, the matter shall be settled according to Clauses GCC 56 & 57.

18. Suspension


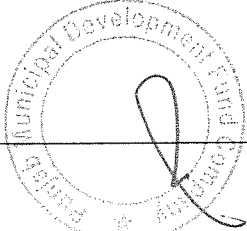
18.1. The Client may, by written notice of suspension to the Consultant, suspend all payments to the Consultant hereunder if the Consultant fails to perform any of its obligations under this Contract, including the carrying out of the Services, provided that such notice of suspension (i) shall specify the nature of the failure, and (ii) shall request the Consultant to remedy such failure within a period not exceeding thirty (30) calendar days after receipt by the Consultant of such notice of suspension.

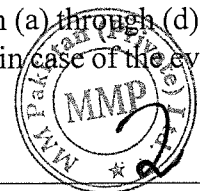
19. Termination

19.1. This Contract may be terminated by either Party as per provisions set up below:

a. By the Client

19.1.1 The Client may terminate this Contract in case of the occurrence of any of the events specified in paragraphs (a) through (f) of this Clause. In such an occurrence the Client shall give at least thirty (30) calendar days' written notice of termination to the Consultant 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); and at least five (5) calendar days' written notice in case of the event referred to in (f):


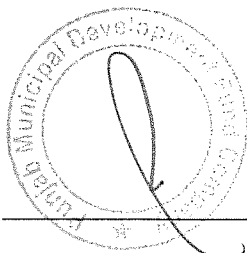
- (a) If the Consultant fails to remedy a failure in the performance of its obligations hereunder, as specified in a notice of suspension pursuant to Clause GCC 18;
- (b) If the Consultant becomes (or, if the Consultant consists of more than one entity, if any of its members becomes) insolvent or bankrupt 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;
- (c) If the Consultant fails to comply with any final decision reached as a result of arbitration proceedings pursuant to Clause GCC 58.1;
- (d) If, as the result of Force Majeure, the Consultant is unable to perform a material portion of the Services for a period of not less than sixty (60) calendar days;
- (e) If the Client, in its sole discretion and for any reason whatsoever, decides to terminate this Contract;
- (f) If the Consultant fails to confirm availability of Key Experts as required in Clause GCC 13.

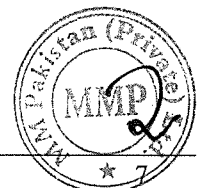
19.1.2 If the Consultant, in the judgment of the Client has engaged in Fraud and Corruption, as defined in paragraph 2.2 a of Attachment 1 to the GCC, in competing for or in executing the Contract, then the Client may, after giving fourteen (14) calendar days written notice to the Consultant, terminate the Consultant's employment under the Contract.

b. By the Consultant


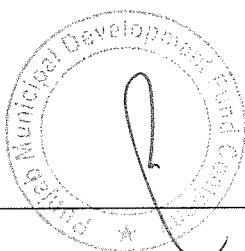
19.1.3 The Consultant may terminate this Contract, by not less than thirty (30) calendar days' written notice to the Client, in case of the occurrence of any of the events specified in paragraphs (a) through (d) of this Clause.

- (a) If, as the result of Force Majeure, the Consultant is unable to perform a material portion of the Services for a period of not less than sixty (60) calendar days
- (b) If the Client fails to comply with any final decision reached as a result of arbitration pursuant to Clause GCC 58.1.
- (c) If the Client fails to comply with any final decision reached as a result of arbitration pursuant to Clause GCC 58.1



- (d) If the Client 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 Consultant may have subsequently approved in writing) following the receipt by the Client of the Consultant's notice specifying such breach.
- c. Cessation of Rights and Obligations** 19.1.4 Upon termination of this Contract pursuant to Clauses GCC 12 or GCC 19 hereof, or upon expiration of this Contract pursuant to Clause GCC 14, all rights and obligations of the Parties hereunder shall cease, except (i) such rights and obligations as may have accrued on the date of termination or expiration, (ii) the obligation of confidentiality set forth in Clause GCC 22, (iii) the Consultant's obligation to permit inspection, copying and auditing of their accounts and records set forth in Clause GCC 25 and to cooperate and assist in any inspection or investigation, and (iv) any right which a Party may have under the Applicable Law.
- d. Cessation of Services** 19.1.5 Upon termination of this Contract by notice of either Party to the other pursuant to Clauses GCC 19a or GCC 19b, the Consultant shall, immediately upon dispatch or receipt of such notice, take all necessary steps to bring the Services to a close in a prompt and orderly manner and shall make every reasonable effort to keep expenditures for this purpose to a minimum. With respect to documents prepared by the Consultant and equipment and materials furnished by the Client, the Consultant shall proceed as provided, respectively, by Clauses GCC 27 or GCC 28
- e. Payment upon Termination** 19.1.6 Upon termination of this Contract, the Client shall make the following payments to the Consultant:
- (a) remuneration for Services satisfactorily performed prior to the effective date of termination, and reimbursable expenditures for expenditures actually incurred prior to the effective date of termination; and pursuant to Clause GCC 50;
 - (b) in the case of termination pursuant to paragraphs (d) and (e) of Clause GCC 19.1.1, reimbursement of any reasonable cost incidental to the prompt and orderly termination of this Contract, including the cost of the return travel of the Experts

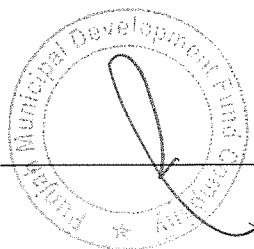
 



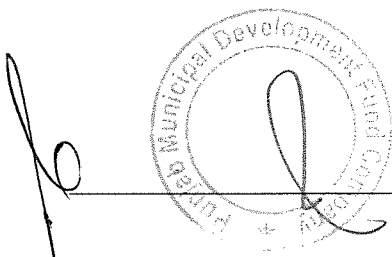
C. OBLIGATIONS OF THE CONSULTANT

20. General

- a. Standard of Performance**
- 20.1. The Consultant 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 Consultant shall always act, in respect of any matter relating to this Contract or to the Services, as a faithful adviser to the Client, and shall at all times support and safeguard the Client's legitimate interests in any dealings with the third parties.
- 20.2 The Consultant shall employ and provide such qualified and experienced Experts and Sub-consultants as are required to carry out the Services.
- 20.3 The Consultant may subcontract part of the Services to an extent and with such Key Experts and Sub-consultants as may be approved in advance by the Client. Submission by the Consultant for the Client's approval, for addition of any Sub-consultant not named in the Contract, shall also include the Sub-consultant's declaration in accordance with Appendix G- Sexual exploitation and Abuse (SEA) and/or Sexual Harassment (SH) Performance Declaration. Notwithstanding such approval, the Consultant shall retain full responsibility for the Services.
- b. Law Applicable to Services**
- 20.4 The Consultant shall perform the Services in accordance with the Contract and the Applicable Law and shall take all practicable steps to ensure that any of its Experts and Sub-consultants, comply with the Applicable Law
- 20.5 Throughout the execution of the Contract, the Consultant shall comply with the import of goods and services prohibitions in the Client's country when:
- (a) as a matter of law or official regulations, the Borrower's country prohibits commercial relations with that country; or
 - (b) by an act of compliance with a decision of the United Nations Security Council taken under Chapter VII of the Charter of the United Nations, the Borrower's Country prohibits any import of goods from that country or any payments to any country, person, or entity in that country.



- 20.6 The Client shall notify the Consultant in writing of relevant local customs, and the Consultant shall, after such notification, respect such customs.
- 21. Conflict of Interest**
- a. Consultant Not to Benefit from Commissions, Discounts, etc.**
- 21.1.1 The payment of the Consultant pursuant to GCC F (Clauses GCC 49 through 54) shall constitute the Consultant's only payment in connection with this Contract and, subject to Clause GCC 21.1.3, the Consultant shall not accept for its own benefit any trade commission, discount or similar payment in connection with activities pursuant to this Contract or in the discharge of its obligations hereunder, and the Consultant shall use its best efforts to ensure that any Sub-consultants, as well as the Experts and agents of either of them, similarly shall not receive any such additional payment.
- 21.1.2 Furthermore, if the Consultant, as part of the Services, has the responsibility of advising the Client on the procurement of goods, works or services, the Consultant shall comply with the Bank's Applicable Regulations, and shall at all times exercise such responsibility in the best interest of the Client. Any discounts or commissions obtained by the Consultant in the exercise of such procurement responsibility shall be for the account of the Client
- b. Consultant and Affiliates Not to Engage in Certain Activities**
- 21.1.3 The Consultant agrees that, during the term of this Contract and after its termination, the Consultant and any entity affiliated with the Consultant, as well as any Sub-consultants and any entity affiliated with such Sub-consultants, shall be disqualified from providing goods, works or non-consulting services resulting from or directly related to the Consultant's Services for the preparation or implementation of the project.
- c. Prohibition of Conflicting Activities**
- 21.1.4 The Consultant shall not engage, and shall cause its Experts as well as its Sub-consultants not to engage, either directly or indirectly, in any business or professional activities that would conflict with the activities assigned to them under this Contract.
- d. Strict Duty to Conflicting Activities**
- 21.1.5 The Consultant has an obligation and shall ensure that its **Disclose** Experts and Sub-consultants shall have an obligation to disclose any situation of actual or potential conflict that impacts their capacity to serve the best interest of their Client, or that may reasonably be perceived as having this effect. Failure to disclose said situations may lead to the disqualification of the Consultant or the termination of its Contract.



Handwritten signature and circular stamp of the Punjab Municipal Development Fund Corporation.



22. Confidentiality

22.1. Except with the prior written consent of the Client, the Consultant and the Experts shall not at any time communicate to any person or entity any confidential information acquired in the course of the Services, nor shall the Consultant and the Experts make public the recommendations formulated in the course of, or as a result of, the Services.

23. Liability of the Consultant

23.1. Subject to additional provisions, if any, set forth in the SCC, the Consultant's liability under this Contract shall be as determined under the Applicable Law.

24. Insurance to be taken out by the Consultant

24.1 The Consultant (i) shall take out and maintain, and shall cause any Sub-consultants to take out and maintain, at its (or the Sub-consultants', as the case may be) own cost but on terms and conditions approved by the Client, insurance against the risks, and for the coverage specified in the SCC, and (ii) at the Client's request, shall provide evidence to the Client showing that such insurance has been taken out and maintained and that the current premiums therefore have been paid. The Consultant shall ensure that such insurance is in place prior to commencing the Services as stated in Clause GCC 13.

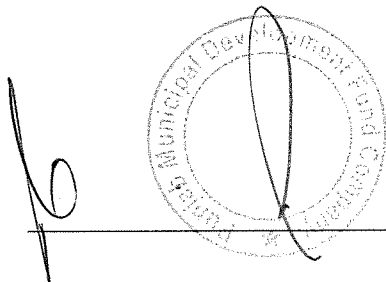
25. Accounting, Inspection and Auditing

25.1. The Consultant shall keep, and shall make all reasonable efforts to cause its Sub-consultants to keep, accurate and systematic accounts and records in respect of the Services in such form and detail as will clearly identify relevant time changes and costs.

25.2 Pursuant to paragraph 2.2 e. of Attachment 1 to the General Conditions, the Consultant shall permit and shall cause its agents (where declared or not), subcontractors, subconsultants, service providers, suppliers, and personnel, to permit, the Bank and/or persons appointed by the Bank to inspect the site and/or the accounts, records and other documents relating to the procurement process, selection and/or contract execution, and to have such accounts, records and other documents audited by auditors appointed by the Bank. The Consultant's and its subcontractors' and subconsultants' attention is drawn to Clause GCC 10.1 (Fraud and Corruption) which provides, inter alia, that acts intended to materially impede the exercise of the Bank's inspection and audit rights constitute a prohibited practice subject to contract termination (as well as to a determination of ineligibility pursuant to the Bank's prevailing sanctions procedures).

26. Reporting

26.1 The Consultant shall submit to the Client the reports and documents specified in **Appendix A**, in the form, in the numbers and within the time periods set forth in the said Appendix.





27. Proprietary Rights of the Client in Reports and Records

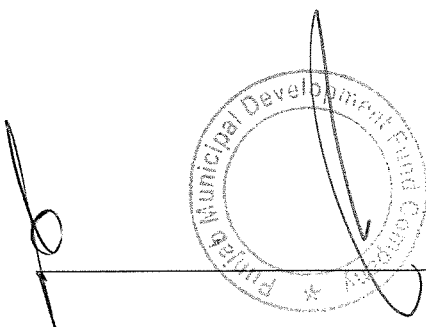
27.1 Unless otherwise indicated in the SCC, all reports and relevant data and information such as maps, diagrams, plans, databases, other documents and software, supporting records or material compiled or prepared by the Consultant for the Client in the course of the Services shall be confidential and become and remain the absolute property of the Client. The Consultant shall, not later than upon termination or expiration of this Contract, deliver all such documents to the Client, together with a detailed inventory thereof. The Consultant may retain a copy of such documents, data and/or software but shall not use the same for purposes unrelated to this Contract without prior written approval of the Client.

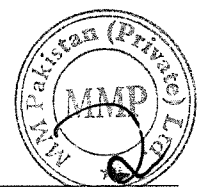
27.2. If license agreements are necessary or appropriate between the Consultant and third parties for purposes of development of the plans, drawings, specifications, designs, databases, other documents and software, the Consultant shall obtain the Client's prior written approval to such agreements, and the Client shall be entitled at its discretion to require recovering the expenses related to the development of the program(s) concerned. Other restrictions about the future use of these documents and software, if any, shall be specified in the SCC.

28. Equipment, Vehicles and Materials

28.1. Equipment, vehicles and materials made available to the Consultant by the Client, or purchased by the Consultant wholly or partly with funds provided by the Client, shall be the property of the Client and shall be marked accordingly. Upon termination or expiration of this Contract, the Consultant shall make available to the Client an inventory of such equipment, vehicles and materials and shall dispose of such equipment, vehicles and materials in accordance with the Client's instructions. While in possession of such equipment, vehicles and materials, the Consultant, unless otherwise instructed by the Client in writing, shall insure them at the expense of the Client in an amount equal to their full replacement value.

28.2 Any equipment or materials brought by the Consultant or its Experts into the Client's country for the use either for the project or personal use shall remain the property of the Consultant or the Experts concerned, as applicable.





29. Health and Safety

- 29.1 The Consultant shall:
- (a) comply with all applicable health and safety regulations and Laws;
 - (b) comply with all applicable health and safety obligations specified in the Contract;
 - (c) provide or cause to be provided health and safety training of Experts as appropriate and maintain training records
 - (d) put in place workplace processes for Experts to report work situations that they believe are not safe or healthy, and to remove themselves from a work situation which they have reasonable justification to believe presents an imminent and serious danger to their life or health;
 - (e) Experts who remove themselves from such work situations shall not be required to return to work until necessary remedial action to correct the situation has been taken. Experts shall not be retaliated against or otherwise subject to reprisal or negative action for such reporting or removal;
 - (f) establish and implement a system for regular (not less than six-monthly) review of health and safety performance and the working environment.

30. Code of Conduct

- 30.1. The Consultant shall have a Code of Conduct for the Experts.


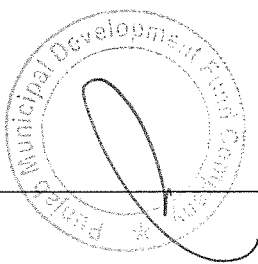
The Consultant shall take all necessary measures to ensure that each Expert is made aware of the Code of Conduct including specific behaviors that are prohibited, and understands the consequences of engaging in such prohibited behaviors.


These measures include providing instructions and documentation that can be understood by the Experts and seeking to obtain that person's signature acknowledging receipt of such instructions and/or documentation, as appropriate.

The Consultant shall also ensure that the Code of Conduct is visibly displayed in multiple locations on the Site, as well as in areas outside the Site accessible to the local community and project affected people. The posted Code of Conduct shall be provided in languages comprehensible to Experts, Contractor's Personnel, Client's Personnel and the local community.

31. Forced Labor

- 31.1 The Consultant, including its Sub-consultants, shall not employ or engage forced labor. Forced labor consists of any work or service, not voluntarily performed, that is exacted from an



individual under threat of force or penalty, and includes any kind of involuntary or compulsory labor, such as indentured labor, bonded labor or similar labor-contracting arrangements. No persons shall be employed or engaged who have been subject to trafficking. Trafficking in persons is defined as the recruitment, transportation, transfer, harboring or receipt of persons by means of the threat or use of force or other forms of coercion, abduction, fraud, deception, abuse of power, or of a position of vulnerability, or of the giving or receiving of payments or benefits to achieve the consent of a person having control over another person, for the purposes of exploitation.

32. Child Labor 32.1.


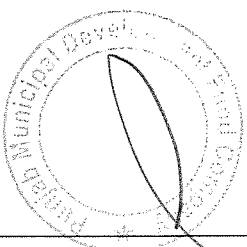
The Consultant, including its Subconsultants, shall not employ or engage a child under the age of 14 unless the national law specifies a higher age (the minimum age).

The Consultant, including its Subconsultants, shall not employ or engage a child between the minimum age and the age of 18 in a manner that is likely to be hazardous, or to interfere with, the child's education, or to be harmful to the child's health or physical, mental, spiritual, moral, or social development.

The Consultant, including its Subconsultants, shall only employ or engage children between the minimum age and the age of 18 after an appropriate risk assessment has been conducted by the Client. The Consultant shall be subject to regular monitoring by the Client that includes monitoring of health, working conditions and hours of work.

Work considered hazardous for children is work that, by its nature or the circumstances in which it is carried out, is likely to jeopardize the health, safety, or morals of children. Such work activities prohibited for children include work:

- (a) with exposure to physical, psychological or sexual abuse;
- (b) underground, underwater, working at heights or in confined spaces;
- (c) with dangerous machinery, equipment or tools, or involving handling or transport of heavy loads;
- (d) in unhealthy environments exposing children to hazardous substances, agents, or processes, or to temperatures, noise or vibration damaging to health; or
- (e) under difficult conditions such as work for long hours, during the night or in confinement on the premises of the employer.



33. Workers’ Organizations

33.1 In countries where the relevant labor laws recognise workers’ rights to form and to join workers’ organizations of their choosing and to bargain collectively without interference, the Consultant shall comply with such laws. In such circumstances, the role of legally established workers’ organizations and legitimate workers’ representatives will be respected, and they will be provided with information needed for meaningful negotiation in a timely manner. Where the relevant labor laws substantially restrict workers’ organizations, the Consultant shall enable alternative means for the Experts to express their grievances and protect their rights regarding working conditions and terms of employment. The Consultant shall not seek to influence or control these alternative means. The Consultant shall not discriminate or retaliate against Experts who participate, or seek to participate, in such organizations and collective bargaining or alternative mechanisms. Workers’ organizations are expected to fairly represent the workers in the workforce.


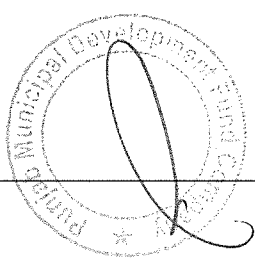
34. Non Discrimination and Equal Opportunity

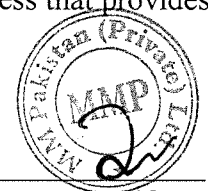
34.1 The Consultant shall not make decisions relating to the employment or treatment of Experts on the basis of personal characteristics unrelated to inherent job requirements. The Consultant shall base the employment of Experts on the principle of equal opportunity and fair treatment, and shall not discriminate with respect to any aspects of the employment relationship, including recruitment and hiring, compensation (including wages and benefits), working conditions and terms of employment, access to training, job assignment, promotion, termination of employment or retirement, and disciplinary practices.

Special measures of protection or assistance to remedy past discrimination or selection for a particular job based on the inherent requirements of the job shall not be deemed discrimination. The Consultant shall provide protection and assistance as necessary to ensure non-discrimination and equal opportunity, including for specific groups such as women, people with disabilities, migrant workers and children (of working age in accordance with Clause GCC 33).

35. Experts Grievance Mechanism

35.1 The Consultant shall have a grievance mechanism for Experts, and where relevant the workers’ organizations stated in Clause GCC 33, to raise workplace concerns. The grievance mechanism shall be proportionate to the nature, scale, risks and impacts of the Contract. The mechanism shall address concerns promptly, using an understandable and transparent process that provides



timely feedback to those concerned in a language they understand, without any retribution, and shall operate in an independent and objective manner.

The Experts shall be informed of the grievance mechanism at the time of engagement for the Contract, and the measures put in place to protect them against any reprisal for its use. Measures will be put in place to make the grievance mechanism easily accessible to all Experts.

The grievance mechanism shall not impede access to other judicial or administrative remedies that might be available, or substitute for grievance mechanisms provided through collective agreements.

The grievance mechanism may utilize existing grievance mechanisms, provided that they are properly designed and implemented, address concerns promptly, and are readily accessible to such Experts. Existing grievance mechanisms may be supplemented as needed with Contract-specific arrangements

36. Training of Experts

36.1

The Consultant shall provide appropriate training to relevant Experts on ES aspects of the Contract, including appropriate sensitization on prohibition of SEA and SH, and health and safety training referred to in Clause GCC 29.

As required under the Contract, the Consultant shall also allow appropriate opportunities for the relevant Experts to be trained on ES aspects of the Contract by the Client's Personnel.

The Consultant shall provide training on SEA and SH, including its prevention, to any of its Experts who has a role to supervise other Experts.

D. CONSULTANT'S EXPERTS AND SUB-CONSULTANTS

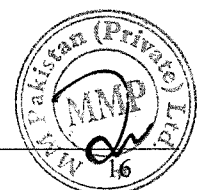
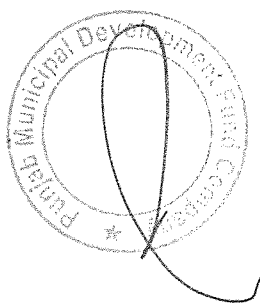
37. Description of Key Experts

37.1.

The title, agreed job description, minimum qualification and time-input estimates to carry out the Services of each of the Consultant's Key Experts are described in **Appendix B**.

37.2

If required to comply with the provisions of Clause GCC 20a, adjustments with respect to the estimated time-input of Key Experts set forth in **Appendix B** may be made by the Consultant by a written notice to the Client, provided (i) that such adjustments shall not alter the original time-input estimates for any individual by more than 10% or one week, whichever is larger; and (ii) that the aggregate of such adjustments shall not



cause payments under this Contract to exceed the ceilings set forth in Clause GCC 49.2.

37.2 If additional work is required beyond the scope of the Services specified in **Appendix A**, the estimated time-input for the Key Experts may be increased by agreement in writing between the Client and the Consultant. In case where payments under this Contract exceed the ceilings set forth in Clause GCC 49.2, the Parties shall sign a Contract amendment.

38. Replacement of Key Experts

38.1 Except as the Client may otherwise agree in writing, no changes shall be made in the Key Experts.

38.2 Notwithstanding the above, the substitution of Key Experts during Contract execution may be considered only based on the Consultant's written request and due to circumstances outside the reasonable control of the Consultant, including but not limited to death or medical incapacity. In such case, the Consultant shall forthwith provide as a replacement, a person of equivalent or better qualifications and experience, meet eligibility requirements, and at the same rate of remuneration.

39. Approval of Additional Key Experts

39.1 If during execution of the Contract, additional Key Experts are required to carry out the Services, the Consultant shall submit to the Client for review and approval a copy of their Curricula Vitae (CVs). If the Client does not object in writing (stating the reasons for the objection) within twenty two (22) days from the date of receipt of such CVs, such additional Key Experts shall be deemed to have been approved by the Client.

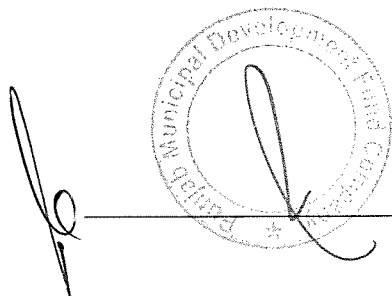
The rate of remuneration payable to such new additional Key Experts shall be based on the rates for other Key Experts position which require similar qualifications and experience.

40. Removal of Experts or Sub-consultants

40.1 If the Client finds that any of the Experts or Sub-consultant:

- (a) persists in any misconduct or lack of care;
- (b) carries out duties incompetently or negligently;
- (c) fails to comply with any provision of the Contract;
- (d) persists in any conduct which is prejudicial to safety, health, or the protection of the environment;
- (e) based on reasonable evidence, is determined to have engaged in Fraud and Corruption during the execution of the Services;
- (f) undertakes behaviour which breaches the Code of Conduct for Experts (ES);

the Consultant shall, at the Client's written request, provide a replacement.



40.2 In the event that any of Key Experts, Non-Key Experts or Subconsultants is found by the Client to be incompetent or incapable in discharging assigned duties, the Client, specifying the grounds therefore, may request the Consultant to provide a replacement.

40.3 Any replacement of the removed Experts or Sub-consultants shall possess better qualifications and experience and shall be acceptable to the Client.

40.4 Subject to the requirements in Clause GCC 40.3, and notwithstanding any requirement from the Client to request a replacement, the Consultant shall take immediate action as appropriate in response to any violation of (a) through (f) above. Such immediate action shall include removing (or causing to be removed) from the Site or other places where the Services are being carried out, any Expert who engages in (a) to (f) above.

**41. Replacement/
Removal of
Experts – Impact
on Payments**

41.1 Except as the Client may otherwise agree, (i) the Consultant shall bear all additional travel and other costs arising out of or incidental to any removal and/or replacement, and (ii) the remuneration to be paid for any of the Experts provided as a replacement shall not exceed the remuneration which would have been payable to the Experts replaced or removed.

**42. Working
Hours, Overtime,
Leave, etc.**

42.1 Working hours and holidays for Experts are set forth in **Appendix B**. To account for travel time to/from the Client's country, experts carrying out Services inside the Client's country shall be deemed to have commenced or finished work in respect of the Services such number of days before their arrival in, or after their departure from, the Client's country as is specified in **Appendix B**.

42.2 The Experts shall not be entitled to be paid for overtime nor to take paid sick leave or vacation leave except as specified in **Appendix B**, and the Consultant's remuneration shall be deemed to cover these items.

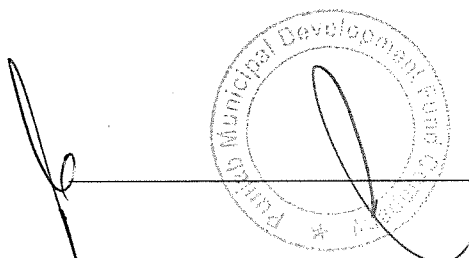
42.3 Any taking of leave by Key Experts shall be subject to the prior approval by the Consultant who shall ensure that absence for leave purposes will not delay the progress and or impact adequate supervision of the Services.

E. OBLIGATIONS OF THE CLIENT

**43. Assistance
and
Exemptions**

43.1 Unless otherwise specified in the SCC, the Client shall use its best efforts to:

- (a) Assist the Consultant with obtaining work permits and such other documents as shall be necessary to enable the Consultant to perform the Services.





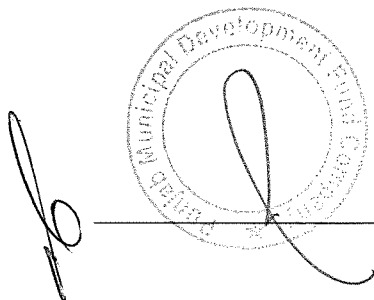
- (b) Assist the Consultant with promptly obtaining, for the Experts and, if appropriate, their eligible dependents, all necessary entry and exit visas, residence permits, exchange permits and any other documents required for their stay in the Client's country while carrying out the Services under the Contract.
- (c) Facilitate prompt clearance through customs of any property required for the Services and of the personal effects of the Experts and their eligible dependents.
- (d) Issue to officials, agents and representatives of the Government all such instructions and information as may be necessary or appropriate for the prompt and effective implementation of the Services.
- (e) Assist the Consultant and the Experts and any Subconsultants employed by the Consultant for the Services with obtaining exemption from any requirement to register or obtain any permit to practice their profession or to establish themselves either individually or as a corporate entity in the Client's country according to the applicable law in the Client's country.

Assist the Consultant, any Sub-consultants and the Experts of either of them with obtaining the privilege, pursuant to the applicable law in the Client's country, of bringing into the Client's country reasonable amounts of foreign currency for the purposes of the Services or for the personal use of the Experts and of withdrawing any such amounts as may be earned therein by the Experts in the execution of the Services.

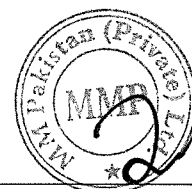
- (f) Provide to the Consultant any such other assistance as may be specified in the SCC.

44. Access to Project Site

44.1 The Client warrants that the Consultant shall have, free of charge, unimpeded access to the project site in respect of which access is required for the performance of the Services. The Client will be responsible for any damage to the project site or any property thereon resulting from such access and will indemnify the Consultant and each of the experts in respect of liability for any such damage, unless such damage is caused by the wilful default or negligence of the Consultant or any Subconsultants or the Experts of either of them.



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45. Change in the Applicable Law Related to Taxes and Duties

45.1 If, after the date of this Contract, there is any change in the applicable law in the Client's country with respect to taxes and duties which increases or decreases the cost incurred by the Consultant in performing the Services, then the remuneration and reimbursable expenses otherwise payable to the Consultant under this Contract shall be increased or decreased accordingly by agreement between the Parties hereto, and corresponding adjustments shall be made to the ceiling amounts specified in Clause GCC 49.2.

46. Services, Facilities and Property of the Client

46.1 The Client shall make available to the Consultant 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 (**Appendix A**) at the times and in the manner specified in said **Appendix A**.

46.2 In case that such services, facilities and property shall not be made available to the Consultant as and when specified in **Appendix A**, the Parties shall agree on (i) any time extension that it may be appropriate to grant to the Consultant for the performance of the Services, (ii) the manner in which the Consultant shall procure any such services, facilities and property from other sources, and (iii) the additional payments, if any, to be made to the Consultant as a result thereof pursuant to Clause GCC 49.3.

47. Counterpart Personnel

47.1 The Client shall make available to the Consultant free of charge such professional and support counterpart personnel, to be nominated by the Client with the Consultant's advice, if specified in **Appendix A**.

47.2 If counterpart personnel are not provided by the Client to the Consultant as and when specified in **Appendix A**, the Client and the Consultant shall agree on (i) how the affected part of the Services shall be carried out, and (ii) the additional payments, if any, to be made by the Client to the Consultant as a result thereof pursuant to Clause GCC 49.3.

47.3 Professional and support counterpart personnel, excluding Client's liaison personnel, shall work under the exclusive direction of the Consultant. If any member of the counterpart personnel fails to perform adequately any work assigned to such member by the Consultant that is consistent with the position occupied by such member, the Consultant may request the replacement of such member, and the Client shall not unreasonably refuse to act upon such request.

48. Payment Obligation

48.1 In consideration of the Services performed by the Consultant under this Contract, the Client shall make such payments to the Consultant and in such manner as is provided by GCC F below.





F. PAYMENTS TO THE CONSULTANT

49. Ceiling Amount

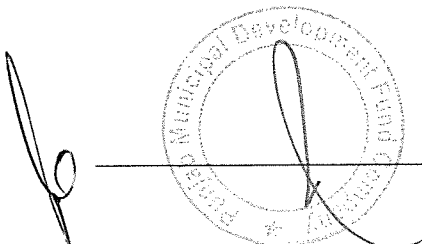
- 49.1. An estimate of the cost of the Services is set forth in Appendix C (Remuneration) and Appendix D (Reimbursable expenses).
- 49.2. Payments under this Contract shall not exceed the ceilings in foreign currency and in local currency specified in the SCC.
- 49.3. For any payments in excess of the ceilings specified in GCC 49.2, an amendment to the Contract shall be signed by the Parties referring to the provision of this Contract that evokes such amendment.

50. Remuneration and Reimbursable Expenses

- 50.1. The Client shall pay to the Consultant (i) remuneration that shall be determined on the basis of time actually spent by each Expert in the performance of the Services after the date of commencing of Services or such other date as the Parties shall agree in writing; and (ii) reimbursable expenses that are actually and reasonably incurred by the Consultant in the performance of the Services.
- 50.2. All payments shall be at the rates set forth in **Appendix C** and **Appendix D**.
- 50.3. Unless the SCC provides for the price adjustment of the remuneration rates, said remuneration shall be fixed for the duration of the Contract.
- 50.4. The remuneration rates shall cover: (i) such salaries and allowances as the Consultant shall have agreed to pay to the Experts as well as factors for social charges and overheads (bonuses or other means of profit-sharing shall not be allowed as an element of overheads), (ii) the cost of backstopping by home office staff not included in the Experts' list in **Appendix B**, (iii) the Consultant's profit, and (iv) any other items as specified in the SCC.
- 50.5. Any rates specified for Experts not yet appointed shall be provisional and shall be subject to revision, with the written approval of the Client, once the applicable remuneration rates and allowances are known.

51. Taxes and Duties

- 51.1. The Consultant, Sub-consultants and Experts are responsible for meeting any and all tax liabilities arising out of the Contract unless it is stated otherwise in the SCC
- 51.2. As an exception to the above and as stated in the SCC, all local identifiable indirect taxes (itemized and finalized at Contract negotiations) are reimbursed to the Consultant or are paid by the Client on behalf of the Consultant.



A handwritten signature in black ink is written over a circular stamp. The stamp contains the text "Multilateral Development Fund" around the perimeter and "MDF" in the center. The signature is a cursive, flowing line.



52. Currency of Payment

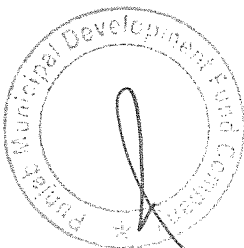
52.1 Any payment under this Contract shall be made in the currency(ies) specified in the SCC

53. Mode of Billing and Payment

53.1 Billings and payments in respect of the Services shall be made as follows:

Advance payment. Within the number of days after the Effective Date, the Client shall pay to the Consultant an advance payment as specified in the SCC. Unless otherwise indicated in the SCC, an advance payment shall be made against an advance payment bank guarantee acceptable to the Client in an amount (or amounts) and in a currency (or currencies) specified in the SCC. Such guarantee (i) is to remain effective until the advance payment has been fully set off, and (ii) is to be in the form set forth in **Appendix E**, or in such other form as the Client shall have approved in writing. The advance payments will be set off by the Client in equal installments against the statements for the number of months of the Services specified in the SCC until said advance payments have been fully set off.

- a) The Itemized Invoices. As soon as practicable and not later than fifteen (15) days after the end of each calendar month during the period of the Services, or after the end of each time interval otherwise indicated in the SCC, the Consultant shall submit to the Client, in duplicate, itemized invoices, accompanied by the receipts or other appropriate supporting documents, of the amounts payable pursuant to Clauses GCC 52 and GCC 53 for such interval, or any other period indicated in the SCC. Separate invoices shall be submitted for expenses incurred in foreign currency and in local currency. Each invoice shall show remuneration and reimbursable expenses separately.
- b) The Client shall pay the Consultant's invoices within sixty (60) days after the receipt by the Client of such itemized invoices with supporting documents. Only such portion of an invoice that is not satisfactorily supported may be withheld from payment. Should any discrepancy be found to exist between actual payment and costs authorized to be incurred by the Consultant, the Client may add or subtract the difference from any subsequent payments.



The Final Payment .The final payment under this Clause shall be made only after the final report and a final invoice, identified as such, shall have been submitted by the Consultant and approved as satisfactory by the Client. The Services shall be deemed completed and finally accepted by the Client and the final report and final invoice shall be deemed approved by the Client as satisfactory ninety (90) calendar days after receipt of the final report and final invoice by the Client unless the

- c) Client, within such ninety (90) calendar day period, gives written notice to the Consultant specifying in detail deficiencies in the Services, the final report or final invoice. The Consultant shall thereupon promptly make any necessary corrections, and thereafter the foregoing process shall be repeated. Any amount that the Client has paid or has caused to be paid in accordance with this Clause in excess of the amounts payable in accordance with the provisions of this Contract shall be reimbursed by the Consultant to the Client within thirty (30) days after receipt by the Consultant of notice thereof. Any such claim by the Client for reimbursement must be made within twelve (12) calendar months after receipt by the Client of a final report and a final invoice approved by the Client in accordance with the above.
- d) All payments under this Contract shall be made to the accounts of the Consultant specified in the SCC.
- e) With the exception of the final payment under (d) above, payments do not constitute acceptance of the Services nor relieve the Consultant of any obligations hereunder.

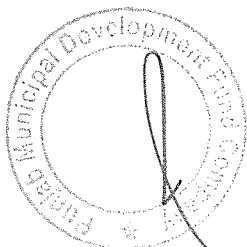
54. Interest on Delayed Payments

54.1 If the Client had delayed payments beyond fifteen (15) days after the due date stated in Clause GCC 53.1 (c), interest shall be paid to the Consultant on any amount due by, not paid on, such due date for each day of delay at the annual rate stated in the SCC.

G. FAIRNESS AND GOOD FAITH

55. Good Faith

55.1. The Parties undertake to act in good faith with respect to each other's rights under this Contract and to adopt all reasonable measures to ensure the realization of the objectives of this Contract.



H. SETTLEMENT OF DISPUTES

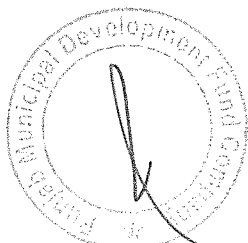
56. Amicable Settlement

56.1 The Parties shall seek to resolve any dispute amicably by mutual consultation.

56.2 If either Party objects to any action or inaction of the other Party, the objecting Party may file a written Notice of Dispute to the other Party providing in detail the basis of the dispute. The Party receiving the Notice of Dispute will consider it and respond in writing within fourteen (14) days after receipt. If that Party fails to respond within fourteen (14) days, or the dispute cannot be amicably settled within fourteen (14) days following the response of that Party, Clause GCC 57.1 shall apply.

57. Dispute Resolution

57.1 Any dispute between the Parties arising under or related to this Contract that cannot be settled amicably may be referred to by either Party to the adjudication/arbitration in accordance with the provisions specified in the SCC.



II. General Conditions Attachment 1

Fraud and Corruption

(Text in this Attachment shall not be modified)

1. Purpose

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

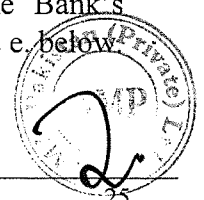
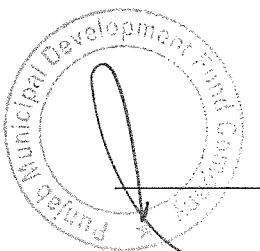
2. Requirements

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

2.2 To this end, the Bank:

a. Defines, for the purposes of this provision, the terms set forth below as follows:

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

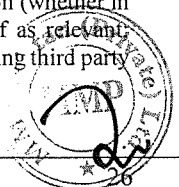
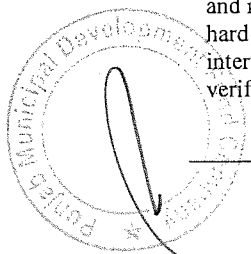


- b. Rejects a proposal for award if the Bank determines that the firm or individual recommended for award, any of its personnel, or its agents, or its sub-consultants, subcontractors, service providers, suppliers and/ or their employees, has, directly or indirectly, engaged in corrupt, fraudulent, collusive,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

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

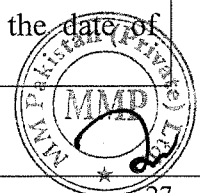
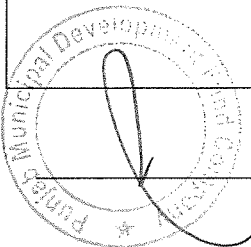
² A nominated sub-contractor, nominated consultant, nominated manufacturer or supplier, or nominated service provider (different names are used depending on the particular bidding document) is one which has been: (i) included by the bidder in its pre-qualification application or bid because it brings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

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

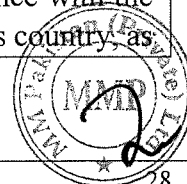
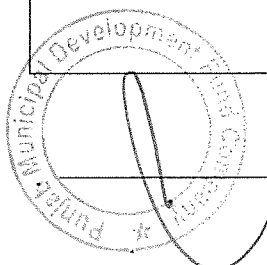


III. Special Conditions of Contract

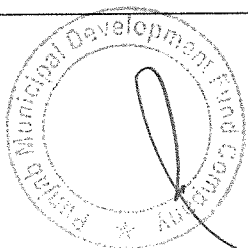
Number of GC Clause	Amendments of, and Supplements to, Clauses in the General Conditions of Contract
1.1(a)	The Contract shall be construed in accordance with the law of : Islamic Republic Of Pakistan
4.1	The language is: English
6.1 and 6.2	<p>The addresses are :</p> <p>Client: Punjab Municipal Development Fund Company (PMDFC) Govt. of the Punjab, 184, Scotch Corner, Upper Mall, Lahore Attention: M. Iftikhar Rasool, PD/MD Facsimile: +92 42 99204390 E-mail : miftikhar@pmdfc.org.pk</p> <p>Consultant: MM Pakistan (Pvt.) Ltd. 27-A, Empress Road, CTI Plaza, Lahore Attention: Tariq Mahmood, General Manager (Coordination) Facsimile: +92 423 666-5049 E-mail : tariq.mahmood@mmpakistan.com & lhr@mmpakistan.com</p>
8.1	"N/A"
9.1	<p>The Authorized Representatives are:</p> <p>For the Client: Mr. Muhammad Iftikhar Rasool, Program Director / Managing Director</p> <p>For the Consultant: Mr. Tariq Mahmood, General Manager (Coordination)</p>
11.1	<p>a) The contract shall be effective upon Signing of the Contract by both the parties;</p> <p>The firm has to deploy its key personnel as mentioned in the technical proposal within a period of seven days from signing of the contract.</p>
12.1	<p>Termination of Contract for Failure to Become Effective: The time period shall be one month from the date of contract.</p>
13.1	<p>Commencement of Services:</p> <p>The number of days shall be: Fifteen (15) days after the date of effectiveness of Contract.</p>



	Confirmation of Key Experts' availability to start the Assignment shall be submitted to the Client in writing as a written statement signed by each Key Expert.
14.1	<p>Expiration of Contract:</p> <p>The time period shall be: Thirty (30) months from date of Signing of the Contract.</p>
23.1	<p>The following limitation of the Consultant's Liability towards the Client can be subject to the Contract's negotiations:</p> <p>"Limitation of the Consultant's Liability towards the Client:</p> <p>(a) Except in the case of gross negligence or willful misconduct on the part of the Consultant or on the part of any person or a firm acting on behalf of the Consultant in carrying out the Services, the Consultant, with respect to damage caused by the Consultant to the Client's property, shall not be liable to the Client:</p> <p>(i) for any indirect or consequential loss or damage; and</p> <p>(ii) for any direct loss or damage that exceeds one time the total value of the Contract;</p> <p>(b) This limitation of liability shall not</p> <p>(i) affect the Consultant's liability, if any, for damage to Third Parties caused by the Consultant or any person or firm acting on behalf of the Consultant in carrying out the Services;</p> <p>be construed as providing the Consultant with any limitation or exclusion from liability which is prohibited by the "applicable law in the Client's country".</p>
24.1	<p>The insurance coverage against the risks shall be as follows:</p> <p>(a) Professional liability insurance, with a minimum coverage of 100 % of total ceiling amount of the contract.</p> <p>(b) Third Party motor vehicle liability insurance in respect of motor vehicles operated in the Client's country by the Consultant or its Experts or Sub-consultants, with a minimum coverage of PKR 4.0 Million</p> <p>(c) Third Party liability insurance, with a minimum coverage of PKR 4.0Million.</p> <p>(d) employer's liability and workers' compensation insurance in respect of the experts and Sub-consultants in accordance with the relevant provisions of the applicable law in the Client's country, as</p>

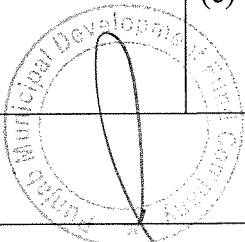


	<p>well as, with respect to such Experts, any such life, health, accident, travel or other insurance as may be appropriate; and</p> <p>(e) insurance against loss of or damage to (i) equipment purchased in whole or in part with funds provided under this Contract, (ii) the Consultant's property used in the performance of the Services, and (iii) any documents prepared by the Consultant in the performance of the Services.</p>
27.1	<p>All reports and relevant data and information such as maps, diagrams, plans, databases, other documents and software, supporting records or material compiled or prepared by the Consultant for the Client in the course of the Services shall be confidential and become and remain the absolute property of the Client. The Consultant shall, not later than upon termination or expiration of this Contract, deliver all such documents to the Client, together with a detailed inventory thereof. The Consultant may retain a copy of such documents, data and/or software but shall not use the same for purposes unrelated to this Contract without prior written approval of the Client.</p>
27.2	<p>The Consultant shall not use these [GIS base maps updating, Feasibility Reports, Design and Drawings Reports, PC – I Document, Final Bidding Documents including BOQ, COC, Detailed Drawings and Specifications, Detailed sectoral planning report of each sector, Detailed Sectoral Plans in the form of descriptive maps shown on the city structure plans for each sector, List of Priority Sub-projects for the year 2030 to 2040 and 2040 to 2050 with time line including Final Reports]for purposes unrelated to this Contract without the prior written approval of the Client.</p>
43.1 (a) through (f)	<p>NA</p>
43.1(g)	<p>(a) Assist the Consultant with obtaining work permits and such other documents as shall be necessary to enable the Consultant to perform the Services.</p> <p>(b) Issue to officials, agents and representatives of the Government all such instructions and information as may be necessary or appropriate for the prompt and effective implementation of the Services.</p>
49.2	<p>The Contract price for Design and Sectoral Planning is: PKR 123,650,000/- exclusive of local indirect taxes.</p> <p>The Contract price for Resident Supervision is: PKR 75,350,000/- exclusive of local indirect taxes.</p> <p>Any indirect local taxes chargeable in respect of this Contract for the Services provided by the Consultant shall be paid or reimbursed by the Client as mutually agreed.</p> <p>The amount of such taxes is : PKR 31,840,000/-</p> <p>Total Contract value is PKR 230,840,000/- (Inclusive of local indirect taxes).</p>

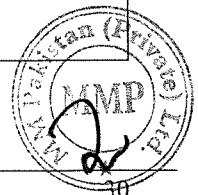


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50.3	<p>Price adjustment on the remuneration “applies” for Resident Supervision.</p> <p>Payments for remuneration made in local currency shall be adjusted as follows:</p> <p>(1) Remuneration paid in local currency pursuant to the rates set forth in Appendix C shall be adjusted every 12 months (and, for the first time, with effect for the remuneration earned in the 12th calendar month after the date of the Contract) by applying the following formula:</p> $R_t = R_{t_0} \times \frac{I}{I_{t_0}}$ <p>where</p> <p>R_t is the adjusted remuneration;</p> <p>R_{t_0} is the remuneration payable on the basis of the remuneration rates (Appendix C) in local currency;</p> <p>I_t is the official index for salaries in the Client’s country for the first month for which the adjustment is to have effect; and</p> <p>I_{t_0} is the official index for salaries in the Client’s country for the month of the date of the Contract.</p> <p>Official index shall be General Consumer Price Index (National) issued by Pakistan Bureau of Statistics, Government of Pakistan.</p>
51.1 and 51.2	<p>The Client shall reimburse the Consultant, the Sub-consultants and the Experts”</p> <p>any indirect taxes, duties, fees levies and other impositions imposed, under the applicable law in the Client’s country, on the Consultant, the Sub-consultants and the Experts in respect of:</p> <p>(a) any payments whatsoever made to the Consultant, Sub-consultants and the Experts (other than nationals or permanent residents of the Client’s country), in connection with the carrying out of the Services;</p> <p>(b) any equipment, materials and supplies brought into the Client’s country by the Consultant or Sub-consultants for the purpose of carrying out the Services and which, after having been brought into such territories, will be subsequently withdrawn by them;</p> <p>(c) any equipment imported for the purpose of carrying out the Services and paid for out of funds provided by the Client and which is treated as property of the Client;</p>



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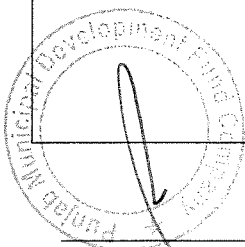
	<p>(d) any property brought into the Client’s country by the Consultant, any Sub-consultants or the Experts (other than nationals or permanent residents of the Client’s country), or the eligible dependents of such experts for their personal use and which will subsequently be withdrawn by them upon their respective departure from the Client’s country, provided that:</p> <p>i the Consultant, Sub-consultants and experts shall follow the usual customs procedures of the Client’s country in importing property into the Client’s country; and</p> <p>ii if the Consultant, Sub-consultants or Experts do not withdraw but dispose of any property in the Client’s country upon which customs duties and taxes have been exempted, the Consultant, Sub-consultants or Experts, as the case may be, (a) shall bear such customs duties and taxes in conformity with the regulations of the Client’s country, or (b) shall reimburse them to the Client if they were paid by the Client at the time the property in question was brought into the Client’s country.</p>
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52.1	The currency [currencies] of payment shall be the following: Pakistani Rupees (PKR)
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53.1(a)	<p>The following provisions shall apply to the advance payment and the advance bank payment guarantee:</p> <p>(1) An advance payment of 10% of the contract amount to the extent of Detailed design and Sectoral Planning in local currency shall be made within 15 days after the receipt of an advance payment guarantee by the Client and its verification from the issuing Bank/Insurance company. The 10% advance payment will be set off by the Client in proposition to invoice value, as agreed, until the advance payment has been fully set off.</p> <p>(2) The advance payment guarantee shall be in the amount and in the currency of the currency(ies) of the advance payment.</p> <p>(3) The bank guarantee will be released when the advance payment has been fully set off.</p>
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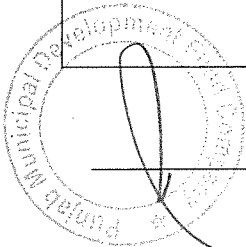
53.1(b)	<p>Payment for Design and Sectoral Planning shall be on Lump-sum basis according to the following schedule:</p> <p>(a) upon submission of each report: 80% (eighty percent)</p> <p>(b) upon approval of each report: 20% (twenty percent)</p>
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Sr. No.	Description	Proposed Time (calendar Month from Contract Signing)	Payment %
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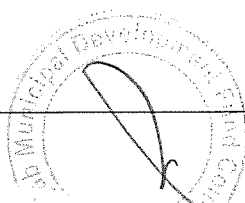
SPECIAL CONDITIONS OF THE CONTRACT

		1-Roads 2 Parks 3-SWM	Water Supply & Sewerage i.e. & Sewerage treatment	
1	Mobilization Advance (on submission of Advance Payment Guarantee) to the extent of Detailed design and Sectoral Planning	One month		10%
2	Preparation of the Detailed Design			
		Period Starts from Contract signing	Period Starts from Contract signing	
2.1	Inception reports, All initial works as per scope of work, GIS base maps updating & preparation of subprojects priority lists	Within a period of one month to two months		5%
A	Feasibility, Design and Drawings	5	9	30%
B	Engineer's Cost Estimates	6	10	10%
C	Draft PC – Is	8	11	10%
D	Final PC – Is	10	12	5%
E	Detailed Cost estimates	11	13	5%
F	Draft Bidding Documents Including • BOQ • COC • Detailed Drawings • Specifications (All above documentation is a parallel activity except BOQ)	12	14	15%
G	Final Bidding Documents including BOQ, COC, Detailed Drawings and Specifications	12	15	20%

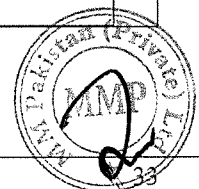


SPECIAL CONDITIONS OF THE CONTRACT

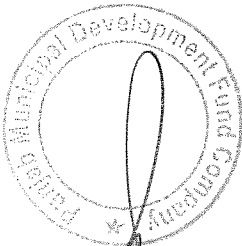
Time period per project		12	15	100%
<p>Note:</p> <p>a) The Client will review and submit comments within 14 working days thereof the submission of the deliverable by the Consultant.</p> <p>b) The part payments against any deliverable will be mutually agreed.</p>				
3) Sectoral Planning				
Sr. No.	Description	Proposed Time (Calendar months from Contract Signing		Payment %
		Roads, Parks and SWM	water supply & sewerage i/c sewage treatment	
1	Inception report and all initial tasks in each MC as given in TORs	1		10%
2	Sectoral boundary, proposed access routes and city roads within this boundary	2	3	10%
	Total initial time period	3	4	
3	Sectoral Plans			
A	Detailed sectoral planning report of each sector in each MC	6	9	30%
B	Detailed Sectoral Plans in the form of descriptive maps shown on the city structure plans for each sector in each MC	7	10	30%
C	List of Priority Subprojects for the year 2030 to 2040 and 2040 to 2050 with time line	7	12	20%



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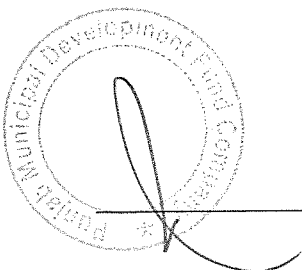
		Total time period for sectoral plan	7	12	100%
	(a) Payments Schedule for Resident Construction Supervision is Time-based based on Monthly Running invoices.				
53.1(c)	The Client shall approve the deliverable and pay the Consultant's invoices within 30 days after the receipt of by the Client upon submission and approval of such itemized invoices with supporting documents. Only such portion of an invoice that is not satisfactorily supported may be withheld from payment. Should any discrepancy be found to exist between actual payment and costs authorized to be incurred by the Consultant, the Client may add or subtract the difference from any subsequent payments.				
53.1(e)	<p>The payment will be made in : : Pak Rupees ("PKR") in the following bank account:</p> <p>Account Title : MM Pakistan (Pvt.) Limited Account Number : 0445369001 Bank Name : Dubai Islamic Bank Pakistan Limited Branch Code : 013 SWIFT Code : DUIBPKKA IBAN : PK26DUIB0000000445369001</p>				
54.1	The interest rate is: [KIBOR + 1%].				
57	<p>Disputes shall be settled by arbitration in accordance with the following provisions:</p> <ol style="list-style-type: none"> 1) As per the Arbitration Act, 1940 of Pakistan and its amendment from time to time. The location of arbitration shall be "Lahore" 2) As per the provision of guidelines of Pakistan Engineering Council (PEC), Islamabad, Pakistan. 				



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IV. Appendices
APPENDIX A – TERMS OF REFERENCE



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I. Brief Background

- ✓ A Program captioned as Punjab Cities Program (PCP), introduced as a Program for Results (P4R), funded by World Bank through soft loan of USD 200.00 million and gestation period of 5 years, is being launched in 16 MCs of Punjab. Each MC will contribute 20% of the total cost of the sub-projects being executed in its jurisdiction. The development objective of the Program is to strengthen the performance of participating Municipal Committees (MCs), focusing on urban management and improvement of municipal services infrastructure for satisfactory service delivery. The operation is financed through a hybrid of Investment Project Financing (IPF) and Program-for-Results (PforR) instruments of the World Bank.
- ✓ The PforR (Window-1) will pilot the Performance Based Grants (PBGs) to the MCs of the 16 selected cities as given below:

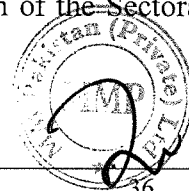
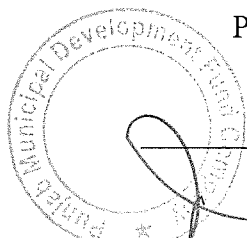
Northern Punjab	Central Punjab	Southern Punjab
1- Daska	1- Gojra	1- Bahawalnagar,
2- Hafizabad	2- Jaranwala,	2- Burewala
3- Jhelum	3- Jhang,	3- Khanewal,
4- Kamoke	4- Kamalia	4- Vehari,
5- Muridke	5- Okara	5- Kot Addu
6- Wazirabad		

- ✓ The IPF (Window-2) will support provincial government agencies i.e. Local Government & Community Development Department (LG&CDD), Punjab Local Government Board (PLGB), Punjab Municipal Development Fund Company (PMDFC) and PFC Unit of Finance Department (FD) in Program Management, Release of funds, Capacity building of MCs in municipal service delivery along with developing and implementing gender responsive systems for human resource management, grant management, reporting, audit and MC performance assessment.

II. Objectives of Consultancy Services

The overall objectives of hiring of the Consultancies Services are to;

- a) Design in detail the need based, prioritized, and most cost-effective municipal services infrastructure sub-projects in the sectors given in the following sections for benefiting the maximum population with optimal possible investments whereby the cost vs. benefits are considered, after due deliberation and assessments from all stake holders of the MC
- b) Prepare the holistic Sectoral Plans for the sectors given in the following sections in each Program MC to serve as a true development framework in that sector in next 30 years to keep in pace with the growing trends of the cities, for benefiting the maximum population with optimal possible investments whereby the cost vs benefits are considered instead of adhoc and piece meal development wasting time and financial resources and bringing smaller benefits (as compared to investments) to the growing population of the cities.
- c) Resident supervision of the sub-projects during execution for quality control.
- d) Develop the list of prioritized, need based and most cost-effective municipal services infrastructure sub-projects in the said sectors, over the planning horizon of the Sectoral Plans with their time frame of execution.



The intention of the process is to develop the municipal infrastructure at a pace and level where satisfactory service delivery level for the entire growing population of the cities in future is attained and the gap between the supply and demand is bridged instead of widening with passage of time.

The Consultancy Services for 16-cities will be divided into 5-Packages in 3 main regions North, Center and South of Punjab with Cities as mentioned below;

Package	Cities
I	Jhelum, Wazirabad & Daska
II	Hafizabad Kamoke & Muridke
III	Jaranwala Gojra, Kamalia & Jhang
IV	Bahawalnagar, Burewala & Vehari
V	Okara, Khanewal & Kot Addu

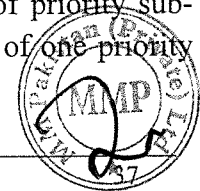
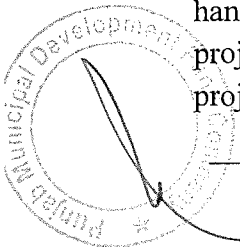
The responsibility matrix of doing work for design and sectoral planning is given as below:

Sector	Re-verification of Data & Gap analysis & updating of maps	Detailed Design of Priority Sub-Projects	Sectoral plans	Resident Supervision
Parks	PMDFC	Consultants	-	Consultants
Filtration plants	PMDFC	PMDFC	-	Consultants
Solid waste management	PMDFC	PMDFC	Consultants	Consultants
Roads & streetlights	Consultants	Consultants	Consultants	Consultants
Water supply	Consultants	Consultants	Consultants	Consultants
Sewerage & WW Treatment plants	Consultants	Consultants	Consultants	Consultants

Data and infrastructure gap analysis is available for Solid Waste Management (primary /secondary collection equipment & machinery), Parks, and Filtration Plants for each MC. The available data for Solid Waste management will be further updated by PMDFC as per present status of the machinery & equipment and requirement for each MC will be worked out. The available data for filtration plants will also be updated by PMDFC and further requirement in each city will be determined depending upon the needs, proposed locations, land availability, water quality at each location and its connectivity/approach.

The subprojects for Solid Waste management and Filtration Plants will be designed and prepared by MCs with the assistance of PMDFC and works and goods will be procured by each MC under the provisions of PPRA Rules.

The data and maps for Parks & green spaces will be further updated as per present status and handed over to Consultants who will commence work on the Detailed Design of priority sub-projects in this sub-sector soon after mobilization, and complete detailed design of one priority project in each MC within 2 months.



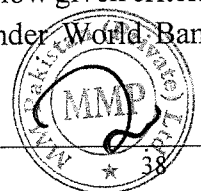
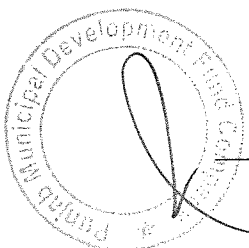
In parallel, data re-verification and surveys for roads will be completed by the Consultants and detailed design and sectoral plans of roads will be started.

Water supply, roads, sewerage systems, & wastewater treatment plants need extensive data verification and confirmation of availability of land. Sub-projects will therefore be designed after completion of these and respective sectoral plans.

Prioritization of Sectors

- a) The Detailed Designs will need to cover the projected population for next 10 years, and will be prepared for the sectors as given below;
1. Water supply
 2. Sewerage & storm water drainage
 2. Solid waste management
 - 4- Urban roads & streetlight
 5. Parks & green spaces
- b) Resident supervision will be carried out for the sub-projects designed and executed in the above-mentioned sectors.
- c) Sectoral Plans with planning horizon up to the year 2050, will be prepared for all the sectors as given below;
1. Water supply
 - 2- Sewerage & storm water drainage
 3. Solid waste management
 - 4- Urban roads & streetlight
- d) A priority list of the sub-projects required to be executed in the **first 10 years (2020 to 2030)** for each city will be prepared by MCs with the assistance of the Consultants by assessing the immediate needs and priorities of the city based on the Situation Analysis and Gap Analysis already carried out by PMDFC in 2018, and updated by the consultants for roads & streetlights, water supply, and sewerage & waste water treatment.
- e) The priority of the sub-projects in this list will be appraised and identified under the light of following parameters;
- Urgency and severity of the present problems and issues in each sector in the city
 - Immediate needs of the city in the next 10 years
 - Technical and economic feasibility
 - Number and nature of direct and indirect beneficiaries
 - Land ownership available with MCs and its suitability for the Sub-Projects.
 - Land acquisition and resettlement requirements.
 - Inventory of individuals and groups that may be negatively affected.
 - Social and environmental impacts & possibility of their mitigation.
 - Sustainability of the sub-projects and their dovetailing with or adjustment in the Sectoral Plans being prepared with 30 years of planning horizon.
 - Other parameters specific to each city witnessed at site.

The projects in the priority list will be further appraised under the light of below given criteria as per IDAMP Framework published by P&D Department (Prepared under World Bank assisted PCGIP Project including:



- i. Identification of the Current Level of Services being delivered by the existing assets/component.
- ii. Ascertain the target level of service to meet the service delivery requirements.
- iii. Assessment of the gap in the existing level of service and target level of service.
- iv. Determine if the existing asset portfolio meets the existing service delivery requirements and is capable to meet the service delivery gap.
- v. In case the existing assets/components are not sufficient to meet the target service delivery requirements, asset planning shall be undertaken in respect of rehabilitation of existing assets or creation of new assets as per below given criteria;

• **Rehabilitation/Replacement of Existing Assets**

The consultants shall identify category-wise list of assets for Replacements /Rehabilitation. Existing assets having significant contribution in the service delivery shall be included in the proposed list on following basis:

- Assets have reached to their replacement year; and/ or
- Assets have condition rating “poor & failing” and/or
- Assets have High risk of failure
- There are regulatory/ statutory directions to replace the asset

• **Creation of New Assets**

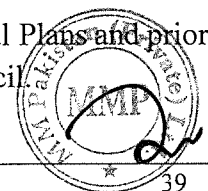
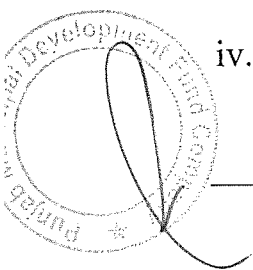
The requirement of service delivery enhancement based on the growing needs of population, development intervention and extension in services in extended boundary of city requires planning for the new assets to be integrated with the existing network of assets and system. The new asset shall be planned by the Consultants after considering the needs within the municipal limits of the cities.

- f) All stake holders including the concerned MC officials, local public representatives & notables of the city, social activists and community organizations will be consulted before finalization of this priority list.
- g) The Projects Priority List will also be approved by MC’s Administrator or the Municipal Council if active within one month of the mobilization of Consultants.

1) Proposed prioritized list of sub-projects under the Sectoral Plans (2020- 2050)

For identification and prioritization of the sub-projects to be recommended for implementation of the Sectoral Plans the Consultants will take the following steps but not limited to;

- i. Assess options for meeting priority needs/forecasting the implementation of the sectoral plans and develop preliminary proposal for the sub-Projects for their execution to meet needs and facilitate implementation of the Sectoral Plan.
- ii. Present the Sectoral Plans, possible sub-Projects and options for meeting priority needs to local stake holders and modify as appropriate in response to their suggestions and concerns.
- iii. Finalize the sectoral plans and list of priority sub-projects under the discussions in these forums. However, Pre-feasibility Report will be prepared by the Consultants to ensure that the sub-projects are technically feasible.
- iv. Liaise with PMDFC and relevant stakeholders to ensure that the Sectoral Plans and priority list sub-projects are formally approved and agreed by relevant MC Council.



In prioritizing sub-projects, preference will be given to city areas which are already fully populated but are either under-served or unserved. Sub-projects for areas that are proposed to be developed under the planning horizon may be taken up in later years, once the existing population of the city has been fully covered.

These sub-projects will be prioritized for execution in the chronological order as per considered needs of the city and the probable timeline of the execution of these sub-projects will be indicated.

The priority list of the sub-projects in each MC will be prepared by the Consultants duly approved by MC Council/Committee and shared with WB according to this latest data, inventories and upgraded maps.

III. Terms of Reference

The consultants will be required to carry out their activities as outlined in the objectives as given above.

A. Detailed Design

a) Re-verification of the data and maps

A gap analysis and situation analysis have already been carried out by PMDFC in the year 2017-2018. Detailed verification of data and up-dation of the descriptive maps and the data of the components of *Solid Waste Management, Filtration Plants and Parks* will be done as per site installations/status by PMDFC and the data for Parks will be provided to the Consultants on their mobilization. This will be done because:

- Degradation of the infrastructure may have taken place in the intervening period because of poor operation & maintenance of the municipal infrastructure by MCs.
- Due to rehabilitation of municipal services infrastructure works carried out by MCs, inventories prepared in the Situation and Gap analysis and the updated maps may have changed.

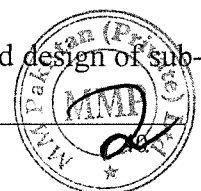
However, re-verification of data and maps of the following will be done by Consultants:

- *Water supply systems,*
- *Sewerage systems including Sewage Treatment and*
- *Urban road network.*

b) General requirements of detailed design of the Priority Sub-Projects

The consultants will be required to undertake, but not be limited to, the following broadly categorized tasks for detailed design of the sub-projects:

- i. Holistic planning of the entire city in the sectors of municipal services given in the detailed scope of work for next 10 years (up to year 2030) and identification of the works needed for *improvement of the services in the served areas and extension of the services to the presently unserved areas* of the city.
- ii. Prepare feasibility of the sub-projects over the given horizon (up to 2030) and design of sub-projects as per priority established and within the financial envelopes agreed.



- iii. Preparation of the project Feasibility Reports, Detailed Design, Rough Cost Estimates, Bid and Detailed Drawings, PC-Is, Detailed Cost Estimates and other Project documents required therein.
- iv. Carrying out the Economic and Financial Analysis for determination of EIRR and FIRR as per requirements of the PC-Is.
 - v. Sensitivity Analysis of the sub-projects and their economic, financial, and social effects.
- vi. Presentation of PC-Is to DDSC/Pre-PDWP/PDWP and finalization of PC-Is in the light of comments (if any) from DDSC/PDWP
- vii. Preparation of Bidding Documents including pre-qualification/post qualification criteria for contractors
- viii. Assist MC in preparation of Bid Evaluation Report on duly cleared format by PCP Team of PMDFC
- ix. Preparation of Revised PC-Is and detailed cost estimates of the sub-projects if required, their presentation to the competent forum and correction or modification as per requirement of the forum.
- x. The Consultants shall supervise the works being executed by the contractors, in all matters concerning quality and quantity of works, safety and care of work and report to MC Project Manager on any problem arising out in construction work during its execution.
- xi. The Consultants shall certify that construction material brought at site by the contractor for use in construction is in accordance with the specifications. The Consultants will get any material tested from any approved government laboratory in line with Contract Documents duly approved by the Client (MC).
- xii. The Consultants will be responsible for checking the quality of works, goods, machinery & equipment brought or installed by the contractors at site of work and will issue notice to the contractor for their replacement if these do not conform to the laid down specifications.
- xiii. The Consultants will verify the quantities of Work carried out by the Contractor by actual measurements at site and will verify IPCs submitted by the contractor with recommendations for payment to the relevant MC.
- xiv. Consultant will provide complete SOPs of Contract Implementation particularly, Processing of Variations / deviations in the quantities and specifications of works, Processing of Contractors IPCs, Check Request System, and Laboratory Testing etc. with their inception report and will implement these SOPs during supervision of works and verification of IPCs.
- xv. The Consultant will monitor the approved implementation schedule and report delays if any with proper analysis of delays particularly early warning of such events to the Engineer in Charge.
- xvi. The Consultant shall submit fortnightly progress report to the concerned Project Manager and to PMDFC on monitoring of works, environmental, social, occupational health and safety management plans, pointing out the deficiencies in the works & plans and suggestions for its remedial measures.

The detailed scope of work to be carried out for each sector has been given in **Annexure-A**.

c) **Documents to be prepared by the Consultants**

The following documents will be prepared by the Consultants for detailed design of each sub-project;

- 1) Inception Report
- 2) Prefeasibility Report
- 3) Feasibility Report
- 4) Detailed design of the sub-project
- 5) Cost Estimates
- 6) Economic and Financial Analysis
- 7) Sensitivity Analysis
- 8) PC-Is
- 9) Bidding Documents including but not limited to;
 - Instruction to Bidders & Conditions of the Contract (COC)
 - Special Conditions of the Contract
 - Bill of Quantities (BOQ)
 - Contract Data
 - Specifications
 - Form of Agreement and detailed draft contract (general and specific conditions)
 - All other standard format used for execution of a Pakistan Engineering Council based contract
- 10) Revised PC-Is and detailed cost estimates, whenever required.

B. Sectoral Planning

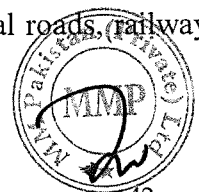
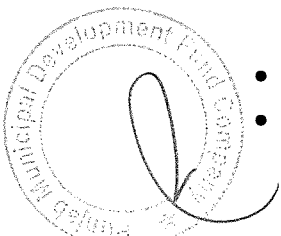
a) Expected growth of the city

As stated above each Sectoral Plan to be prepared by the Consultants will be based on the approximate expected extent of future growth of each city and the main new and upgraded access routes proposed to provide access to areas expected to be developed in the planning horizon of the Sectoral plan (up to 2050). The plan will be drawn based on projected population of each city, existing and expected commercial, industrial, & residential areas and other main requirements of the city ***based on the city's economic growth potential and the main physical drivers that influence the growth of the city. Population and spatial growth projections will be taken from the Spatial Plan/Master Plan of the city. In case these are not available, or are outdated, the Sectoral Plans will only cover the city within its existing municipal boundary.***

b) Data Collection for Sectoral Planning

The Sectoral Plans will take into account, but not be limited to, the following parameters;

- Existing social and physical municipal infrastructure and quality of municipal services in various areas of the city.
- Connectivity of the city with provincial arterial roads and city arterial roads, railway stations and by pass roads.
- General topography of the city
- Availability of fresh water sources availability of fresh water sources



- Ultimate waste water disposal
- Water bodies passing through the city and their effects or impacts on the city environments
- Location of SWM collection points, transfer stations, and dumping sites/landfill sites
- Location of industrial units adversely affecting the city environment.
- Cantonments, their main approaches, and extent of use of city's municipal services.
- Corridor development on various outgoing or incoming roads adversely affecting existing service provision
- Corridor development on various outgoing or incoming roads adversely affecting existing service provision
- Industrial estates if any
- Agriculture activities in the city

The following communication corridors will be marked on the city plan within the sectoral planning boundary;

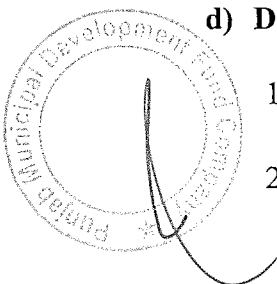
- Proposed roads or routes to be established for serving /accessing the areas to be developed within this boundary.
- Arterial roads proposed for connectivity of the expanded city with the existing arterial roads of the city.
- Proposed city roads in the areas to be developed for their connection with national or provincial arterial roads and bypasses.
- Cantonments, their main approaches, and extent of use of city's municipal services.
- Industrial estates if existing in or around the city within the municipal limits and the municipal infrastructure used by the industrial units.

c) Preparation of the Sectoral Plans

- A Sectoral Plan report for each sector will be prepared which will provide the location of the city, climatic conditions & rainfall data, connectivity, important and religious places, economic, cultural, or religious importance of the city, social infrastructure, educational facilities, government offices and administrative structure, commercial and industrial activities, culture and traditions of the area and other type of factors or activities attributed to the city which will impact municipal infrastructure and service delivery. The report for the Plan will reflect the ultimate effects on the city environments and benefits to be accrued to the inhabitants of the city after implementation of the Sectoral Plan.
- Salient features of each sectoral plan to be developed are given in **Annexure-A**. The Consultants will include any other features which can add to the comprehensiveness and value of the Plans which will provide comprehensive data and be helpful for future planning of the sectoral infrastructure.
- Descriptive maps of each sector will be prepared showing the existing municipal infrastructure in the city in that sector and the proposed facilities as per provisions of **Annexure-A** in the planning horizon marked within the planned sectoral boundary.

d) Documents to be prepared by the Consultants for each MC:

- 1) Sectoral Plan boundary marked on the city map along with access roads and arterial roads.
- 2) Detailed sectoral planning report of each sector in each MC



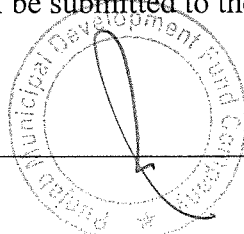
- 3) Detailed Sectoral Plans in the form of descriptive maps shown on the city plans within the sectoral boundary for each sector in each MC
- 4) Sub-projects which are required to be developed from year 2030 to 2040 to cover the projected population with timeline of execution in chronological order in each MC.
- 5) Sub-projects which are required to be developed from year 2040 to 2050 to cover the projected population with timeline of execution in chronological order in each MC.
- 6) Prioritization of the inter sector and intra sector sub-projects with timeline of execution in each MC.
- 7) Final & Completion Report for each MC.

Sector Wise TORs are attached as **Annexure-A**.

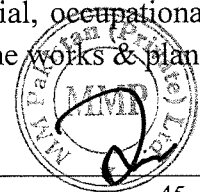
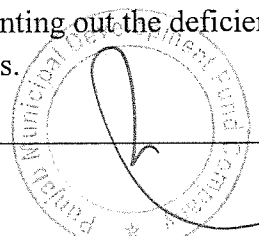
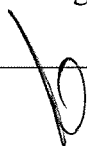
C. Resident Construction Supervision

The Consultants will undertake Resident Supervision of the Sub-Projects per the following:

- (a) A Chief Resident Engineer/Team Leader will be appointed against each Package who will have overall control of the package.
- (b) One RE will be appointed against each Package who will be responsible to overall supervision duties of the sub-projects.
- (c) One Assistant Resident Engineer (Qualified Graduate Engineer Civil in the respective discipline with sufficient experience as given below) and two Inspectors (DAE Civil with experience as given below) will be stationed in each Program MC, and will be responsible for resident supervision of the works & goods and shall perform their duties with due diligence, efficiency and in accordance with the best engineering professional and consulting standards.
- (d) Consultants will devise a progress report format and submit to the Client along the inception report for approval.
- (e) The Consultants shall supervise the works being executed by the contactors in all matters concerning safety and care of work and report to MC Project Manager on any problem arising out in construction work during its execution.
- (f) The Consultants shall certify that construction material brought at site by the contractor for use in construction, in accordance with the specifications and the material should be tested from any approved government laboratory in line with Contract Documents duly approved by the Client (MC).
- (g) The Consultants will be responsible for checking the quality of works and machinery & equipment installed by the contractors at site of work and will issue notice to the contractor for their replacement if these do not conform to the laid down specifications. One copy of this notice will be submitted to the Project Manager.



- (h) The Consultants will verify the quantities of work carried out by the Contractor at site and recommend payment to the relevant MC.
- (i) None of the substandard works, equipment and machinery will be verified for payment to the contractor by the Consultants. Similarly, no excess quantity over and above that actually measured at site by the Consultants, will be verified and paid.
- (j) Consultant will provide complete SOPs of Contract Implementation particularly, Processing of Variations / deviations in the quantities and specifications of works, Processing of Contractors IPCs, Check Request System, and Laboratory Testing etc. with their inception report.
- (k) IPCs will be verified and certified by the Chief Resident Engineer and concerned field staff. Consultant will ensure that all necessary documents are appended with the IPCs before recommendation to Project Manager under intimation to the Client. One copy of IPC will also be provided to the Client.
- (l) The test reports from nearest government laboratory (C&W, NLC, FWO, PCSIR, PITAC, UET Lahore and UET Taxila or any other Government approved laboratory etc.) will be attached with the contractors' IPCs. .
- (m) The Consultant will monitor the approved implementation schedule and report delays if any with proper analysis of delays particularly early warning of such events to MO (I), the Engineer in Charge.
- (n) The Consultants shall keep the record of daily inspection reports and hand them over to the concerned Project Manager i.e. MO (I&S) on fortnightly basis. One copy of this record shall be retained by the consultants for record at site offices and the summary of such notes shall become part of Monthly Progress reports to be submitted to the Client. The Consultants will submit progress pictures through an android application attached with a dash board through Google map providing GPS with date and time and progress in % at site.
- (o) The Consultant will keep pictorial evidence of each and every stage of work before, during and after completion of the work. This pictorial evidence will be systematically & chronologically arranged and will be submitted to the Client on weekly basis or as required by the Client.
- (p) The required decisions shall be made at site by Assistant Resident Engineers. Decisions requiring major change in scope of work liable to change the project cost substantially, will be referred to the Team Leader who will process such cases in line with contract agreement signed between MC and the Contractor and recommend to MO (I), the Engineer for approval.
- (q) The Consultant shall submit fortnightly progress report to the concerned Project Manager and the Client on monitoring of works, environmental, social, occupational health and safety management plans, pointing out the deficiencies in the works & plans and suggestions for its remedial measures.


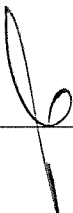



- (r) No payment to the Consultant will be made till submission of the certification by its Chief Resident Engineer/Team Leader that the work has been completed in accordance with Contract Documents and approved Drawings for Construction and the quality and quantities of the works have been verified.
- (s) Consultant will include MC stationed field office attendance sheet of every month in the Monthly Progress Report duly attested by the Team Leader/Chief Resident Engineer.
- (t) Due to various types of variations in quantities and specifications of the actual work required / executed in the filed with those provided in the BOQ /letter of award, the revision in the PC-I and detailed cost may be needed. In such cases the Consultants will prepare Revised Cost Estimates on the format specified by Government of Punjab and PC-Is, present these before the competent forum for Approval and subsequently prepare the detailed cost estimate and drawings for seeking Technical Sanction from the competent authority. The consultants shall be responsible to supervise any other construction work already completed in a PCP sub-project.
- (u) One month prior to the expiry of the defect liability period of the work, the Consultant shall carryout a detailed final inspection of the works along with MCs and Contractors concerned authorised staff and submit a report to the concerned Project Manager pointing out the defects if any in the works along with remedial measures mentioning specified time lines with one copy endorsed to the Client.
- (v) If subsequently, at any stage after the expiry of the defect liability period and during the service life of the work, the quality of any item of work passed by the consultant is found substandard, defective or its quantity excess over that actual quantity in field, the consultant shall also be liable to pay the compensation to the concerned MC for the defective work. The liability shall be to the extent of two times the fee charged for consultancy.

IV. Time Lines

(i) Detailed Designs & Sectoral Plans

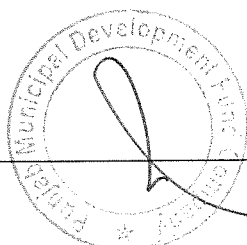
Complete Assignment is likely to be completed within 15 Months of the signing of contract agreements. The deliverables as per time line are given below:

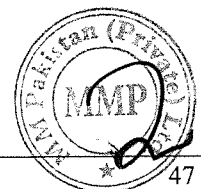
V. Deliverables/KPIs with timeline

1) Detailed Design (Roads, SWM, Parks, Water Supply, Sewerage and Sewage Treatment)

Sr. No.	Description	Proposed Time (Calendar months from contract signing)		Hard Copies	Soft Copies
		Roads, Parks and SWM	Water Supply & Sewerage i/c Sewage Treatment		
		(Months)			
1	Inception reports, All initial works as per scope of work, GIS base maps updating & preparation of subprojects priority lists	1		03	01
2	Preparation of the Detailed Design	Roads, Parks and SWM Period starts from contract signing (Months)	Water Supply & Sewerage i/c Sewage Treatment Period starts from contract signing (Months)		
a	Feasibility, Design and Drawings	5	9	03	01
b	Engineer's Cost Estimates	6	10	03	01
c	Draft PC – Is	8	11	03	01
d	Final PC – I	10	12	15	01
e	Detailed Cost estimates	11	13	15	01
f	Draft Bidding Documents Including <ul style="list-style-type: none"> • BOQ • COC • Detailed Drawings • Specifications (All above documentation is a parallel activity except BOQ)	12	14	02	01
g	Final Bidding Documents including BOQ, COC, Detailed Drawings and Specifications	12	15	10	01
Total time per project		12	15		



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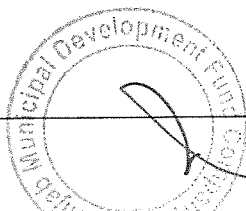


2) Sectoral Planning

Sr. No.	Description	Proposed Timeline for document delivery (months)		Hard Copies	Soft Copies
		Roads, Parks and SWM	water supply & sewerage i/c sewage treatment		
		Period starts from zero month			
1	Inception report and all initial tasks in each MC as given in TORs	1		03	01
2	Sectoral boundary, proposed access routes and city roads within this boundary	2	3	03	01
	Total initial time period	3	4		
3	Sectoral Plans				
a	Detailed sectoral planning report of each sector in each MC	6	9	03	01
b	Detailed Sectoral Plans in the form of descriptive maps shown on the city structure plans for each sector in each MC	7	10	03	01
c	List of Priority Sub-projects for the year 2030 to 2040 and 2040 to 2050 with time line	7	12	03	01
	Total time period for one sector	7	12		

RESIDENT CONSTRUCTION SUPERVISION (MAXIMUM-18 MONTHS)

Sr.No.	Deliverables	Hard Copies	Soft Copies (MS Word/Excel/PDF)
1	Inception Report	03	01
2	Fortnightly Progress Report	03	01
3	Monthly Progress Reports	03	01
4	Mid Term Progress Report	03	01
5	Final Report	03	01
6	Revised PC-I (when required)	14	01



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Annexure-A

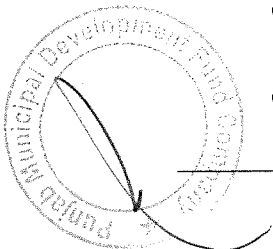
Detailed scope of work of individual municipal service

The sector wise main features to be included in scope of work for various sectors for the Detailed Design of Projects and Sectoral Planning, has been given herein. The tasks to be performed will not be limited to these parameters and the Consultants may include all other features or parameters required to make the detailed design of projects and Sectoral Plans most cost effective, workable, comprehensive, viable and sustainable.

1) Water Supply Systems

A. Detailed Design of water supply Projects

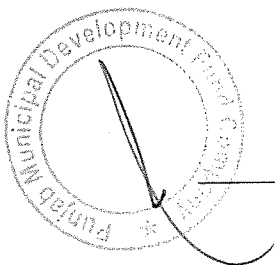
- 1) Identification of most suitable and cost-effective fresh water sources for the city by investigation of the water quality of the existing water sources in and around the city and plotting them on a plan for getting true and holistic picture of the water quality of all available fresh water sources.
- 2) Inventory of the abandoned or closed water sources by MC for the existing water supply system and determination of the causes of failure of these sources.
- 3) Working out the existing service delivery level in water supply systems in the light of under mentioned parameters;
 - Total present daily water production determined by measurement of actual discharge of the sources and the pumping hours per day.
 - Per capita per day water being supplied by MC at present.
 - Cost of present water production and distribution per 1000 gallons or per cubic meter.
 - Detection of inefficient water sources components in the existing water supply system and recommendation for their future use or closure.
 - Water shortage areas and reasons thereof (plot on the map).
 - Contaminated water supply areas with reasons of water contamination (plot on the map).
 - Approximate percentage of water wastage presently occurring in the city and most probable areas of wastage.
- 4) Measures to control this water wastage and the expected results out of these methods.
- 5) Recommended most suitable method for reduction of non-revenue water.
- 6) Preparation of the design criteria for water supply system.
- 7) Rehabilitation of the existing water supply infrastructure (if not included in M&R Projects of Year-1) for gaining maximum efficiency and maximum benefits to the consumers involving but not limited to the under mentioned components;
 - Replacement of tube wells if direly needed.
 - Repair of the existing pumping machinery and its replacement if it is not repairable including repair/replacement of electrical and mechanical parts.
 - Repair of water reservoirs, repair/replacement of pumping machinery & civil structures in intermediate pumping stations.



- Replacement of rusted, damaged and leaking pipe lines of the transmission mains and distribution system wherever these are essentially required giving problems caused by these pipelines and reasons for replacement.
 - Conducting the surveys and replacement of the underground portion of the substandard/rusted up consumer connections which are leaking in the underground and adding water contamination to the system.
 - Repair or replacement of the water disinfection facilities.
- 8) Extension of water supply facilities to all unserved areas in the city including all water supply components required therein.
- 9) Induction of consumer metering system in existing as well as proposed system.
- 10) Main water supply pipe lines to be connected subsequently with the water supply system in the areas to be developed in future in the sectoral plan horizon
- 11) Identification of the gaps and shortcomings in the present user charges levying, billing and recovery system, subsidies being injected and devising the methods for improving billing and recovery system of water revenue.
- 12) Induction of consumer and bulk water metering system and devise water tariff structure with recovery mechanism.
- 13) Carryout Environmental and Social Assessments acceptable to World Bank and EPA Punjab and recommend mitigation measures as per requirements along with Environmental and Social Management Plans (E&SMPs) during all phases of projects (Detailed Designing, Construction & Maintenance & Operation)
- 14) Manpower presently deployed for O&M and total manpower cost effective needs after the completion and commissioning of the proposed water supply system.

B. Sectoral Planning of water supply sector

- 1) Preparation of the Design Criteria.
- 2) Per capita requirement of fresh water for the city keeping in view the city living style/culture and the available fresh water sources in or around the city.
- 3) Total demands of the population in the planning horizon, present water production from the existing sources and the proposed sources of fresh water wherefrom it can be obtained.
- 4) Possibility of the extension of existing water supply facilities in the areas to be developed in the planning horizon including all water supply components required therein.
- 5) Skelton water supply system in the areas to be developed in future in the sectoral plan horizon including;
 - Proposed water sources according to the need of Structure Plan including their dovetailing with the existing sources if required.
 - Transmission mains including the resizing of existing mains if required and laying of new mains as per requirement of the proposed water sources and the structure plan.
 - City / intermediate pumping stations including the enhancement of ground storage and pumping capacity in the existing pumping stations if required and the new pumping stations to be developed.
 - Overhead storage to be constructed to meet the peak hour demand of the inhabitation to be developed under structure plan.
 - Main distribution grid keeping in view the requirements of the structure/physical plan developed. This may also include enhancing the capacity of the existing distribution



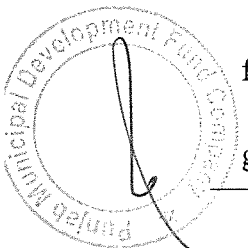
mains by their replacement and their dovetailing with the newly proposed skeleton of main pipe lines.

- Water disinfection facilities required therein.
- An approximate cost estimate of the operation and maintenance of the water supply system in the year, 2030, 2040 and 2050

2) Sewerage Systems

A. Detailed Design of sewerage projects

- a) Preparation of the design criteria.
- b) Rehabilitation of the existing sewerage infrastructure (If not included in M&R projects in Year-1) for gaining maximum efficiency and maximum benefits to the consumers involving but not limited to the under mentioned components;
 - Repair of the existing pumping machinery and its replacement if it is not repairable including repair/replacement of electrical and other mechanical parts.
 - Repair of civil structures in the disposal/ pumping stations.
 - Repairs or replacement of rusted, damaged and leaking suction or delivery pipes of the pumping machinery along with specials and valves if required
 - Cleaning and de-silting of choked or semi choked sewers wherever possible.
 - Replacement of existing sewers (only those which are damaged or which cannot be de-silted) or under capacity sewers.
 - Construction of sewers in case some areas of the cities can be drained of by gravity without pumping.
 - Construction of any link sewers in the present system which can improve the existing system or reduce the O&M charges
 - Repair of the sullage carriers and repair/replacement of force mains
 - Repair or raising of manholes, including provision of base frames and manhole covers
 - Repair or construction of gulley grating chambers.
 - Construction of desilting chambers if needed.
 - Repair or erection of ventilating shafts (not vulnerable to theft)
 - Provision of sewer de-silting and cleaning equipment /machinery
 - Repair of generators
 - Provision of sewer safety equipment (if not available with MC)
- c) Extension of the sewerage system to unserved areas of the city with projected growth of next 10 years including all required components like sewers, disposal stations, sullage carriers or force mains and intermediate pumping stations (if unavoidable).
- d) Main sewers to be extended in the areas to be developed in future in the Sectoral Plan horizon including main and branch sewers.
- e) Design of most suitable and appropriate waste water treatment plants including the existing waste water outflow keeping in view the most cost-effective solutions after comparing various options.
- f) Ultimate disposal arrangements of treated water including force mains or sullage carriers required therein.
- g) Carryout Environmental and Social Assessments acceptable to World Bank and EPA



Punjab and recommend mitigation measures as per requirements along with Environmental and Social Management Plans (E&SMPs) for all phases of subproject (Detailed Designing, Construction and O&M)

- h) Manpower presently deployed for O&M and total cost-effective manpower needs after the completion and commissioning of the proposed sewerage system.
- i) Waste water tariff structure (if levied), present billing & recovery system, subsidies being injected and proposed improvements in tariff structure and billing & recovery system to reduce the subsidies.

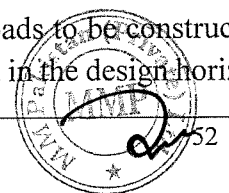
B. Sectoral Planning of sewerage sector

- a) Total waste water production in the planning horizon, quantity of waste water presently being disposed-off at various points and in various water bodies and methods of its treatment.
- b) Total remaining waste water quantity to be disposed-off in future in the planning horizon of the city, the methods and point of its disposal.
- c) Extension of the existing sewerage system, if possible, to the proposed inhabitation under Sectoral Plan including all required components like sewers, disposal stations, sullage carriers or force mains and intermediate pumping stations (if unavoidable) along with their proposed location.
- d) Location, capacity and sizes of skeleton sewerage system in the areas to be developed in future in the Sectoral Plan horizon including main, branch and outfall sewers, intermediate pumping stations (if required), outfall disposal stations and force mains /sullage carriers and other structure required therein.
- e) Capacity and proposed location of waste water treatment plants and ultimate disposal arrangements of treated water including force mains or sullage carriers or any other structures required therein for the presently disposed-off untreated water and the waste water from the proposed systems.
- f) Storm water drainage on the existing main roads and the areas to be planned for future and its ultimate disposal preferably by gravity. Separate storm water drainage should be planned only in the form of larger sized drains. It should be assumed that the present drainage or sewerage system will take some of the storm water from streets and narrow roads and remaining will flow in the form of surface runoff to be taken by larger drains to be planned and constructed.
- g) An approximate cost estimate of the operation and maintenance of the sewerage and drainage system in the year, 2030, 2040 and 2050.

3) Urban Road & Street Light

A. Detailed Design of Road Projects

- a) Detailed survey and field investigations for roads which should include but not limited to collection of all available data about the existing roads including traffic loads and intensity.
- b) Details of existing utilities or services on the roads
- c) Details of existing road longitudinal and cross drainage
- d) Preparation of detailed design of the roads to be improved or new roads to be constructed in the presently populated areas or the areas proposed to be developed in the design horizon



of the Project which should include:

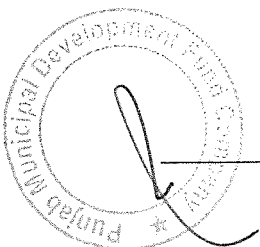
- Design Criteria for roads
 - Geometric design of roads
 - Road structures design
 - Road longitudinal profile and cross sections at required locations
 - Road longitudinal and cross drainage profiles and plans
 - Any other parameter required for detailed design and construction of roads.
- e) Possible extension of the roads so designed to the areas to be developed in the Sectoral Plan horizon.
- f) Design of the quality monitoring system of road works.

B. Sectoral Planning of Road Network

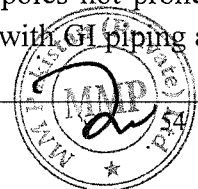
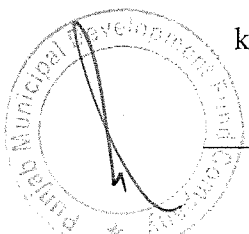
- a) Road network required to be planned for serving the population growth proposed under the Sectoral Planning horizon, will be as follows but not limited to this;
- Access roads for the proposed inhabited areas to be linked with the present road network of the city.
 - Main arterial city roads to be linked with the Provincial or National arterial network.
 - Roads leading to the industrial areas and commercial hubs
 - All other roads required to serve the existing or proposed settlements/colonies and social infrastructure in the planning horizon.
 - All outgoing and incoming roads.
 - Any other roads as per future needs of the city.
- b) The length and number of lanes of each proposed road or roads to be rehabilitated, will be determined depending upon estimated future traffic intensity and loads.
- c) The location, capacity, width and number of lanes of road interchanges, bypasses, flyovers, underpasses and other required structures in the existing inhabited areas and that proposed in future.
- d) Bridges and culverts required over the water bodies in the presently inhabited areas or areas to be developed in future.
- e) Longitudinal and cross storm water road drainage and its ultimate disposal preferably by gravity.

C. Detailed Design of street light Projects

- a) Inventory of the under mentioned types of existing street light including transformers, service cables, poles, arms, brackets and type & wattage of luminaries, LT Panels, energy meters and switch on & switch off devices with their functional status. The damaged, dormant & non-functional components will be listed down for their repairs or replacements during rehabilitation.
- Installed on Power Distribution Company's poles including the MC owned conductor
 - Installed on MC poles
 - Installed in secondary and tertiary streets with or without poles or mounted on walls



- b) Plotting the existing street light on city plan mentioning all above given three types in different colours
- c) Rehabilitation of the above-mentioned street light in all respects as mentioned below;
- Lights on Power Distribution Company's poles on main roads will be converted in to standard form of street light by erection of new light masts with underground cables, brackets and other allied electrical items of work. The transformers, service cables, LT panels or any other old component if usable should be utilized.
 - The dormant, damaged or non-functional components of the lights installed on MC poles including the control panels and transformers on main roads will be repaired or replaced in such a way that all street light goes functional.
 - The lights installed in secondary and tertiary streets without poles, or mounted on certain type of poles and walls but operated through MC conductors, will be renovated or rehabilitated in such a way that the installations become a permanent infrastructure to stay for ever.
 - For this purpose, poles, brackets, bracket arms, wires, cables, cross arms, anchors, stays, ordinary clamps or PG clamps or any other kind of fastenings may be used to make the installations stable and permanent. Old transformers, service cables, LT panels and energy meters will be utilized if found usable.
 - Care should be taken not to use bare conductor in such streets where it can cause damage to the public. Bare conductor should be used only in wider streets which can accommodate the LT line mounted on poles which should be erected at safe distance from the building line.
- d) Design of new street light on the roads finalized by the Client for such installations including all components, transformers and LT panels.
- e) Longitudinal Plans of such roads will be prepared showing the details of the existing features such as Power Company's high tension, 11-KV & LT lines & poles, telephone poles, water supply and sewer pipe lines, telephone underground ducts and other utilities for location of the proposed light masts and underground cables at appropriate routes.
- f) The transformers, LT panels, energy meters and switch on & off devices should be installed at safe locations not vulnerable to traffic or pedestrians and not in reach of the children. All of these installations will be placed in fenced & locked enclosures to stay away from the reach of the common man.
- g) Sensor switches will be provided with each control panel for automatic operation of the lights.
- h) The elevating platforms, folding ladders and other equipment or tools & plants considered appropriate for operation & maintenance of the street light, will be provided in the project cost along with their specifications.
- i) Efforts should be made to operate converging, diverging or connecting roads street lights from common points to reduce the number of transformers and control points.
- j) LED luminaries of 120 watts manufactured by some approved company will be used in the street light.
- k) The poles used in the street light will be telescopic tubular, GI pipe poles not prone to rusting. Similarly, the bracket arms and brackets will be manufactured with GI piping and sheets having zinc coating of specified thickness.



- l) Carryout Environmental and social Impact assessments acceptable to World Bank and EPA Punjab after implementation of the sectoral Plan and recommended mitigation measures as per requirements along with Environmental and social Management plan.

d. Sectoral Planning of street light sector

- a) A comprehensive plan will be prepared showing;
 - The provision of new street light in the left over existing main roads and the access roads to various residential inhabitations, industrial areas and commercial hubs.
 - The provision of street light on the proposed main roads in the areas under planning horizon.

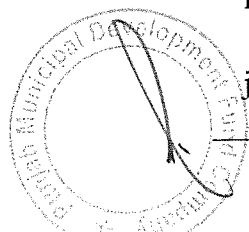
All shown as a line diagram with location of control panels and switching devices.

- b) Inventory showing type of poles, height of poles, pole structure, type and wattage of luminaries, distances between the poles for single light poles on each single road and double light poles on each dual carriage way to light the roads as per national illumination standards along with other required parameter to give complete information about the installations.
- c) Common control panels to be provided on diverging or converging roads.
- d) Energy saving plan to be made effective in all these street lights on all roads of the city with automatic switching.
- e) Street lights to be provided on all fly overs, interchanges, bridges, underpasses, bypass road junctions and important cross roads.
- f) Maintenance equipment to be part of the Plan.
- g) Rudimentary Operation and maintenance cost of the street light system in the year 2030, 2040 and 2050.

4. Solid waste Management System

A. Sectoral Planning of street light sector

- a) Assessment of the existing system of solid waste management including the primary, and secondary waste collection, road sweeping, and transportation of waste, waste dumping, waste compaction and provision of earth covers.
- b) Areas of the city which are completely served, partially served and not served by the existing system including plotting them on the city updated map.
- c) Composition of solid waste
- d) Overall waste generation, efficiency of waste collection and disposal in the city.
- e) Total present annual expenditure on the waste management on different O&M heads in the previous three years, cost per ton of the waste and per capita annual expenditure.
- f) Equipment and machinery deployed, its functional status and condition.
- g) Present efficiency of the existing waste collection and transportation machinery & equipment and its comparison with the modern efficient machinery showing total annual financial losses to MC due to use of the existing inefficient machinery and equipment.
- h) Hazards associated with the existing system of waste collection and disposal and their proposed solutions
- i) Carryout all necessary investigations essentially required in line with the best engineering practices
- j) Design of most economical, feasible and viable solid waste management system while

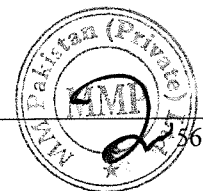
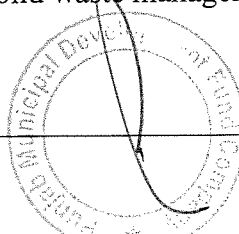


incorporating the existing facilities available with MCs in cost effective manner.

- k) Assessment of requirement of most cost effective and efficient machinery & equipment for efficient operation of SWM System.
- l) Assessment of the area and depth of the landfill required for next 10 years for the city.
- m) Design of transfer stations in the city if the waste is to be carried to some regional landfill provided /constructed by provincial government.
- n) Methods for reduction of the waste to be dumped in landfills, quantity and cost of possible recyclables and quantity of waste which can be used for “Waste to Energy process”
- o) Planning and design of the vehicle parking area in the city on the site to be provided by MCs.
- p) Working out the annual operation and maintenance cost of the proposed system.
- q) Assessment of the total manpower requirement for proposed waste management system including the additional manpower required to be employed.
- r) Carryout Environmental and Social Assessments acceptable to World Bank and EPA Punjab and recommend mitigation measures as per requirements along with Environmental and Social Management Plans (E&SMPs) for all phases of subproject (Detailed Designing, Construction and O&M).

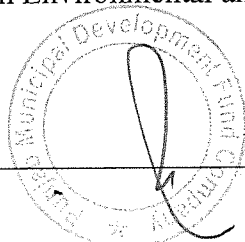
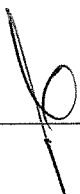
B. Sectoral Planning of Solid waste management sector

- a) Total quantity of present waste generation, quantity of waste collected and disposed and adverse impacts of low efficiency of waste collection.
- b) Total expected quantity of waste generation in the planning horizon, waste collection and disposal catered for in the Project up to the year 2030 and collection and disposal of the remaining quantity of waste in the planning horizon.
- c) Effective, efficient, economical, feasible and viable system of waste collection and disposal including the quantity and number of equipment and machinery required to collect and dispose-off the entire waste generated up to the year 2050 with intervals of 5 years.
- d) Location of present waste dumping points and their effects on city environments.
- e) Location and areas of landfills already constructed and maintained by MCs, their expected life and year of expiry.
- f) Area of the landfills required from 2030 to 2050 with 5 years interval.
- g) Proposed landfills to cater the planning horizon including their location, areas, capacity and year of expiry.
- h) Regional landfills proposed or under development by Provincial Government if any, transfer stations required to be built in the existing or proposed inhabitations to transfer this waste to regional landfills.
- i) Possibility of reduction of waste and its percentage to be disposed-off in landfills up to the year 2050 with 5 years intervals;
 - Sale to energy consuming industries and income expected to MCs.
 - Recovery of recyclables and its cost effectiveness.
 - Waste compositing, its sale prospects and its cost effectiveness.
 - Generation of energy from waste, estimate wattage which can be generated and its cost effectiveness.
- j) An approximate cost estimate of the solid waste management system from the year 2030 to 2050 with 5 years interval.



5. Detailed Design of Parks & Green Spaces Projects

- a) Complete topographic survey including spot levelling of the existing and proposed park site including the boundary wall
- b) Inventory of existing facilities in the park including their condition and possibility of future use after repairs.
- c) Location of the open spaces in the existing populated areas and the area to be developed in future proposed for construction of parks at present and in future.
- d) Design of rehabilitation of existing parks including repair or replacement of the existing components and provision of new components and facilities for improved public recreation and possible leasing out of facilities for generation of funds for O&M.
- e) Construction of new parks at feasible sites proposed by MCs.
- f) Design of the parks will include but not limited to the under mentioned components;
 - Preparation of site profile and design of landscaping in cut and fill
 - Pathways, boundary wall, podium, entrance gates.
 - Jogging track and allied services.
 - Water source for lawn watering and for water supply systems for toilets, cafeteria and for drinking purposes.
 - Toilets as per actual requirement of the visitors.
 - Lighting system including high mast lights and ornamental lights on the pathways along with LT control panel and external electrification.
 - Cafeteria (feasible for larger area parks only) including water supply, drainage and approach path.
 - Children outdoor games including swings and slides and other children playing facilities to be erected on a separate and specified area in the parks.
 - Apron for the electrically operated games along with provision of three phase electric connection points for renting the area to vendors
 - Benches & other sitting facilities, pergolas and other ornamental structures most suiting to the topography and location of the parks
 - Suggesting the most suitable plants according to the soil classifications and climatic conditions.
- g) Design should be suggested in keeping with the storm season wherein it should not create long water stagnation periods.
- h) In case of parks on depressed sites, park storm water drainage should be accompanied with aquifer recharging facilities.
- i) Any other important and necessary item of work required to make the park most useful and provide a source of income to the MC for meeting the O&M charges.
- j) Carryout Environmental and Social Impact assessment acceptable to world bank and EPA Punjab after implementation of the sectoral Plan and recommend mitigation measures as per requirement alongwith Environmental and Social Management Plan.

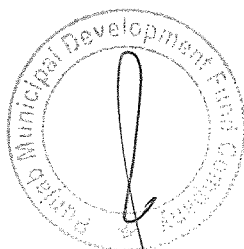


Annexure-C

**Package wise number of Projects, Sectoral Plans and Resident
Supervision Projects**

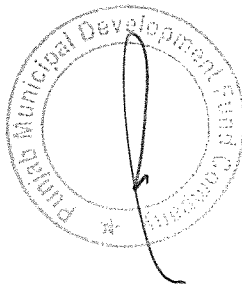
Package-III					
No of cities			4		
Name of Cities			Jaranwala Gojra, Kamalia & Jhang		
Projects and Plans			Sectoral Plans	Detailed Design	Resident Supervision
1	Water supply*		3	3	3
2	Sewerage & Sanitation, Storm water drainage & waste water treatment plants		4	4	4
3	Solid waste management	Machinery & Equipment	4	0	4
		Land Fill		4	0
4	Roads, allied structures & street lights		4	4	4
5	Parks & green spaces		0	4	4
Total			15	19	19

*Jhang will not have water supply system



APPENDIX B - KEY EXPERTS

No.	Name	Position
Design + Sectoral Planning		
Key Experts		
1	Jahanzeb Chaudry	Team Leader
2	Dr. Syed Shabih-ul-Hassan Zaidi	Urban Planner
3	Shafeeq ur Rehman	GIS Specialist
4	Umar Javaid	GIS Analyst
5	Ihsan UI Haq Farooqi	Social Safeguard Specialist
6	Omer Rasheed	Environmental Specialist
7	Wahaj Ahmed Farooqui	Water Supply Specialist (Design)
8	Muhammad Alam Shahzad	Sewerage Specialist (Design)
9	Muhammad Zaheer Abbas	Wastewater Treatment Specialist (Design)
10	Dr. Kiran Farhan	SWM Specialist (Design)
11	Syeda Sadia Sharafat	Roads Specialist (Design)
12	Rashid Ahmed	Procurement & Contract Management Specialist
13	Syed Ali Zeeshan Rizvi	Architect
Resident Supervision		
Key Experts		
1	Jahanzeb Chaudry	Team Leader / Chief Resident Engineer (Design+Sectoral Planning+Resident Supervision)
2	Malik Shahid Fareed	Resident Engineer
3	Asad Bhatti, Atta ur Rehman, Farid ullha Shah, Waheed khan	Assistant Resident Engineer (04)

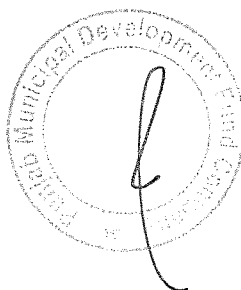



APPENDIX C – REMUNERATION COST ESTIMATES

A. Summary of Cost

Item	Cost (PKR)
	Amount
A. Design Phase + Sectoral Planning (Lump-Sum)	
Cost of Design Phase	86,555,000
Cost of Sectoral Planning	37,095,000
Total Cost of Design Phase	123,650,000
B. Resident Supervision Phase (Time Based)	
Total Cost of Resident Supervision Phase	75,350,000
Total Cost (A+B) exclusive of sales tax on services:	199,000,000

Indirect Local Tax Estimates:	
Sales Tax on Services @ 16%	31,840,000
Total Estimate for Indirect Local Tax	31,840,000



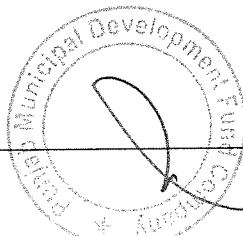
APPENDICES

B. Staff Remuneration

No.	Name	Position as in (TECH-6)	Person-month Remuneration Rate (PKR)	Time Input in Person/Month (from Tech-6)	Total Amount (PKR)
Design + Sectoral Planning					
Key Experts					
1	Jahanzeb Chaudry	Team Leader / Chief Resident Engineer (Design+Sectoral Planning+Resident Supervision)	600,000	15.0	9,000,000
2	Dr. Syed Shabih-ul-Hassan Zaidi	Urban Planner	450,000	15.0	6,750,000
3	Shafeeq ur Rehman	GIS Specialist	400,000	15.0	6,000,000
4	Umar Javaid	GIS Analyst	250,000	15.0	3,750,000
5	Ihsan Ul Haq Farooqi	Social Safeguard Specialist	400,000	15.0	6,000,000
6	Omer Rasheed	Environmental Specialist	400,000	15.0	6,000,000
7	Wahaj Ahmed Farooqui	Water Supply Specialist (Design)	500,000	10.0	5,000,000
8	Muhammad Alam Shatzad	Sewerage Specialist (Design)	500,000	10.0	5,000,000
9	Muhammad Zaheer Abbas	Wastewater Treatment Specialist (Design)	400,000	15.0	6,000,000
10	Dr. Kiran Farhan	SWM Specialist (Design)	500,000	10.0	5,000,000
11	Syeda Sadia Sharafat	Roads Specialist (Design)	500,000	10.0	5,000,000
12	Rashid Ahmed	Procurement & Contract Management Specialist	400,000	15.0	6,000,000
13	Syed Ali Zeeshan Rizvi	Architect	250,000	15.0	3,750,000
Sub - Total (Key Experts)				175.0	73,250,000
Non - Key Experts					
1	Sr. Engineers, Urban Planners, GIS Analyst, Environmentalist, Architect, Quantity Surveyors etc.		200,000	18.0	3,600,000
2	Technical Support Staff (Surveyors, AutoCAD Operators etc.)		150,000	30.0	4,500,000
Sub - Total (Non - Key Experts)				48.0	8,100,000
Total Costs (Design + Sectoral Planning)				223.0	81,350,000
Resident Supervision					
Key Experts					
1	Jahanzeb Chaudry	Team Leader / Chief Resident Engineer (Design+Sectoral Planning+Resident Supervision)	600,000	5.0	3,000,000
2	Malik Shahid Fareed	Resident Engineer	500,000	18.0	9,000,000
3	Asad Bhatti, Atta ur Rehman, Farid ulha Shah, Waheed khan	Assistant Resident Engineer (04)	275,000	72.0	19,800,000
Sub - Total (Key Experts)				95.0	31,800,000
Non - Key Experts					
1	Contract Engineer, Planning Engineer, Quantity Surveyor, Electrical & Mechanical Engineer and Sr. Engineers etc.		200,000	35.0	7,000,000
2	Technical Support Staff (Site Inspectors, Surveyors, AutoCAD Operators etc.)		150,000	110.0	16,500,000
Sub - Total (Non - Key Experts)				145.0	23,500,000
Total Costs (Resident Supervision)				240.0	55,300,000
Total Costs (Design + Sectoral Planning & Resident Supervision)				463.0	136,650,000

Note:

- Payments for Design and Sectoral Planning shall be on Lumpsum basis against submission of deliverables.
- Payments for Resident Construction Supervision shall be on Monthly basis.

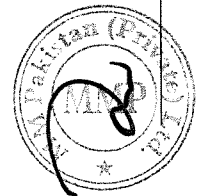


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Model Form I Breakdown of Agreed Fixed Rates in Consultant's Contract

Ref	Personnel		1	2	3	4	5	6
	Name	Position						
			1	2	3	4	5	
				43.0%	100.0%		10%	
Design + Sectoral Planning								
Key Experts								
1	Jahanzeb Chaudry	Team Leader / Chief Resident Engineer (Design+Sectoral Planning+Resident Supervision)	224,467	96,521	224,467	545,455	54,545	600,000
2	Dr. Syed Shahid-ul-Hassan Zaidi	Urban Planner	168,350	72,391	168,350	409,091	40,909	450,000
3	Shafeeq ur Rehman	GIS Specialist	149,645	64,347	149,645	363,636	36,364	400,000
4	Umar Javaid	GIS Analyst	93,528	40,217	93,528	227,273	22,727	250,000
5	Ihsan Ul Haq Farooqi	Social Safeguard Specialist	149,645	64,347	149,645	363,636	36,364	400,000
6	Omer Rasheed	Environmental Specialist	149,645	64,347	149,645	363,636	36,364	400,000
7	Wahaj Ahmed Farooqi	Water Supply Specialist (Design)	187,056	80,434	187,056	454,545	45,455	500,000
8	Muhammad Alam Shahzad	Sewerage Specialist (Design)	187,056	80,434	187,056	454,545	45,455	500,000
9	Muhammad Zaheer Abbas	Wastewater Treatment Specialist (Design)	149,645	64,347	149,645	363,636	36,364	400,000
10	Dr. Kiran Farhan	SWM Specialist (Design)	187,056	80,434	187,056	454,545	45,455	500,000
11	Syeda Sadia Sharafat	Roads Specialist (Design)	187,056	80,434	187,056	454,545	45,455	500,000
12	Rashid Ahmed	Procurement & Contract Management Specialist	149,645	64,347	149,645	363,636	36,364	400,000
13	Syed Ali Zeeshan Rizvi	Architect	93,528	40,217	93,528	227,273	22,727	250,000
Non - Key Experts								
1	Sr. Engineers, Urban Planners, GIS Analyst, Environmentalist, Architect, Quantity Surveyors etc.		74,822	32,174	74,822	181,818	18,182	200,000
2	Technical Support Staff (Surveyors, AutoCAD Operators etc.)		56,117	24,130	56,117	136,364	13,636	150,000
Resident Supervision								
Key Experts								
1	Jahanzeb Chaudry	Team Leader / Chief Resident Engineer (Design+Sectoral Planning+Resident Supervision)	224,467	96,521	224,467	545,455	54,545	600,000
2	Malik Shahid Fareed	Resident Engineer	187,056	80,434	187,056	454,545	45,455	500,000
3	Asad Bhatti, Alta ur Rehman, Farid ulha Shah, Waheed Khan	Assistant Resident Engineer (04)	102,881	44,239	102,881	250,000	25,000	275,000
Non - Key Experts								
1	Contract Engineer, Planning Engineer, Quantity Surveyor, Electrical & Mechanical Engineer and Sr. Engineers etc.		74,822	32,174	74,822	181,818	18,182	200,000
2	Technical Support Staff (Site Inspectors, Surveyors, AutoCAD Operators etc.)		56,117	24,130	56,117	136,364	13,636	150,000



Package No.3

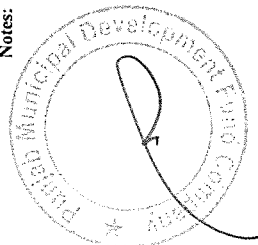
Table No.2 : Activity Wise Cost Break-up

Cities Sectors	Jaranwala			Gojra			Kamalia			Jhang		
	*Detailed Design	*Sectoral Plan	** Resident supervision	*Detailed Design	*Sectoral Plan	** Resident supervision	*Detailed Design	*Sectoral Plan	** Resident supervision	*Detailed Design	*Sectoral Plan	** Resident supervision
Water supply system	4,857,679	2,318,438	3,665,215	4,857,679	2,318,438	3,665,215	4,857,679	2,318,438	3,665,215	4,857,679	2,318,438	3,665,215
Sewerage & Sanitation, waste water treatment plants & storm water drainage	4,857,679	2,318,438	3,665,215	4,857,679	2,318,438	3,665,215	4,857,679	2,318,438	3,665,215	4,857,679	2,318,438	3,665,215
Solid waste management			3,835,690			3,835,690			3,835,690			3,835,690
			-			-			-			-
Land Fill	3,974,464	2,318,438	-	3,974,464	2,318,438	-	3,974,464	2,318,438	-	3,974,464	2,318,438	-
Roads, allied structures & Street Lights	3,974,464	2,318,438	3,835,690	3,974,464	2,318,438	3,835,690	3,974,464	2,318,438	3,835,690	3,974,464	2,318,438	3,835,690
Parks	3,974,464	-	3,835,690	3,974,464	-	3,835,690	3,974,464	-	3,835,690	3,974,464	-	3,835,690
Total Cost PKR	21,638,750	9,273,750	18,837,500	21,638,750	9,273,750	18,837,500	21,638,750	9,273,750	18,837,500	21,638,750	9,273,750	18,837,500
Total Bid Cost	Detailed Design		86,555,000									
	Sectoral Plans		37,095,000									
	Resident supervision		75,350,000									
	Total Cost		199,000,000									
	Sales Tax on Services		31,840,000									
			230,840,000									

Notes:

1) * Payments for Design and Sectoral Planning shall be on Lump-sum basis as per SC Clause 49.2 read with Appendix-B against submission of deliverables. The above referred figures are only indicative for compliance purposes.

2) ** As per data sheet Item 14.1.3, resident supervision shall be based on actual input of staff on monthly basis from the date of mobilization of resident supervision staff

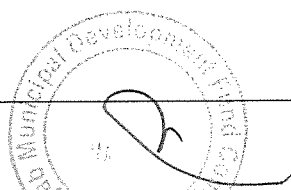


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APPENDIX D – REIMBURSABLE EXPENSES COST ESTIMATES

S.No.	Description	Unit	Quantity	Unit Price	Total (PKR)
Design + Sectoral Planning					
I	Rental Furnished Project Office Accommodation at Lahore including all office utilities, Electric, Gas, Water etc. and office equipment Computers, Printers etc.	Monthly LS ²	15	100,000	1,500,000
li	Office Supplies / Stationery / Report Printing etc.	LS budget ¹			1,000,000
lii	PTCL Telephone, Internet, EVO, Mobile Cards etc.	LS budget ¹			500,000
Iv	Rental Transportation with running expenses	LS budget ¹			3,800,000
V	Non - Technical Support Staff - <i>Office Manager, Project Accountant, Assistants, Computer Operators, office boy etc.</i>	Month	15	100,000	1,500,000
Vi	Survey / Studies / Investigations Costs etc				34,000,000
	Total Costs (Design + Sectoral Planning)				42,300,000
Note: (a) ¹ Lump Budget payments are payable as per actual against invoices as claimed with supporting vouchers. (b) ² Monthly LS payments are payable as Lump sum against invoices as claimed without supporting vouchers (c) Information provided in this Form shall only be used to demonstrate the basis for the calculation of the Contract's ceiling of Lump Sum amount, if needed, to establish payments to the Consultant for possible additional services requested by the Client. This form shall not be used as a basis for payments under Lump-sum contracts.					
Resident Supervision					
I	Rental Furnished Project Office Accommodation at Lahore including all office utilities, Electric, Gas, Water etc. and office equipment Computers, Printers etc.	Monthly ²	15	100,000	1,500,000
li	Rental site office cum residential accommodation (3 Nos)	Month	18	150,000	2,700,000
lii	Furnishing Cost for office cum residential accommodation	Monthly ¹	15	66,667	1,000,000
Iv	All office utilities, Electric, Gas, Water etc.	Monthly ¹	15	100,000	1,500,000
V	Purchase of Office equipment, computer, printer, Tonners etc. for field offices	Monthly ¹	15	66,667	1,000,000
Vi	Office Supplies / Stationery / Report Printing etc.	Monthly ¹	15	66,667	1,000,000
Vii	PTCL Telephone, Internet, EVO, Mobile Cards etc.	Monthly ¹	15	48,333	725,000
viii	Rental Transportation with running expenses *	Monthly ¹	15	500,000	7,500,000
ix	<i>Non - Technical Support Staff - Office Manager, Project Accountant, Assistants, Computer Operators, office boy etc.</i>	Month	15	175,000	2,625,000
xi	Per Diem allowance	Monthly ¹	15	33,333	500,000
	Total Costs (Resident Supervision)				20,050,000
	Total Costs (Design + Sectoral Planning & Resident Supervision)				62,350,000

- Note:**
- Monthly ¹ payments are payable as per actual against invoices as claimed with supporting evidences. However, the monthly budget is indicative which may be increased or decreased in the respective month in accordance with progress of activities, however, it should be capped as per overall total amount of that expense head.
 - Monthly² payments are payable against invoices as claimed without supporting vouchers/evidences.

APPENDIX E - FORM OF ADVANCE PAYMENTS GUARANTEE

[See Clause GCC 53.1(a) and SCC 53.1(a)]

{Guarantor letterhead or SWIFT identifier code}

Guarantee for Advance Payment

Guarantor: _____ [insert commercial Bank's Name / Insurance Company's Name, and Address of Issuing Branch or Office]

Beneficiary: _____ [insert Name and Address of Client]

Date: _____ [insert date] _____

ADVANCE PAYMENT GUARANTEE No.: _____ [insert number] _____

We have been informed that MM Pakistan (Pvt.) Ltd. [name of Consultant or a name of the Joint Venture, same as appears on the signed Contract] (hereinafter called "the Consultant") has entered into Contract No. _____ [reference number of the contract] dated _____ [insert date] _____ with the Beneficiary, for the provision of _____ [brief description of Services] (hereinafter called "the Contract").

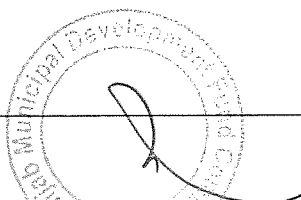
Furthermore, we understand that, according to the conditions of the Contract, an advance payment in the sum of _____ [insert amount in figures] (_____ [amount in words]) is to be made against an advance payment guarantee.

At the request of the Consultant, we, as Guarantor, hereby irrevocably undertake to pay the Beneficiary any sum or sums not exceeding in total an amount of _____ [amount in figures] (_____ [amount in words])⁴ upon receipt by us of the Beneficiary's complying demand supported by the Beneficiary's a written statement, whether in the demand itself or in a separate signed document accompanying or identifying the demand, stating that the Consultant is in breach of its obligation under the Contract because the Consultant:

- (a) has failed to repay the advance payment in accordance with the Contract conditions, specifying the amount which the Consultant has failed to repay;
- (b) has used the advance payment for purposes other than toward providing the Services under the Contract

It is a condition for any claim and payment under this guarantee to be made that the advance payment referred to above must have been received by the Consultant on its account number _____ at _____ [name and address of bank/insurance company].

⁴ The Guarantor shall insert an amount representing the amount of the advance payment and denominated either in the currency(ies) of the advance payment as specified in the Contract, or in a freely convertible currency acceptable to the Client.



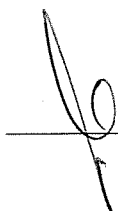
The maximum amount of this guarantee shall be progressively reduced by the amount of the advance payment repaid by the Consultant as indicated in certified statements or invoices marked as “paid” by the Client which shall be presented to us. This guarantee shall expire, at the latest, upon our receipt of the payment certificate or paid invoice indicating that the Consultant has made full repayment of the amount of the advance payment, or on the ___ day of [month]_____, [year]__,⁵ whichever is earlier. Consequently, any demand for payment under this guarantee must be received by us at this office on or before that date.

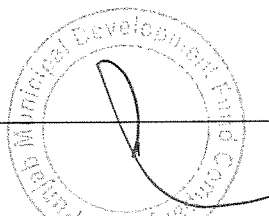
This guarantee is subject to the Uniform Rules for Demand Guarantees (URDG) 2010 revision, ICC Publication No. 758.

[signature(s)]

{Note: All italicized text is for indicative purposes only to assist in preparing this form and shall be deleted from the final product.}

⁵ Insert the expected expiration date. In the event of an extension of the time for completion of the Contract, the Client would need to request an extension of this guarantee from the Guarantor. Such request must be in writing and must be made prior to the expiration date established in the guarantee. In preparing this guarantee, the Client might consider adding the following text to the form, at the end of the penultimate paragraph: “The Guarantor agrees to a one-time extension of this guarantee for a period not to exceed [six months][one year], in response to the Client’s written request for such extension, such request to be presented to the Guarantor before the expiry of the guarantee.”





APPENDIX F - CODE OF CONDUCT

We are the Consultant, **MM Pakistan (Pvt.) Limited**. If project awarded, we will sign a contract with **Punjab Municipal Development Fund Company (PMDFC)** for **detailed design of Infrastructure Sub Projects, Sectoral Planning and Resident Supervision in 16 Cities of Punjab (Package 03)**. These Services will be carried out in **three cities of Punjab Jaranwala Gojra, Kamalia & Jhang**. Our contract requires us to implement measures to address environmental and social risks related to the Services, including the risks of sexual exploitation, sexual abuse and sexual harassment.

This Code of Conduct is part of our measures to deal with environmental and social risks related to the Services. It applies to all Experts at the Site or other places where the Services are being carried out.

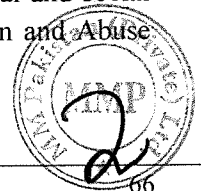
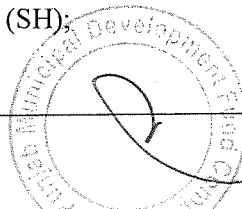
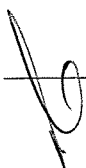
This Code of Conduct identifies the behavior that we require from all Experts.

Our workplace is an environment where unsafe, offensive, abusive or violent behavior will not be tolerated and where all persons should feel comfortable raising issues or concerns without fear of retaliation.

REQUIRED CONDUCT

Experts shall:

1. Carry out his/her duties competently and diligently;
2. Comply with this Code of Conduct and all applicable laws, regulations and other requirements, including requirements to protect the health, safety and well-being of other Experts and any other person;
3. maintain a safe working environment including by:
 - a. Ensuring that workplaces, equipment and processes under each person's control are safe and without risk to health;
 - b. Wearing required personal protective equipment; and
 - c. Following applicable emergency operating procedures.
4. report work situations that he/she believes are not safe or healthy and remove himself/herself from a work situation which he/she reasonably believes presents an imminent and serious danger to his/her life or health;
5. treat other people with respect, and not discriminate against specific groups such as women, people with disabilities, migrant workers or children;
6. not engage in Sexual Harassment, which means unwelcome sexual advances, requests for sexual favors, and other verbal or physical conduct of a sexual nature with other Experts, Contractor's Personnel or Client's Personnel;
7. not engage in Sexual Exploitation, which means any actual or attempted abuse of position of vulnerability, differential power or trust, for sexual purposes, including, but not limited to, profiting monetarily, socially or politically from the sexual exploitation of another ;
8. not engage in Sexual Abuse, which means the actual or threatened physical intrusion of a sexual nature, whether by force or under unequal or coercive conditions;
9. not engage in any form of sexual activity with individuals under the age of 18, except in case of pre-existing marriage;
10. complete relevant training courses that will be provided related to the environmental and social aspects of the Contract, including on health and safety matters, Sexual Exploitation and Abuse (SEA), and Sexual Harassment (SH);



11. report violations of this Code of Conduct; and
12. Not retaliate against any person who reports violations of this Code of Conduct, whether to us or the Client, or who makes use of grievance mechanism for Experts or the project's Grievance Redress Mechanism.

RAISING CONCERNS

If any person observes behavior that he/she believes may represent a violation of this Code of Conduct, or that otherwise concerns him/her, he/she should raise the issue promptly. This can be done in either be done in either of the following ways:

1. Contact [*General Manager (Coordination)*] in writing at this address [27-A, Empress Road, CTI Plaza, Lahore] or by telephone at [+92 42-36292525-28] or in person at [2nd Floor, CTI Plaza, Empress Road Lahore]; or
2. Call [+923008417948] to reach the Consultant's hotline and leave a message.

The person's identity will be kept confidential, unless reporting of allegations is mandated by the country law. Anonymous complaints or allegations may also be submitted and will be given all due and appropriate consideration. We take seriously all reports of possible misconduct and will investigate and take appropriate action. We will provide warm referrals to service providers that may help support the person who experienced the alleged incident, as appropriate.

There will be no retaliation against any person who raises a concern in good faith about any behavior prohibited by this Code of Conduct. Such retaliation would be a violation of this Code of Conduct.

CONSEQUENCES OF VIOLATING THE CODE OF CONDUCT

Any violation of this Code of Conduct by Experts may result in serious consequences, up to and including termination and possible referral to legal authorities.

FOR EXPERT:

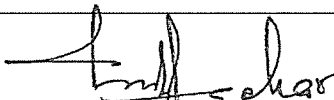
I have received a copy of this Code of Conduct written in a language that I comprehend. I understand that if I have any questions about this Code of Conduct, I can contact [enter name of Consultant's contact person(s) with relevant experience] requesting an explanation.

Name of Expert: Jahanzeb Chaudry

Signature: 

Date (day month year): 29 September 2021

Countersignature of authorized representative of the Consultant:

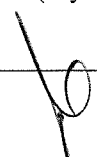
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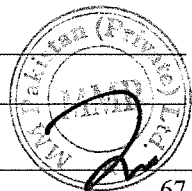
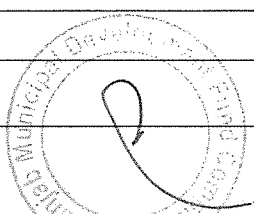
Date: (day month year): 29 September 2021

Name of Expert: Dr. Syed Shabih-ul-Hassan Zaidi

Signature: 

Date (day month year): 29 September 2021





APPENDICES

Countersignature of authorized representative of the Consultant:

Signature:



Date: (day month year): 29 September 2021

Name of Expert: Shafeeq ur Rehman


Signature:



Date (day month year): 29 September 2021

Countersignature of authorized representative of the Consultant:

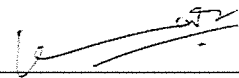
Signature:



Date: (day month year): 29 September 2021

Name of Expert: Umar Javaid

Signature:



Date (day month year): 29 September 2021

Countersignature of authorized representative of the Consultant:

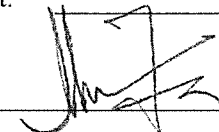
Signature:



Date: (day month year): 29 September 2021

Name of Expert: Ihsan Ul Haq Farooqi

Signature:



Date (day month year): 29 September 2021

Countersignature of authorized representative of the Consultant:

Signature:



Date: (day month year): 29 September 2021

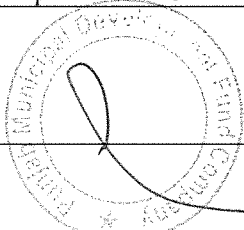
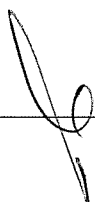
Name of Expert: Omer Rasheed

Signature:




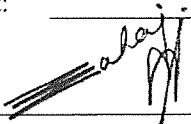
Date (day month year): 29 September 2021

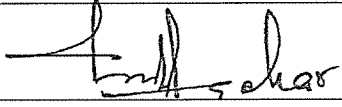
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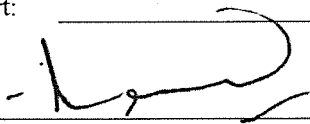


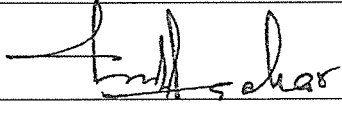
APPENDICES

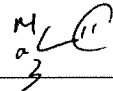
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Date: (day month year): 29 September 2021


Name of Expert: Wahaj Ahmed Farooqui
Signature: 
Date (day month year): 29 September 2021
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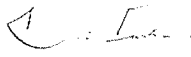
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Date: (day month year): 29 September 2021


Name of Expert: Muhammad Alam Shahzad
Signature: 
Date (day month year): 29 September 2021
Countersignature of authorized representative of the Consultant:

Signature: 
Date: (day month year): 29 September 2021

Name of Expert: Muhammad Zaheer Abbas
Signature: 
Date (day month year): 29 September 2021
Countersignature of authorized representative of the Consultant:

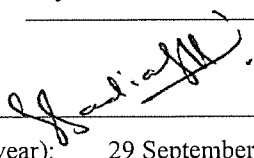
Signature: 
Date: (day month year): 29 September 2021

Name of Expert: Dr. Kiran Farhan
Signature: 
Date (day month year): 29 September 2021
Countersignature of authorized representative of the Consultant:

Signature: 
Date: (day month year): 29 September 2021

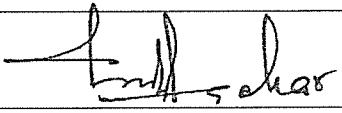
APPENDICES

Name of Expert: Syeda Sadia Sharafat

Signature: 

Date (day month year): 29 September 2021

Countersignature of authorized representative of the Consultant:

Signature: 

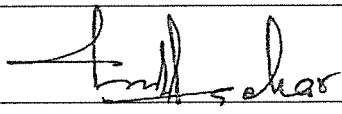
Date: (day month year): 29 September 2021

Name of Expert: Rashid Ahmad

Signature:


Date (day month year): 29 September 2021

Countersignature of authorized representative of the Consultant:

Signature: 


Date: (day month year): 29 September 2021

Name of Expert: Syed Ali Zeeshan Rizvi

Signature: 

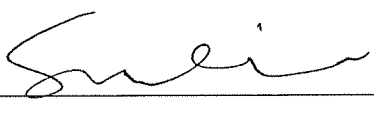
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Signature: 

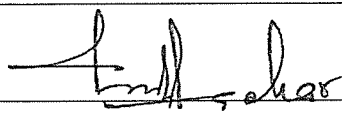
Date: (day month year): 29 September 2021

Name of Expert: Malik Shahid Fareed

Signature: 


Date (day month year): 29 September 2021

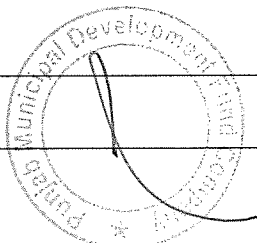
Countersignature of authorized representative of the Consultant:

Signature: 

Date: (day month year): 29 September 2021

Name of Expert: Asad Bhatti

Signature: 



APPENDICES

Atta
Date (day month year): 29 September 2021

Countersignature of authorized representative of the Consultant:

Signature: Atta ur Rehman

Date: (day month year): 29 September 2021

Name of Expert: Atta ur Rehman

Signature: Atta ur Rehman

Date (day month year): 29 September 2021

Countersignature of authorized representative of the Consultant:

Signature: Farid ulla Shah

Date: (day month year): 29 September 2021

Name of Expert: Farid ulla Shah

Signature: Farid ulla Shah

Date (day month year): 29 September 2021

Countersignature of authorized representative of the Consultant:

Signature: Abdul Waheed Khan (FL)

Date: (day month year): 29 September 2021

Name of Expert: Abdul Waheed Khan (FL)

Signature: Abdul Waheed Khan (FL)

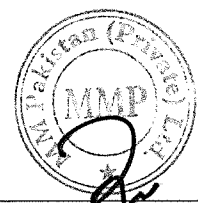
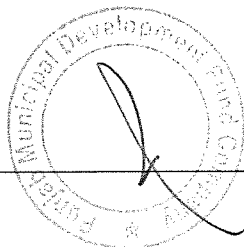
Date (day month year): 29 September 2021

Countersignature of authorized representative of the Consultant:

Signature: Abdul Waheed Khan (FL)

Date: (day month year): 29 September 2021

Atta



**APPENDIX G - SEXUAL EXPLOITATION AND ABUSE (SEA)
AND/OR SEXUAL HARASSMENT (SH) PERFORMANCE
DECLARATION FOR SUB-CONSULTANTS**

Consultant's Name: MM Pakistan (Pvt.) Ltd.

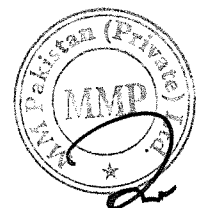
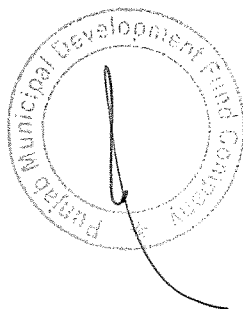
Date: 23 February 2022

RFP No. and title: PK-PMDFC-228549-CS-QCBS

Detailed Design of Infrastructure Sub-projects,
Sectoral Planning & Resident Supervision in 16 Cities of Punjab

(Package No. 03)

SEA and / or SH Declaration	
We:	
<input checked="" type="checkbox"/>	(a) Have not been subject to disqualification by the Bank for non-compliance with SEA / SH obligations
<input type="checkbox"/>	(b) Are subject to disqualification by the Bank for non-compliance with SEA / SH obligations
<input type="checkbox"/>	(c) Had been subject to disqualification by the Bank for non-compliance with SEA / SH obligations. An arbitral award on the disqualification case has been made in our favor.



Beneficial Ownership Disclosure Form

Request for Proposal reference No.: PK-PMDFC-228549-CS-QCBS
Name of the Assignment: Hiring of An Engineering Firm for Detailed Design of Infrastructure Sub-Projects, Sectoral Planning & Resident Supervision in 16 Cities of Punjab-**Package No.3**

To:
Managing Director (MD) / Program Director (PD)
Punjab Municipal Development Fund Company (PMDFC)
H # 184, Upper Mall, Scotch Corner, Lahore – Pakistan
Ph: 042-99204386-89

In response to your notification of award dated 31st December 2021 to furnish additional information on beneficial ownership:


(i) We hereby provide the following beneficial ownership information:

Details of beneficial ownership

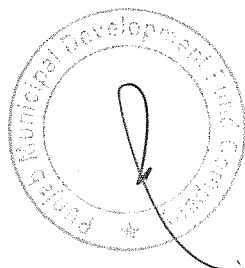
Identity of Beneficial Owner	Directly or indirectly holding 25% or more of the Shares (Yes / No.)	Directly or indirectly holding 25% or more of voting rights (Yes /No)	Directly or indirectly having the right to appoint a majority of the board of the directors of an equivalent governing body of the Consultant (Yes /No)
Name: Waseem Nazir Nationality: Pakistani, Country of residence: Pakistan	Yes	Yes	Yes
Name: Fozia Waseem Nationality: Pakistani, Country of residence: Pakistan	No	No	No

Name of the Consultant: : MM Pakistan (Private) Limited (“MMP”)
Name of the person duly authorized to sign the Proposal on behalf of the Consultant : Irfan Gohar
Title of the person signing the Proposal: : Manager Business Development

Signature of the person named above
Date signed


: February 28, 2022







Curriculum Vitae (CV)

Position Title and No.	:	K-15, Assistant Resident Engineer
Name of Expert	:	Abdul Waheed
Date of Birth	:	01-07-1991
Country of Citizenship / Residence	:	Pakistan

Education:

- M.Sc. Structural Engineering from NUST Islamabad, 2013-17
- B.Sc. Civil Engineering from UET Peshawar, 2009-13

Employment Record relevant to the assignment:

Period	Employing organization and your title / position. Contact information for references	Country	Summary of activities performed relevant to the Assignment
Feb 2018 – to date	Employer: AA Engineering Services, Peshawar Position: Chief Executive Officer Ref Contact: Ph: +92-42-35922325 Email: info@aaengineeringpvt.com	Pakistan	<ul style="list-style-type: none"> • Managing all site activities • Coordination with Client • Execution of design structure with ensuring quality
Nov 2017 - Feb 2019	Employer: MM Pakistan (Pvt) Ltd. Position: Support Engineer Ref Contact: Ph: 042-38662595 Email: corporate@mmpakistan.com	Pakistan	<ul style="list-style-type: none"> • Construction of Flyovers • Construction of Bus stations • Underpasses and below grad bus stations • BRT corridor with rigid pavement • Road networks • Drainage System
April 2015- Oct 2017	Employer: M/S ACERs (Contractor) Position: Site Manager and Project Coordinator Ref Contact: 051 5208051	Pakistan	<ul style="list-style-type: none"> • Coordinating with my office and contractor • Solving the design issues in drawings as per site scenario • Designing of Structures on site as per priority and increase in scope of work • Managing the Materials • Site Execution and overall supervision
June, 2013 – March, 2015	Employer: Architecture & Civil Engineering Services (M/S ACES) Position: Jr Design Engineer Ref Contact: Ph: 051-4918366-7 Email: info@acespak.com	Pakistan	<ul style="list-style-type: none"> • Designing of Milk Processing Plant FFL, Bhalwal • Designing and drafting of Bahria hill view Apartments (G+12) • Designing of Bahria loft Building (G +10) • Modeling of DAEWOO building, DHA Lahore • Vetting of MIA Building, Islamabad • Designing of 2 storey Houses in DHA Islamabad

Membership In Professional Associations and Publications:

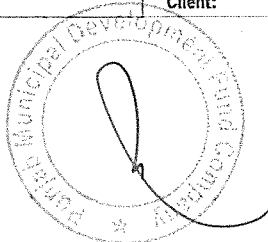
- Pakistan Engineering Council

Language Skills (Indicate only languages in which you can work): English, Urdu & Punjabi

Adequacy for the Assignment:

Detailed Tasks Assigned on Consultant's Team of Experts:	Reference to Prior Work/Assignments that Best Illustrates Capability to Handle the Assigned Tasks
<ul style="list-style-type: none"> • To supervise all construction related activities under the supervision of RE 	<p>Name of Assignment: Shidu General Hospital, Nowshera</p> <p>Year: Sep 2019 to date</p> <p>Position held: Chief Executive Officer</p> <p>Client: Private Client</p>

Abdul Waheed



29 September 2021




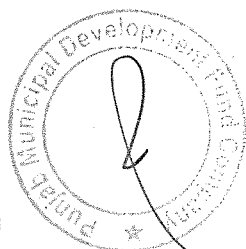
1 of 3



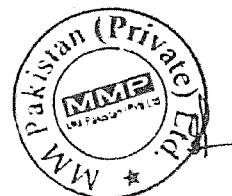
Detailed Tasks Assigned on Consultant's Team of Experts:	Reference to Prior Work/Assignments that Best Illustrates Capability to Handle the Assigned Tasks
	<p>Location: Nowshera</p> <p>Activities Performed:</p> <ul style="list-style-type: none"> Managing all site activities Coordination with Client Execution of design structure with ensuring quality <p>Name of Assignment: Peshawar Sustainable Bus Rapid Transit (BRT) Corridor Project</p> <p>Year: Nov 2017 till Feb 2019</p> <p>Position held: Support Engineer</p> <p>Client: Peshawar Development Authority</p> <p>Location: Peshawar</p> <p>Activities Performed:</p> <ul style="list-style-type: none"> Construction of Flyovers Construction of Bus stations Underpasses and below grad bus stations BRT corridor with rigid pavement Road networks Drainage System <p>Name of Assignment: Renovation and Extension of Existing facility At Milk Processing Plant, Bhalwal (Cost: 750 Million Budgeted Cost)</p> <p>Year: April 2015- Oct 2017</p> <p>Position held: Site Manager and Project Coordinator</p> <p>Client: Fauji Foods Limited</p> <p>Location: Bhalwal</p> <p>Activities Performed:</p> <ul style="list-style-type: none"> Coordinating with my office and contractor Solving the design issues in drawings as per site scenario Designing of Structures on site as per priority and increase in scope of work Managing the Materials Site Execution and overall supervision <p>Name of Assignment:</p> <ul style="list-style-type: none"> Milk Processing Plant FFL, Bhalwal Bahria Hill View Apartments (G+12) Bahria Loft Building (G +10) DAEWOO Building, DHA Lahore MIA Building, Islamabad 2 storey Houses in DHA Islamabad <p>Year: June, 2013 – March, 2015</p> <p>Position held: Jr Design Engineer</p> <p>Client: Various clients</p> <p>Location: Bhalwal, Lahore, Islamabad</p> <p>Activities Performed:</p> <ul style="list-style-type: none"> Designing of Milk Processing Plant FFL, Bhalwal Designing and drafting of Bahria hill view Apartments (G+12) Designing of Bahria loft Building (G +10) Modeling of DAEWOO building, DHA Lahore Vetting of MIA Building, Islamabad Designing of 2 storey Houses in DHA Islamabad

Expert's contact information: (e-mail: bdu@mmpakistan.com phone: 0423-6292525-26-27)


Abdul Waneed




29 September 2021



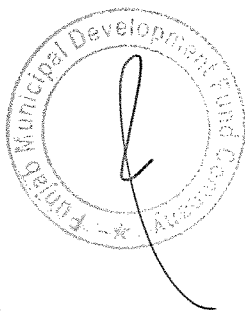


Certification:

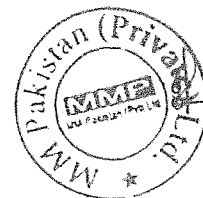
I, the undersigned, certify that to the best of my knowledge and belief, this CV correctly describes myself, my qualifications, and my experience, and I am available, as and when necessary, to undertake the assignment in case of an award. I understand that any misstatement or misrepresentation described herein may lead to my disqualification or dismissal by the Client, and/or sanctions by the Bank.

Abdul Waheed Name of Expert	Signature	Date: 29 September 2021 Day/Month/Year
Muhammad Irfan Gohar Name of authorized Representative of the Consultant	 Signature	Date: 29 September 2021 Day/Month/Year


Abdul Waheed



29 September 2021



Curriculum Vitae (CV)

Position Title and No.	:	K-15, Assistant Resident Engineer
Name of Expert	:	Atta ur Rehman
Date of Birth	:	1985
Country of Citizenship / Residence	:	Pakistani

Education:

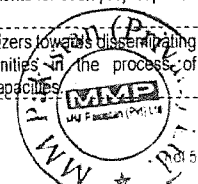
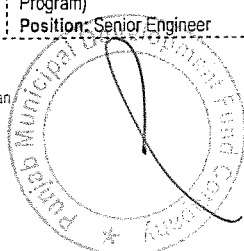
- B.Sc. Civil Engineering

Employment Record relevant to the assignment:

Period	Employing organization and your title / position. Contact information for references	Country	Summary of activities performed relevant to the Assignment
February 2021 to date	Employer: MM Pakistan (Pvt.) Ltd. Position: Junior Engineer Ref Contact: Mr Tariq Mehmood 03009439301	Pakistan	<ul style="list-style-type: none"> Supervision of the different Construction activities at Preliminary works. Witness of Lab test (Crushing of Cylinders and gradation etc.) Supervision of Concrete for Cradle bridges. Preparing of daily and weekly progress report. Supervision of excavation with blasting at right bank periphery road. Dealing and processing RFIs of work on daily basis. Any other task assign by immigrate supervisor.
Feb 2018 - December 2020	Employer: Creative Engineering Consultant (Pvt.) Ltd. Position: Resident Engineer Ref Contact: Mr Gulfam Shahzad 03329641586	Pakistan	<ul style="list-style-type: none"> Create and hand out schedules for construction staff working in the field Perform field quality control observations and assessments Inspect and assess the quality of materials being used for construction projects Calculate the quantity of material, supplies and equipment needed for each individual project Verify and approve invoices of purchases Oversee the work of field staff to ensure efficacy of work procedures Ensure compliance to project specifications Make sure that all construction activities are being carried out in accordance to pre- set safety rules Ensure availability of resources and materials at all times Provide recommendations for repair work and make sure that deadlines are compiled to Perform continuous evaluation on trends and ensure that preventative maintenance is managed at each stage of the project Survey maps and blueprints prior to creating construction plans Determine project feasibility and direct all resources to the site in a time efficient manner Provide technical advice to field staff in order to ensure that construction procedures are being carried out properly Identify construction constraints and plan and carry out measures to counter them Prepare public reports such as bid proposals and environmental impact statements Test sites to ensure appropriateness for construction project Prepare period reports and assessments for each project phase
May 2015 - January 2018	Employer: SRSP (Sarhad Rural Support Program) Position: Senior Engineer	Pakistan	<ul style="list-style-type: none"> Support and guide community mobilizers towards disseminating technical inputs in local communities in the process of organizing and building their local capacities

Atta ur Rehman

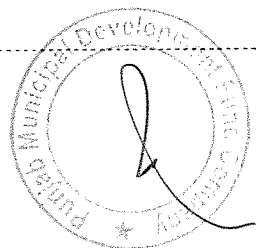
29 September 2021



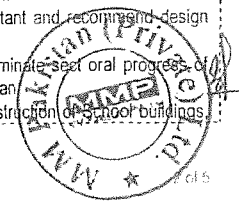


Period	Employing organization and your title / position. Contact information for references	Country	Summary of activities performed relevant to the Assignment
	Ref Contact: Mr Hamayun Rasheed 03339119575		<ul style="list-style-type: none"> Support local communities in preparing project proposals including technical design, cost estimation, bill of quantities and other details for community based neighborhoods development projects. Co-ordinate CDLD level proposed projects with district offices, municipalities and other development agencies as required. Develop appropriate supervision, monitoring and evaluation systems for community based infrastructure and services related projects. Encourage participatory approach and conduct regular supervision, monitoring, and evaluation of all neighborhood level projects in selected CDCs. Plan, design and conduct participatory training in local communities to support designing, implementation, monitoring and maintenance of community based local development projects. Work with reporting officer and develop a comprehensive reporting system to report progress in the field on regular basis. Undertake regular field visits and provide technical assistance to district engineers and CDC members who are involved in planning, designing, implementation, monitoring and maintenance of the projects. Remain responsible for maintaining appropriate level of accountability and transparency in disbursement and utilization of community supported development funds. Establish a comprehensive system of keeping all necessary technical, procurement and financial records related to different types of projects being implemented in the selected neighborhoods. Support district engineers and local communities in preparing project progress reports and also project final reports on regular basis. Plan, design and conduct awareness raising and capacity building programs for Municipality technical divisions on regular basis.
January 2011 – April 2015	Employer: Al Bukhari foundation Malaysia Position: Project Engineer Ref Contact: Mr Noran shah 03345582858	Malaysia	<ul style="list-style-type: none"> Preparing the site and liaising with other construction professionals such as architects, engineers, buyers, estimators and surveyors before construction work start. Developing the program of work and strategy for making the project happen. Planning ahead to prevent problems on site before they occur, for example, planning the delivery and storage of equipment and materials. Making safety inspections of the site when work is underway and ensuring regulations relating to health safety and the environment.
January 2008 – August 2011	Employer: PERRA (Provincial Earthquake Reconstruction and Rehabilitation Agency) Position: Junior Engineer Ref Contact: Mr TriqShah 03469636050	Pakistan	<ul style="list-style-type: none"> To take lead role in preparation, initiation and coordination of sectoral work plans of Communication, Governance, WATSAN, Education and Livelihood sectors. Preparation and Construction Supervision of Community Livelihood Rehabilitation Plans (CLRP) under ERRA livelihood Strategy. To review the technical proposals (PC-Is) and designs prepared by the line departments of above mentioned sectors and get approval from the competent forum. To coordinate the work of consultant and recommend design changes To coordinate, review, and disseminate sectoral progress of District Reconstruction Unit Kohistan Monitoring and evaluation of construction of school buildings

Atta ur Rehman



29 September 2021





Period	Employing organization and your title / position- Contact information for references	Country	Summary of activities performed relevant to the Assignment
			governance building, roads, bridges etc. <ul style="list-style-type: none"> • Evaluation of bids and screening of contractors • To monitor the physical progress of the consultants /line departments and to ensure that construction has been taken as per design, specification and earthquake factor are incorporated • Financial management for reconstruction and rehabilitation projects of DRU Kohistan.

Membership in Professional Associations and Publications:

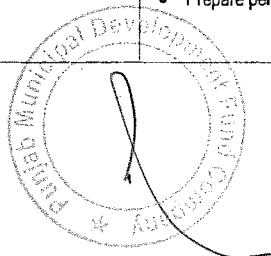
- Member of Pakistan Engineering Council # Civil/27609

Language Skills (indicate only languages in which you can work): English, Urdu & Pashto

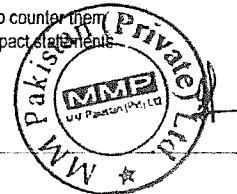
Adequacy for the Assignment:

Detailed Tasks Assigned on Consultant's Team of Experts:	Reference to Prior Work/Assignments that Best Illustrates Capability to Handle the Assigned Tasks
<ul style="list-style-type: none"> • To supervise all construction related activities under the supervision of RE 	<p>Name of Assignment: Diamer Basha Dam Project (2021) Year: February 2021 to date Position held: Junior Engineer Client: WAPDA Location: Diamer Basha Activities Performed:</p> <ul style="list-style-type: none"> • Supervision of the different Construction activities at Preliminary works. • Witness of Lab test (Crushing of Cylinders and gradation etc.) • Supervision of Concrete for Cradle bridges. • Preparing of daily and weekly progress report. • Supervision of excavation with blasting at right bank periphery road. • Dealing and processing RFIs of work on daily basis. • Any other task assign by immigrate supervisor. <p>Name of Assignment: Khyber Pakhtunkhwa Roads Improvement Project Year: Feb 2018 - December 2020 Position held: Resident Engineer Client: C&W Location: Khyber Pakhtunkhwa Activities Performed:</p> <ul style="list-style-type: none"> • Create and hand out schedules for construction staff working in the field • Perform field quality control observations and assessments • Inspect and assess the quality of materials being used for construction projects • Calculate the quantity of material, supplies and equipment needed for each individual project • Verify and approve invoices of purchases • Oversee the work of field staff to ensure efficacy of work procedures • Ensure compliance to project specifications • Make sure that all construction activities are being carried out in accordance to pre- set safety rules • Ensure availability of resources and materials at all times • Provide recommendations for repair work and make sure that deadlines are compiled to • Perform continuous evaluation on trends and ensure that preventative maintenance is managed at each stage of the project • Survey maps and blueprints prior to creating construction plans • Determine project feasibility and direct all resources to the site in a time efficient manner • Provide technical advice to field staff in order to ensure that construction procedures are being carried out properly • Identify construction constraints and plan and carry out measures to counter them • Prepare public reports such as bid proposals and environmental impact statements • Test sites to ensure appropriateness for construction project • Prepare period reports and assessments for each project phase

Atia ur Rehman



29 September 2021

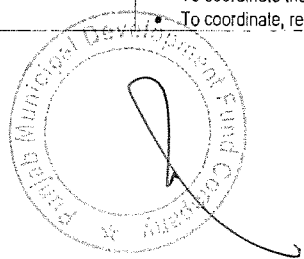


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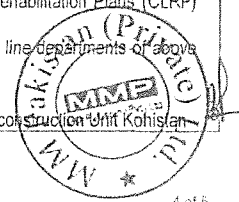


Detailed Tasks Assigned on Consultant's Team of Experts:	Reference to Prior Work/Assignments that Best Illustrates Capability to Handle the Assigned Tasks
	<p>Name of Assignment: Community Driven Local Development Year: May 2015 – January 2018 Position held: Senior Engineer Client: European Union and KP Government Location: Shangla Activities Performed:</p> <ul style="list-style-type: none"> • Support and guide community mobilizers towards disseminating technical inputs in local communities in the process of organizing and building their local capacities. • Support local communities in preparing project proposals including technical design, cost estimation, bill of quantities and other details for community based neighborhoods development projects. • Co-ordinate CDLD level proposed projects with district offices, municipalities and other development agencies as required. • Develop appropriate supervision, monitoring and evaluation systems for community based infrastructure and services related projects. • Encourage participatory approach and conduct regular supervision, monitoring, and evaluation of all neighborhood level projects in selected CDCs. • Plan, design and conduct participatory training in local communities to support designing, implementation, monitoring and maintenance of community based local development projects. • Work with reporting officer and develop a comprehensive reporting system to report progress in the field on regular basis. • Undertake regular field visits and provide technical assistance to district engineers and CDC members who are involved in planning, designing, implementation, monitoring and maintenance of the projects. • Remain responsible for maintaining appropriate level of accountability and transparency in disbursement and utilization of community supported development funds. • Establish a comprehensive system of keeping all necessary technical, procurement and financial records related to different types of projects being implemented in the selected neighborhoods. • Support district engineers and local communities in preparing project progress reports and also project final reports on regular basis. • Plan, design and conduct awareness raising and capacity building programs for Municipality technical divisions on regular basis. <p>Name of Assignment: Al Trimzi complex and rural infrastructure Year: January 2011 – April 2015 Position held: Project Engineer Client: Malaysian Location: Battagram Activities Performed:</p> <ul style="list-style-type: none"> • Preparing the site and liaising with other construction professionals such as architects, engineers, buyers, estimators and surveyors before construction work start. • Developing the program of work and strategy for making the project happen. • Planning ahead to prevent problems on site before they occur, for example, planning the delivery and storage of equipment and materials. • Making safety inspections of the site when work is underway and ensuring regulations relating to health safety and the environment. <p>Name of Assignment: Reconstruction and Rehabilitation Project Year: January 2008 – August 2011 Position held: Junior Engineer Client: ADB, World Bank, UN and IDB Location: Kohistan Activities Performed:</p> <ul style="list-style-type: none"> • To take lead role in preparation, initiation and coordination of sectoral work plans of Communication, Governance, WATSAN, Education and Livelihood sectors. • Preparation and Construction Supervision of Community Livelihood Rehabilitation Plans (CLRP) under ERRA livelihood Strategy. • To review the technical proposals (PC-Is) and designs prepared by the line departments of above mentioned sectors and get approval from the competent forum. • To coordinate the work of consultant and recommend design changes • To coordinate, review, and disseminate sectoral progress of District Reconstruction Unit Kohistan

Atta ul Rehman



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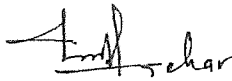


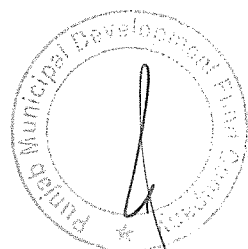
Detailed Tasks Assigned on Consultant's Team of Experts:	Reference to Prior Work/Assignments that Best Illustrates Capability to Handle the Assigned Tasks
	<ul style="list-style-type: none"> Monitoring and evaluation of construction of School buildings, governance building, roads, bridges etc. Evaluation of bids and screening of contractors To monitor the physical progress of the consultants /line departments and to ensure that construction has been taken as per design, specification and earthquake factor are incorporated. Financial management for reconstruction and rehabilitation projects of DRU Kohistan.

Expert's contact information: (e-mail: bdu@mmpakistan.com phone: 0423-6292525-26-27)

Certification:

I, the undersigned, certify that to the best of my knowledge and belief, this CV correctly describes myself, my qualifications, and my experience, and I am available, as and when necessary, to undertake the assignment in case of an award. I understand that any misstatement or misrepresentation described herein may lead to my disqualification or dismissal by the Client, and/or sanctions by the Bank.

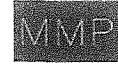
<p>Atta ur Rehman Name of Expert</p>	 Signature	<p>Date: 29 September 2021 Day/Month/Year</p>
<p>Muhammad Irfan Gohar Name of authorized Representative of the Consultant</p>	 Signature	<p>Date: 29 September 2021 Day/Month/Year</p>

Atta ur Rehman

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Curriculum Vitae (CV)

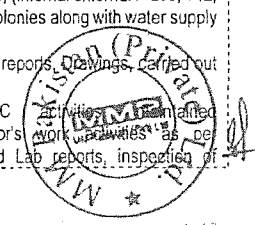
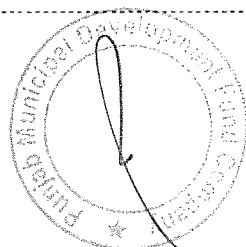
Position Title and No.	:	K-15, Assistant Resident Engineer
Name of Expert	:	Farid Ullah Shah
Date of Birth	:	April 14, 1989
Country of Citizenship/Residence	:	Pakistani

Education :

- BS in Civil Engineering from (CECOS University), 2011
- MS in Civil Structural Engineering from (CECOS University), 2020

Employment Record relevant to the assignment:

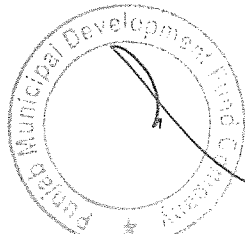
Period	Employing organization and your title / position. Contact information for references	Country	Summary of activities performed relevant to the Assignment
Jan 2021 – To Date	<p>Employer: EA Consultants Position: Resident Engineer Ref Contact: 091-7086429 Email: eaconsultants1@gmail.com Client: TEVTA & C&W</p>	Pakistan	<ul style="list-style-type: none"> • Supervised structural works as per approved Structural drawings and specifications. • Quality control as per drawings and specifications. • Supervised construction site to monitor progress and assess conformance to engineering plans, specifications, and construction and safety standards. • Supervised that Contractor's works are being carried out according to plans, standards, and specifications prior to approving work and progress payments. • Checked and supervised after finishing works, block work, plaster work, tile work, snagging and de snagging activities till handover project. • Prepared and presented monthly progress reports and shears through emails with all stake holders. • Lab testing's reports Verification and approval of subcontractor / supplier invoices. • Executed tasks at site as per the approved Shop Drawings, specifications, program, and quality/safety policy. • Analyzed form work as per the design as well as reinforcement as per the approved design drawing. • Preparing Weekly monthly and daily progress reports. • Dealings with client professionally and technically also presentations for monthly progress in client office.
2017 – Dec 2020	<p>Employer: CAMEOS Consultant Private Limited, Islamabad Position: Resident Engineer Ref Contact: # 091-5843388 Email: Cameos@consultant.com Mr Abdul Waheed (Admin- HR CAMEOS Consultant) Client: PMU FIP Merged Area Secretariat (Peshawar)</p>	Pakistan	<p>PMU FIP (USAID Assisted donor funded) project was consists of 2 phases design and implementation in design phase we carried out design of, 142 No's of middle Schools, 12 no's of post graduated colleges, 3 No's of WAPDA colonies and 132 KV Grid Station equipment's foundations along with internal roads water supply and sewerage systems and Road lighting, Moreover preparation of feasibilities reports, PC-1 and procurements.</p> <p>In 2nd phase as Resident Engineer I control Quality and quantities also carried out work as per design and specification on site. And manage the site staff (inspectors, LT,s, surveyors ,etc.)</p> <p>Key Accomplishments:</p> <ul style="list-style-type: none"> • Design of infrastructure projects, (internal external roads, 142, no of schools, 3 no's WAPDA colonies along with water supply and sewerage systems, • Preparation of PC-1, feasibility reports, Drawings, carried out procurements process etc. • Monitored/supervised QA/QC activities, maintained inspector's records, contractor's work activities as per approved check requests and Lab reports, inspected of



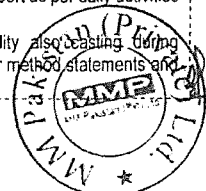
Period	Employing organization and your title / position. Contact information for references	Country	Summary of activities performed relevant to the Assignment
			<p>milestones, and completed responses in compliance with contract documents.</p> <ul style="list-style-type: none"> Examined construction site to evaluate progress and assess conformance to engineering plans, specifications, construction, and safety standards. Adopted, monitored, and devised safety and environmental issues within the project site. Organized activities and schedules of on-going projects with contractors and department supervisors. Carried out contractor's works according to plans, standards, and specifications prior to approving work and progress payments. Generates weekly and monthly progress reports to client and donor with pictorial reports. Supervised execution of Structure work at every stage (Sub Structure & Super structure). Execution and checking farm work as per Drawings and design. Maintained Safety measurements (PPPE) as per safety officer instructions. Strong Communication with clients and donor i.e. (USAID) and PD FATA Infrastructure works. <p>Key Projects (USAID assisted FIP projects):</p> <ul style="list-style-type: none"> Construction of high Rise office buildings in WAPDA Colonies. Construction of 24 no's of Residential Quarters Construction of All infrastructures works (sewerage water supply and sanitary) in colony. Internal External roads in colonies.
2015 – 2017	<p>Employer: BL Herbert International (American Based Company), Islamabad Position: Field Engineer Ref Contact: # 0301-5515069 Web: www.bharbert.com Bismillah jan (HR) Consultant: Reliance Dinners: Oversees Building Operations (OBO)</p>	Pakistan	<p>Examined and supervised RCC works as per approved structural design and engineering codes. Examined structure tasks of multi stories buildings G+28 stories, Verified steel, concrete and materials testing reports as per specification and drawings. Generated daily, weekly, monthly progress reports, bar bending schedule, and estimation while Issuing S.I (site instruction) structural drawings to the field held Strong communication with consultants and PM Projects.</p> <p>Key Accomplishments:</p> <ul style="list-style-type: none"> Gained Good knowledge in Sub structure/Super structure/Composite structure and finishing works involved in High rise tower, All civil related activities such as; Earthworks, waterproofing, Reinforcement for different items such as retaining walls. Maintained PPPE As per safety measurements. Ensure that Contractor's works are being carried out according to plans, standards, and specifications prior to approving work and progress payments. Built synergies with consultant engineers to analyze, supervise, and verify structural and rebar drawings as per IFC at the construction site. Analyzed structural and finishing works, Quality controlling, Structural MEP coordination, Safety of works, Preparing snag lists & Final acceptance of all works. Inspected MDIR and verified the quality and quantity at site for the material. Produced and submitted daily site report as per daily activities and ITR status. Checked concrete and Steel Quality also casting during pouring as well as revised contractor method statements and as-built drawings.



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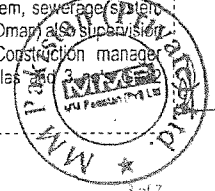
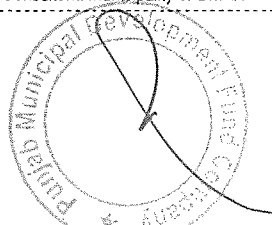


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Period	Employing organization and your title / position. Contact information for references	Country	Summary of activities performed relevant to the Assignment
			<ul style="list-style-type: none"> Liaised with contractor site team to execute the work according to specs and approve shop drawings as per site requirements. <p>Key Projects: (Construction of US Embassy high rise buildings G+28 stories In Diplomatic Enclave Islamabad).</p> <ul style="list-style-type: none"> Construction of high-rise buildings G+28 stories buildings All finishing works at high Rise buildings. Internal Roads and sewerage works.
2013 – 2015	<p>Employer: EURO Consultant (Private Limited), Peshawar Position: Assistant Resident Engineer Ref Contact: # 042-35832276 # 03219414107 Email: info@ecpak.net Mr Habib Nawaz (MD EURO Consultant) Client1: Small Dam FATA Secretariat (Peshawar) Client2: Irrigation Secretariat ADP Projects in all KPK</p>	Pakistan	<p>Skillfully analyzed/Supervised structural works quality and quantities buildings and Small dam structures infrastructure works like water supply, sewerage lines, and 8000 meter pipe lining to distribute water from filtration plants to the existing village, as per drawings and specifications. Revised/corrected all structural drawings and levels as per actual site conditions, prepared and approved shop drawings as per actual site requirements, and generated monthly and weekly progress reports for the management attended and presents monthly progress reports in the clients office.</p> <p>Key Accomplishments:</p> <ul style="list-style-type: none"> Supervised all infrastructures works as per approved Structural drawings and specifications. Monitor QA/QC activities, maintain Inspector's Logs & Records, contractor's work activities, construction progress and inspection milestones and ensure that responses are complete in compliance with the contract documents. Reporting to Resident Engineer daily, weekly, and monthly basis along with pictorial details. Inspect construction site to monitor progress and assess conformance to engineering plans, specifications, construction and safety standards. Ensure that Contractor's works are being carried out according to plans, standards, and specifications prior to approving work and progress payments. Looked after finishing works, block work, plaster work, tile work, snagging and de snagging activities till handover project. Prepared and presented monthly progress reports and shears through emails with all stake holders. Liaised with other trade Engineers for implementation of work at site. Lab testing's reports Verification and approval of subcontractor / supplier invoices. Executed tasks at site as per the approved Shop Drawings, specifications, program, and quality/safety policy. <p>Key Projects: (Small Dam /public health/Rest house at (Mohmand Agency KPK)).</p> <ul style="list-style-type: none"> Construction of office buildings Construction of Rest house building. Construction of Residential buildings. Construction of small Dam body and filtration plant. Construction of water supply, sewerage system, and distribution of 8000m pipe line to the village from filtration plants.
2011 – 2013	<p>Employer: WADI SHRM United LLC (GULF OMAN) Position: Site Engineer Ref Contact: # +96899883649 Consultant: Municipality of OMAN</p>	Pakistan	<p>Carried out Design of Roads pavements, side drains, interlock along with roads side, road drainage system, sewerage system and gets approval from the municipality of (Oman) also supervision of the same moreover Worked as a Construction manager constructed 50 numbers of residential villas and 3 buildings in Oman</p> <p>Key Accomplishments:</p>

Faiz Ullah Shah





Period	Employing organization and your title/ position. Contact information for references	Country	Summary of activities performed relevant to the Assignment
	Email: ismailshibli@Wadisharm.com Ismail Al shibli (MD)		<ul style="list-style-type: none"> Design of Roads pavements, side drains, interlock along with roads side, road drainage system, sewerage system and gets approval from the municipality of (Oman). Examined and supervised structural drawings, water supply, drainage system, plumbing, and sanitary works as per design and site conditions for necessary corrections. Checking Lab Testing reports of all materials before transportation and using also checking concrete and steel testing before fabrications and casting. Dealing with consultant and municipality to take approval as per specifications. Implementation of buildings works as per approved design and specifications. Maintained Safety measurements PPPE as per PPPE standards. Good technical background and computer knowledge like Auto CAD and MS Office. Rendered keen eye for details to design buildings, install interlocks and landscaping, and test materials as per specifications and engineering codes and laws. Generated daily, weekly, and monthly reports while testing materials as per engineering codes and laws. Attended and presents monthly progress review meetings with consultants and PM. <p>Key Projects:</p> <ul style="list-style-type: none"> Construction of G+12 stories high Rise Buildings. Construction of road pavements, roads drainage systems, interlocks besides roads and parking areas, Construction of villas. Finishing works in high rise buildings. Sewerage systems, water supply and sanitations in buildings.

Membership in Professional Associations and Publications:

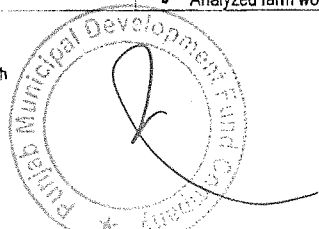
- Member, Pakistan Engineering Council (Registration number (Civil/32000))

Language Skills (Indicate only languages in which you can work): English, Urdu, and Punjabi.

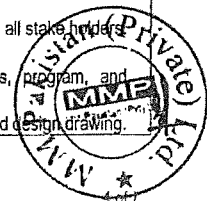
Adequacy for the Assignment:

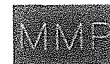
Detailed Tasks Assigned on Consultant's Team of Experts:	Reference to Prior Work/Assignments that Best Illustrates Capability to Handle the Assigned Tasks
To supervise all construction related activities under the supervision of RE	<p>Name of Assignment: Hospital in Bannu Year: Jan 2021 – To Date Position held: Resident Engineer Client: TEVTA & C&W Location: Peshawar</p> <p>Activities Performed:</p> <ul style="list-style-type: none"> Supervised structural works as per approved Structural drawings and specifications. Quality control as per drawings and specifications. Supervised construction site to monitor progress and assess conformance to engineering plans, specifications, and construction and safety standards. Supervised that Contractor's works are being carried out according to plans, standards, and specifications prior to approving work and progress payments. Checked and supervised after finishing works, block work, plaster work, tile work, snagging and de snagging activities till handover project. Prepared and presented monthly progress reports and shears through emails with all stakeholders. Lab testing's reports Verification and approval of subcontractor / supplier invoices. Executed tasks at site as per the approved Shop Drawings, specifications, program, and quality/safety policy. Analyzed farm work as per the design as well as reinforcement as per the approved design drawing.

Farid Ullah Shah



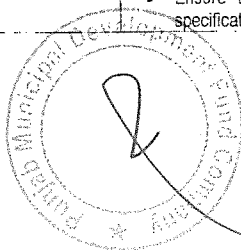
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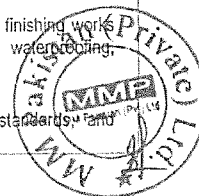


Detailed Tasks Assigned on Consultant's Team of Experts:	Reference to Prior Work/Assignments that Best Illustrates Capability to Handle the Assigned Tasks
	<ul style="list-style-type: none"> • Preparing Weekly monthly and daily progress reports. • Dealings with client professionally and technically also presentations for monthly progress in client office. <p>Name of Assignment: Design And Supervision of Buildings, Water Supply and Sewerage Systems in FATA.</p> <p>Year: 2017 – Dec 2020</p> <p>Position held: Resident Engineer</p> <p>Client: PMU FIP Merged Area</p> <p>Location: Peshawar (KPK)</p> <p>Activities Performed: FIP (USAID Assisted donor funded) project was consists of 2 phases design and implementation in design phase we design phase we carried out design of, 142 No's of middle Schools, 12 no's of post graduated colleges, 3 No's of WAPDA colonies and 132 KV Grid Station equipment's foundations along with internal roads water supply and sewerage systems and Road lighting, Moreover preparation of feasibilities reports, PC-1 and procurements. In 2nd phase as Resident Engineer I control Quality and quantities also carried out work as per design and specification on site. And manage the site staff (inspectors, LT,s, surveyors, etc.)</p> <p>Key Accomplishments:</p> <ul style="list-style-type: none"> • Design of infrastructure projects,(internal external roads, 142, no of schools, 3 no's WAPDA colonies along with water supply and sewerage systems, • Preparation of PC-1, feasibility reports, Drawings, carried out procurements process etc. • Monitored/supervised QA/QC activities, maintained inspector's records, contractor's work activities as per approved check requests and Lab reports, inspection of milestones, and completed responses in compliance with contract documents. • Examined construction site to evaluate progress and assess conformance to engineering plans, specifications, construction, and safety standards. • Adopted, monitored, and devised safety and environmental issues within the project site. • Organized activities and schedules of on-going projects with contractors and department supervisors. • Carried out contractor's works according to plans, standards, and specifications prior to approving work and progress payments. • Generates weekly and monthly progress reports to client and donor with pictorial reports. • Supervised execution of Structure work at every stage (Sub Structure & Super structure). • Execution and checking farm work as per Drawings and design. • Maintained Safety measurements (PPPE) as per safety officer instructions. • Strong Communication with clients and donor i.e. (USAID) and PD FATA Infrastructure works. <p>Key Projects (USAID assisted FIP projects):</p> <ul style="list-style-type: none"> • Construction of high Rise office buildings in WAPDA Colonies. • Construction of 24 no's of Residential Quarters • Construction of All infrastructures works (sewerage water supply and sanitary) in colony. • Internal External roads in colonies. <p>Name of Assignment: Construction of US Embassy Residential Compounds water supply, sewerage system and Roads in colony (Diplomatic Enclave Islamabad)</p> <p>Year: 2015 – 2017</p> <p>Position held: Field Engineer(Structures)</p> <p>Client: Oversees building operations (OBO)</p> <p>Location: Islamabad</p> <p>Activities Performed: Examined and supervised RCC works as per approved structural design and engineering codes. Examined structure tasks of multi stories buildings G+28 stories, Verified steel, concrete and materials testing reports as per specification and drawings. Generated daily, weekly, monthly progress reports, bar bending schedule, and estimation while issuing S.I (site instruction) structural drawings to the field held Strong communication with consultants and PM Projects.</p> <p>Key Accomplishments:</p> <ul style="list-style-type: none"> • Gated Good knowledge in Sub structure/Super structure/Composite structure and finishing work involved in High rise tower, All civil related activities such as; Earthworks, water proofing, Reinforcement for different items such as retaining walls. • Maintained PPPE As per safety measurements. • Ensure that Contractor's works are being carried out according to plans, standards, and specifications prior to approving work and progress payments.

Fand Ullah Shah



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Detailed Tasks Assigned on Consultant's Team of Experts: **Reference to Prior Work/Assignments that Best Illustrates Capability to Handle the Assigned Tasks**

- Built synergies with consultant engineers to analyze, supervise, and verify structural and rebar drawings as per IFC at the construction site.
 - Analyzed structural and finishing works, Quality controlling, Structural MEP coordination, Safety of works, Preparing snag lists & Final acceptance of all works.
 - Inspected MDIR and verified the quality and quantity at site for the material.
 - Produced and submitted daily site report as per daily activities and ITR status.
 - Checked concrete and Steel Quality also casting during pouring as well as revised contractor method statements and as- built drawings.
 - Liaised with contractor site team to execute the work according to specs and approve shop drawings as per site requirements.
- Key Projects: (Construction of US Embassy high rise buildings G+28 stories in Diplomatic Enclave Islamabad).**
- Construction of high-rise buildings G+28 stories buildings
 - All finishing works at high Rise buildings.
 - Internal Roads and sewerage works.

Name of Assignment: Supervision of Small Dam, Filtration plants, pipe lining to community sewerage lines, Water supply, and residential building.
Year: 2013 –2015
Position held: Assistant Resident Engineer
Client: SMALL DAM FATA Secretariat.
Location: Peshawar

Activities Performed:
 Skillfully analyzed/Supervised structural works quality and quantities buildings and Small dam structures infrastructure works like water supply, sewerage lines, and 8000 meter pipe lining to distribute water from filtration plants to the existing village, as per drawings and specifications. Revised/corrected all structural drawings and levels as per actual site conditions, prepared and approved shop drawings as per actual site requirements, and generated monthly and weekly progress reports for the management attended and presents monthly progress reports in the clients office.

- Key Accomplishments:**
- Supervised all infrastructures works as per approved Structural drawings and specifications.
 - Monitor QA/QC activities, maintain Inspector's Logs & Records, contractor's work activities, construction progress and inspection milestones and ensure that responses are complete in compliance with the contract documents.
 - Reporting to Resident Engineer daily, weekly, and monthly basis along with pictorial details.
 - Inspect construction site to monitor progress and assess conformance to engineering plans, specifications, construction and safety standards.
 - Ensure that Contractor's works are being carried out according to plans, standards, and specifications prior to approving work and progress payments.
 - Looked after finishing works, block work, plaster work, tile work, snagging and de snagging activities till handover project.
 - Prepared and presented monthly progress reports and shears through emails with all stake holders.
 - Liaised with other trade Engineers for Implementation of work at site.
 - Lab testing's reports Verification and approval of subcontractor / supplier invoices.

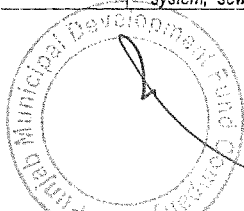
Executed tasks at site as per the approved Shop Drawings, specifications, program, and quality/safety policy.

- Key Projects: (Small Dam /public health/Rest house at (Mohmand Agency KPK)).**
- Construction of office buildings
 - Construction of Rest house building.
 - Construction of Residential buildings.
 - Construction of small Dam body and filtration plant.
 - Construction of water supply, sewerage system, and distribution of 8000m pipe line to the village from filtration plants.

Name of Assignment: Construction of buildings, Water supply road drainage lines, and road pavements.
Year: 2011 – 2013
Position held: Site Engineer
Client: Municipality of OMAN
Location: OMAN GULF

Activities Performed:
 Carried out Design of Roads pavements, side drains, interlock along with roads side road drainage system, sewerage system and gets approval from the municipality of Saudi Arabia (KSA) also

Farid Ullah Shah



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Detailed Tasks Assigned on Consultant's Team of Experts:	Reference to Prior Work/Assignments that Best Illustrates Capability to Handle the Assigned Tasks
	<p>supervision of the same moreover Worked as a Construction manager constructed 50 numbers of residential villas and 3 no's G+12 buildings in Saudi Arabia.</p> <p>Key Accomplishments:</p> <ul style="list-style-type: none"> • Design of Roads pavements, side drains, interlock along with roads side, road drainage system, sewerage system and gets approval from the municipality of Saudi Arabia (KSA). • Examined and supervised structural drawings, water supply, drainage system, plumbing, and sanitary works as per design and site conditions for necessary corrections. • Checking Lab Testing reports of all materials before transportation and using also checking concrete and steel testing before fabrications and casting. • Dealing with consultant and municipality to take approval as per specifications. • Implementation of buildings works as per approved design and specifications. • Maintained Safety measurements PPPE as per PPPE standards. • Good technical background and computer knowledge like Auto CAD and MS Office. • Rendered keen eye for details to design buildings, install interlocks and landscaping, and test materials as per specifications and engineering codes and laws. • Generated daily, weekly, and monthly reports while testing materials-as per engineering codes and laws. • Attended and presents monthly progress review meetings with consultants and PM. <p>Key Projects:</p> <ul style="list-style-type: none"> • Construction of G+12 stories high Rise Buildings. • Construction of road pavements, roads drainage systems, interlocks besides roads and parking areas. • Construction of villas. • Finishing works in high rise buildings. • Sewerage systems, water supply and sanitations in buildings.

Expert's contact information: (e-mail: bdu@mmpakistan.com phone: 0423-6292525-26-27)

Certification:

I, the undersigned, certify that to the best of my knowledge and belief, this CV correctly describes myself, my qualifications, and my experience, and I am available, as and when necessary, to undertake the assignment in case of an award. I understand that any misstatement or misrepresentation described herein may lead to my disqualification or dismissal by the Client, and/or sanctions by the Bank.

<p>Farid Ullah Shah Name of Expert</p>	 Signature	<p>Date: 29 September 2021 Day/Month/Year</p>
<p>Muhammad Irfan Gohar Name of authorized Representative of the Consultant</p>	 Signature	<p>Date: 29 September 2021 Day/Month/Year</p>


 Farid Ullah Shah


29 September 2021



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Curriculum Vitae (CV)

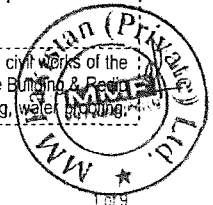
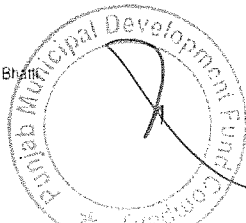
Position Title and No.	:	K-15, Assistant Resident Engineer
Name of Expert	:	Muhammad Asad Bhatti
Date of Birth	:	1982
Country of Citizenship / Residence	:	Pakistani

Education:

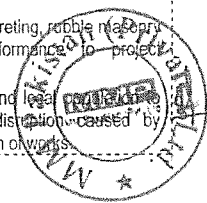
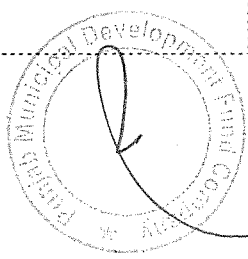
- B.Sc. – Civil Engineering from University of Engineering & Technology, Taxila, Pakistan

Employment Record:

Period	Employing organization and your title / position. Contact information for references	Country	Summary of activities performed relevant to the Assignment
May 2016 - date	<p>Employer: MM Pakistan (Pvt.) Ltd. Position: Construction Engineer (Civil) Ref Contact: Phone: 0311 5276299 Email: Anzar.hussain@mmcpakistan.com Name: Anzar Hussain Shah Designation: Chief Resident Engineer - SKHPP</p>	Pakistan	<p>The project scope consists of the construction of 870 MW Run-of-the-river hydropower project in the Kaghan valley featuring high head, long headrace tunnel and underground powerhouse. This is the largest private sector power development project in Pakistan and a part of strategic China Pakistan Economic Corridor (CPEC) which is a further part of China's One-Belt-One-Road (OBOR) initiative.</p> <ul style="list-style-type: none"> Deputed to the project site in April, 2017 as the first member of OE's resident team and started OE's site supervision activities at SK Project. Utilizing past experience and good communication skills, initiated good communication with contractor and Owner's site staff and established good working relationships. Effective coordination with the contractor's team for a thorough and detailed investigation for selecting the sources of all construction materials (aggregates, cement, steel, admixtures etc.) to be used for permanent works. Managed subordinate staff to ensure OE's strict supervision of material tests and concrete/shotcrete mix design at NJHPP laboratory. Carried out detailed documentation of all tests, recorded all deficiencies and advised the contractor for the resolution of issues as per project specification requirements and expert advice by OE's Lahore office. Managed the subordinate staff to carry out OE's site supervision activities like material testing, joint verification of topographic survey data etc. Handled all on-site technical coordination with the contractor and Owner, represented OE during weekly coordination meetings at site. Utilized the subordinate staff efficiently and kept their moral high during difficult times. Review of Contractor's technical submittals related to Material sources approvals, concrete / Shotcrete / Mortar Mix Design and Progress Reports etc. Maintained complete documentation and record of all activities performed at site and communicated to the OE's Lahore office for timely expert review. Coordinated with the Contractor and Owner's site staff to arrange the facilities for the OE's resident team deputed to site in September 2017.
May, 2016 - March 2017	<p>Employer: MM Pakistan (Pvt.) Ltd. Position: Assistant Resident Engineer (Civil)</p>	Pakistan	<ul style="list-style-type: none"> Construction supervision and monitoring of all civil works of the Air Traffic Control building, Fire Crash Rescue Building & Radar Building. Civil Works include concreting, water proofing.



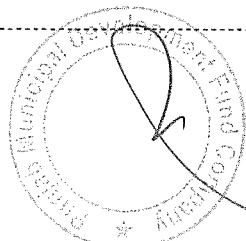
Period	Employing organization and your title / position. Contact information for references	Country	Summary of activities performed relevant to the Assignment
	Ref Contact: Phone: 0345 5907814 Email: ghulam.raza@mmmpakistan.com Name: Ghulam Raza Khan Designation: Resident Engineer - Geotech		raised access flooring, pavements & walkways, underground tanks etc. <ul style="list-style-type: none"> Managing the professional team of site inspectors & junior engineers for the supervision of Construction activities to ensure the Quality of work and resolve day-to-day technical issues. Technical correspondence with contractor, design consultant & the client. Coordination with other relevant Package contractors for resolution of interface management issues. Assisting the Resident Engineer (RE) in technical matters related to review of shop drawings, method statements, Inspection Requests, Site visits, Technical Correspondence, Minutes of meetings etc.
August 2014 - February 2016	Employer: Redco CICON W.L.L. Qatar Position: Senior Engineer Ref Contact: Phone: 00974 3308 3266 Email: achougle@yahoo.com Name: Adam Chougle Designation: Operations Director	Qatar	Acting as a Senior Project Engineer/ Technical Coordinator of the civil works subcontractor, worked on the construction of underground structures of Doha Metro, Gold line stations: <ul style="list-style-type: none"> Coordinating with the JV of five companies (AKTOR, L&T, Yapi Merkezi, STFA and Al Jaber Engineering), Consultant (ATKINS Middle East) and client (Qatar Rail) for progress monitoring, review and approval of reinforcement & concrete outline drawings, method statements and resolution of technical issues. Coordinating with Civil Construction teams to monitor the progress of site activities and prepare progress reports. Identifying any potential impediments & working proactively for its resolution beforehand. Coordinating with the schedule of Tunnel Boring Machines (TBMs) operation and prioritizing the submission of technical documents and construction activities accordingly. Leading the sub-contractor's technical team to prepare detailed reinforcement shop drawings and BBS for execution at site. Liaising closely with the Project Manager and Construction Managers to customize the reinforcement design according to the site conditions and concrete pouring sequence. Organizing and managing the reinforcement cut-and-bend orders involving large tonnage and supply to the site.
January 2013 - June 2014	Employer: Halcrow Pakistan (Pvt.) Ltd. Position: Assistant Resident Engineer Ref Contact: Email: abdulefafeymajid@gmail.com Name: Sheikh Abdul Rafey Designation: Lead Engineer Civil Design	Pakistan	Construction supervision and monitoring of all civil works for construction of various bridges in Malakand division. Bridge sites were located at remote areas of various districts like Swat, Bahrain, Kalam, Ulor, Bunair, Shangla, Upper & lower Dir etc. <ul style="list-style-type: none"> Participated in site surveys for bridge site selection, topographic surveys and assisted in hydrological studies. Reviewed the bridge design drawings prepared by Halcrow Karachi office, visited the respective sites, discussed the details with RE & Construction Managers and proposed design revisions according to the site conditions. Improved the design drawings by preparing additional details according to site conditions (additional drawings/sketches/revised BBS etc.) to assist the Contractor for resolution of technical issues. Supervision of all Civil Works including reinforcement and concreting of bridge foundations, abutments, retaining walls, approach slabs and water training works including rubble masonry, Gabion walls etc. at following bridges sites: Kalam Exit, Chitore Islampur, TangBanr, Mankial and Ulor as per approved drawings. Detailed inspections of Rebar fixing, concreting, rubble masonry and approach road works for conformance to project specifications & design drawings. Liaising effectively between contractor and local communities to garner their cooperation during the disruption caused by construction activities and safe completion of works.



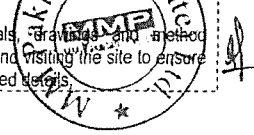
Period	Employing organization and your title / position. Contact information for references	Country	Summary of activities performed relevant to the Assignment
			<ul style="list-style-type: none"> Review, verification and processing of material test reports, site inspection requests and variation orders. Managing the team of site inspectors & surveyors for the supervision of Construction activities to ensure the quality of work and resolve day-to-day technical issues. Technical correspondence with contractor, structural designer & the client (C&W department). Coordination with other stakeholders (Government departments, law enforcement agencies, local people etc.) for resolution of technical, security and land acquisition issues. Assisting the Resident Engineer (RE) in technical matters related to review of shop drawings, method statements, Inspection Requests, Site visits, Technical Correspondence, Minutes of meetings etc. Maintaining a regular check for weather conditions and updating all Contractors to adopt necessary safety measures in case of any expected adverse weather conditions like floods or torrential rains etc.
August 2009 - December 2012	<p>Employer: Redco International, W.I.I Qatar Position: Project Engineer/Technical Coordinator Ref Contact: Email: zeeshan@redcointl.com Name: Zeeshan Aziz Designation: Design Manager</p>	Qatar	<ul style="list-style-type: none"> Assisting the construction managers in detailed site supervision of all civil works starting from excavation till the finishing of structures Managing a team of site engineers, surveyors, foremen and heavy equipment operators (Cranes & Earthwork machinery) for the smooth completion of project. Managing the team of junior engineers & AutoCAD technicians for preparation of detailed reinforcement shop drawings and BBS for whole project involving large tonnage of reinforcement. Dividing the Responsibilities of engineering staff & Monitoring on daily Basis. Coordination between site staff and Project manager. Resolution of all technical issues by preparing technical details in coordination with Project Manager, Construction Managers and Consultant's engineering staff. Coordination with site store and purchase department for availability of construction material. Coordinating & controlling the rebar supply orders, ensuring minimum wastage & timely supply of rebar Attending the weekly progress review meetings with client & consultants. Coordinating with Mechanical, Electrical and other subcontractors and ensure that the Construction Managers remain updated of any changes in design and adjust their plans accordingly. Achieving 1 million safe Man Hours without any Lost Time Injuries (LTI).
August 2009 - December 2012	<p>Employer: Redco International, W.I.I Qatar Position: Project Engineer/Technical Coordinator Ref Contact: Email: zeeshan@redcointl.com Name: Zeeshan Aziz Designation: Design Manager</p>	Qatar	<p>The project involved extensive coordination with various other contractors working at Mechanical, electrical, heavy equipment and other trades.</p> <ul style="list-style-type: none"> Involved with a team of site engineers, supervisors and surveyors for initial civil works like excavation, dewatering, drilling and a 70 feet deep excavation for lifting pumping station, Assisting the Construction Managers for documentation related to the concrete and reinforcement and other material approvals. Assisting the construction managers in detailed site supervision of all concrete works of major structural elements like rafts, heavily reinforced RCC walls, heavy equipment foundations which involved close coordination with mechanical and heavy equipment subcontractors. Preparing the technical submittals, drawings and method statement for shot-creting activity and visiting the site to ensure that the work is done as per approved details.



Muhammad Asad Bhatti

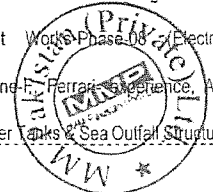
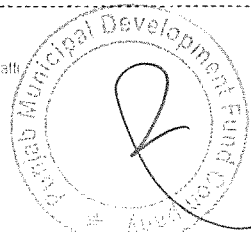


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Period	Employing organization and your title / position, Contact information for references	Country	Summary of activities performed relevant to the Assignment
			<ul style="list-style-type: none"> Coordinating with Main Contractor (VINCI Construction) for scheduling daily site activities and approval of technical documents (Drawings, logistic plans, method statements etc.) Managing the team of AutoCAD technicians for preparation of detailed reinforcement shop drawings and BBS for whole project involving large tonnage of reinforcement. Resolution of all technical issues by preparing technical details in coordination with Project Manager, Construction Managers and Consultant's engineering staff. Coordination with site store and purchase department for availability of construction material. Coordinating & controlling the rebar supply orders, ensuring minimum wastage & timely supply of rebar Attending the weekly progress review meetings with client & consultants. Design & emulative detailing of precast structural elements and coordinating with client & structural design consultant (KEO) for its approval.
April, 2005 - July, 2009	<p>Employer: Halcrow Pakistan (Pvt.) Ltd. Position: Assistant Engineer (Site Supervision) Ref Contact: Email: abduarafeymajid@gmail.com Name: Sheikh Abdul Rafey Designation: Lead Engineer Civil Design</p>	Pakistan	<p>As the Assistant Engineer of the design and supervision consultant, worked on the following project: Construction of 70ft long single span Bridge at Makri, Azad Kashmir, Pakistan Project Scope: Construction of a 70ft long bridge at Marki in order to replace the existing bridge which was destroyed during floods. Design & Supervision Consultant: Halcrow Donor: DFID, Government of United Kingdom Client: Construction and Works Department, Government of AJK</p> <ul style="list-style-type: none"> Participated in site surveys for bridge site selection, topographic surveys and assisted in hydrological studies. Reviewed the bridge design drawings prepared by Halcrow Karachi office, visited the respective sites and discussed the details with RE & Construction Managers to review contractor's proposed construction methodology. Improved the design drawings by preparing additional details according to site conditions (additional drawings/sketches/revised BBS etc.) to assist the Contractor for resolution of technical issues. Supervision of all Civil Works including reinforcement and concreting of bridge foundations, abutments, retaining walls and river training works including rubble masonry & gabions. Detailed inspections of Rebar fixing, concreting, rubble masonry and approach road works for conformance to design drawings.
April, 2005 - July 2009	<p>Employer: Halcrow Pakistan (Pvt.) Ltd. Position: Assistant Engineer (Site Supervision) Ref Contact: Email: abduarafeymajid@gmail.com Name: Sheikh Abdul Rafey Designation: Lead Engineer Civil Design</p>	Pakistan	<p>As part of the engineering team working on the structural design projects:</p> <ul style="list-style-type: none"> Preparing detailed Structural Design Calculations, compiling design reports, supervising & checking the work of AUTOCAD draftsmen for production of detailed rebar shop drawings & BBS. Planning the work to ensure submissions within specified time schedule. Regular correspondence & Coordination with the consultant. Design review of Water Storage Projects. <p>Projects Completed:</p> <ul style="list-style-type: none"> 33/11KV Electrical Substation in Industrial City, Abu-Dhabi, U.A.E. 132/11KV Electrical Substation & associated Buildings in Khalifa City, Abu-Dhabi, U.A.E. Sharjah Sewage Treatment Works-Phase 08 (Electrical Substation at Masaffa, UAE). YAS Island Development, Zone F, Ferrari Residence, Abu-Dhabi, U.A.E Structural Design of Storm Water Tanks & Sea Outfall Structures



Period	Employing organization and your title / position. Contact information for references	Country	Summary of activities performed relevant to the Assignment
			<ul style="list-style-type: none"> • Harrogate South Pumping Station South Yorkshire, United Kingdom. • Dubai Festival City, Dubai, U.A.E. • "The Royal Atlantis Hotel", Palm Jumeirah, Dubai, U.A.E
October 2005 - March 2006	Employer: Zeeruk International (Pvt.) Ltd. Position: Junior Engineer Ref Contact: Email: irfan@zeeruk.com Phone: (051) 4938213 Name: Irfan Ahmad Designation: Administration Manager	Pakistan	Construction of a bridge over Gumrah Kas nala in order to replace the damaged existing road bridge <ul style="list-style-type: none"> • Studied the geotechnical investigation reports, design drawings and reinforcement schedules. • Assisted the construction managers in the supervision of construction activities at bridge abutments, retaining walls, deck slab and parapet walls. • Checked the post-tensioning tendons profiles and reinforcement details of girders to ensure that they match with the design drawings. • Observed the post tensioning and launching operation of bridge girders. • Assisted In construction supervision of the approach roads.

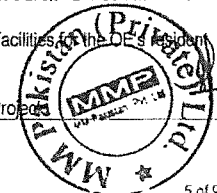
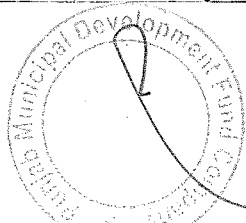
Membership In Professional Associations and Publications:

- Member of Pakistan Engineering Council # Civil/25844

Language Skills (indicate only languages in which you can work): English, Urdu

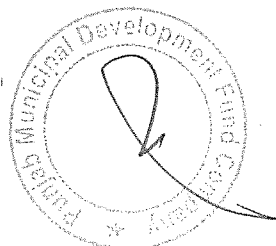
Adequacy for the Assignment:

Detailed Tasks Assigned on Consultant's Team of Experts:	Reference to Prior Work/Assignments that Best Illustrates Capability to Handle the Assigned Tasks
To supervise all construction related activities under the supervision of RE	<p>Name of Assignment: Sukl Kinari Hydro Power Project</p> <p>Year: March 2016 – to date</p> <p>Position held: Construction Engineer (Civil)</p> <p>Client: SK Hydro (Private) Limited</p> <p>Location: Kaghan Valley</p> <p>Activities Performed: The project scope consists of the construction of 870 MW Run-of-the-river hydropower project in the Kaghan valley featuring high head, long headrace tunnel and underground powerhouse. This is the largest private sector power development project in Pakistan and a part of strategic China Pakistan Economic Corridor (CPEC) which is a further part of China's One-Belt-One-Road (OBOR) initiative.</p> <ul style="list-style-type: none"> • Deputed to the project site in April, 2017 as the first member of OE's resident team and started OE's site supervision activities at SK Project. • Utilizing past experience and good communication skills, initiated good communication with contractor and Owner's site staff and established good working relationships. • Effective coordination with the contractor's team for a thorough and detailed investigation for selecting the sources of all construction materials (aggregates, cement, steel, admixtures etc.) to be used for permanent works. • Managed subordinate staff to ensure OE's strict supervision of material tests and concrete/ shotcrete mix design at NJHPP laboratory. Carried out detailed documentation of all tests, recorded all deficiencies and advised the contractor for the resolution of issues as per project specification requirements and expert advice by OE's Lahore office. • Managed the subordinate staff to carry out OE's site supervision activities like material testing, joint verification of topographic survey data etc. • Handled all on-site technical coordination with the contractor and Owner, represented OE during weekly coordination meetings at site. • Utilized the subordinate staff efficiently and kept their moral high during difficult times. • Review of Contractor's technical submittals related to Material sources approvals, concrete/Shotcrete/Mortar Mix Design and Progress Reports etc. • Maintained complete documentation and record of all activities performed at site and communicated to the OE's Lahore office for timely expert review. • Coordinated with the Contractor and Owner's site staff to arrange the facilities for the OE's resident team deputed to site in September 2017. <p>Name of Assignment: New Islamabad International Airport Project</p>



Detailed Tasks Assigned on Consultant's Team of Experts:	Reference to Prior Work/Assignments that Best Illustrates Capability to Handle the Assigned Tasks
	<p>Year: May 2016 – March 2017</p> <p>Position held: Assistant Resident Engineer (Civil – Package 8C1)</p> <p>Client: Civil Aviation Authority, Government of Pakistan</p> <p>Location: Islamabad</p> <p>Activities Performed:</p> <ul style="list-style-type: none"> • Construction supervision and monitoring of all civil works of the Air Traffic Control building, Fire Crash Rescue Building & Radio Radar Building. Civil Works include concreting, water proofing, raised access flooring, pavements & walkways, underground tanks etc. • Managing the professional team of site inspectors & junior engineers for the supervision of Construction activities to ensure the Quality of work and resolve day-to-day technical issues. • Technical correspondence with contractor, design consultant & the client. • Coordination with other relevant Package contractors for resolution of interface management issues. • Assisting the Resident Engineer (RE) in technical matters related to review of shop drawings, method statements, Inspection Requests, Site visits, Technical Correspondence, Minutes of meetings etc. <p>Name of Assignment: Doha Metro, Gold line stations:</p> <ul style="list-style-type: none"> • Ras Bu Abboud Metro Station • Al-Aziziyah Metro Station <p>Year: August 2014 – February 2016</p> <p>Position held: Senior Project Engineer</p> <p>Client: Qatar Rail</p> <p>Location: Qatar</p> <p>Activities Performed:</p> <p>Acting as a Senior Project Engineer/ Technical Coordinator of the civil works subcontractor, worked on the construction of underground structures of Doha Metro, Gold line stations:</p> <ul style="list-style-type: none"> • Coordinating with the JV of five companies (AKTOR, L&T, Yapi Merkezi, STFA and Al Jaber Engineering), Consultant (ATKINS Middle East) and client (Qatar Rail) for progress monitoring, review and approval of reinforcement & concrete outline drawings, method statements and resolution of technical issues. • Coordinating with Civil Construction teams to monitor the progress of site activities and prepare progress reports. Identifying any potential impediments & working proactively for its resolution beforehand. • Coordinating with the schedule of Tunnel Boring Machines (TBMs) operation and prioritizing the submission of technical documents and construction activities accordingly. • Leading the sub-contractor's technical team to prepare detailed reinforcement shop drawings and BBS for execution at site. • Liaising closely with the Project Manager and Construction Managers to customize the reinforcement design according to the site conditions and concrete pouring sequence. • Organizing and managing the reinforcement cut-and-bend orders involving large tonnage and supply to the site. <p>Name of Assignment: Construction of Various Bridges in Malakand division</p> <p>Year: January 2013 – June 2014</p> <p>Position held: Assistant Resident Engineer</p> <p>Client:</p> <p>Location: Various Districts</p> <p>Activities Performed:</p> <p>Construction supervision and monitoring of all civil works for construction of various bridges in Malakand division. Bridge sites were located at remote areas of various districts like Swat, Bahrain, Kalam, Utror, Bunair, Shangla, Upper & lower Dir etc.</p> <ul style="list-style-type: none"> • Participated in site surveys for bridge site selection, topographic surveys and assisted in hydrological studies. • Reviewed the bridge design drawings prepared by Halcrow Karachi office, visited the respective sites, discussed the details with RE & Construction Managers and proposed design revisions according to the site conditions. • Improved the design drawings by preparing additional details according to site conditions (additional drawings/sketches/ revised BBS etc.) to assist the Contractor for resolution of technical issues. • Supervision of all Civil Works including reinforcement and concreting of bridge foundations, abutments, retaining walls, approach slabs and water training works including rubble masonry, Gabion walls etc. at following bridges sites: Kalam Exit, Chitore Islampur, Tars Bani, Manikial and Utror as per approved drawings. • Detailed inspections of Rebar fixing, concreting, rubble masonry and approach road works for conformance to project specifications & design drawings.

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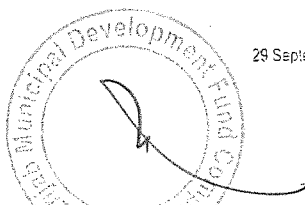


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Detailed Tasks Assigned on Consultant's Team of Experts.	Reference to Prior Work Assignments that Best Illustrates Capability to Handle the Assigned Tasks
	<ul style="list-style-type: none"> • Liaising effectively between contractor and local population to garner their cooperation during the disruption caused by construction activities and safe completion of works. • Review, verification and processing of material test reports, site inspection requests and variation orders. • Managing the team of site inspectors & surveyors for the supervision of Construction activities to ensure the quality of work and resolve day-to-day technical issues. • Technical correspondence with contractor, structural designer & the client (C&W department). • Coordination with other stakeholders (Government departments, law enforcement agencies, local people etc.) for resolution of technical, security and land acquisition issues. • Assisting the Resident Engineer (RE) in technical matters related to review of shop drawings, method statements, Inspection Requests, Site visits, Technical Correspondence, Minutes of meetings etc. • Maintaining a regular check for weather conditions and updating all Contractors to adopt necessary safety measures in case of any expected adverse weather conditions like floods or torrential rains etc. <p>Name of Assignment: Construction of 3KM long utility tunnel and a 66/11KVA substation at Lusail City, Qatar (Lusail CP1 Utility Tunnel)</p> <p>Year: August 2009 - December 2012</p> <p>Position held: Project Engineer</p> <p>Client: Lusail Real Estate Development Company</p> <p>Location: Qatar</p> <p>Activities Performed: The project involved the construction of 3KM section of underground Utility Tunnel as Construction Package-1 (CP1). The total length of utility tunnel is approximately 18km long with cross lateral sections of tunnel to service the Lusail development Marina plots.</p> <ul style="list-style-type: none"> • Assisting the construction managers in detailed site supervision of all civil works starting from excavation till the finishing of structures • Managing a team of site engineers, surveyors, foremen and heavy equipment operators (Cranes & Earthwork machinery) for the smooth completion of project. • Managing the team of junior engineers & AutoCAD technicians for preparation of detailed reinforcement shop drawings and BBS for whole project involving large tonnage of reinforcement. • Dividing the Responsibilities of engineering staff & Monitoring on daily Basis. • Coordination between site staff and Project manager. • Resolution of all technical issues by preparing technical details in coordination with Project Manager, Construction Managers and Consultant's engineering staff. • Coordination with site store and purchase department for availability of construction material. Coordinating & controlling the rebar supply orders, ensuring minimum wastage & timely supply of rebar • Attending the weekly progress review meetings with client & consultants. • Coordinating with Mechanical, Electrical and other subcontractors and ensure that the Construction Managers remain updated of any changes in design and adjust their plans accordingly. • Achieving 1 million safe Man Hours without any Lost Time Injuries (LTI). <p>Name of Assignment: Construction of Sewage Treatment and Pumping Station PS70 at Doha North, Qatar</p> <p>Year: August 2009 - December 2012</p> <p>Position held: Project Engineer</p> <p>Client: ASHGHAL</p> <p>Location: Qatar</p> <p>Activities Performed: Construction of Sewage Pumping Station, Screen Chamber and Lifting Pumping Station, HV & Generator Building, Motor Control Centre and Administration Building. The project involved extensive coordination with various other contractors working at Mechanical, electrical, heavy equipment and other trades.</p> <ul style="list-style-type: none"> • Involved with a team of site engineers, supervisors and surveyors for initial civil works like excavation, dewatering, drilling and a 70 feet deep excavation for lifting pumping station, • Assisting the Construction Managers for documentation related to the concrete and reinforcement and other material approvals. • Assisting the construction managers in detailed site supervision of all concrete works of major structural elements like rafts, heavily reinforced RCC walls, heavy equipment foundations which involved close coordination with mechanical and heavy equipment subcontractors. • Preparing the technical submittals, drawings and method statement for the lifting activity and visiting the site to ensure that the work is done as per approved details.

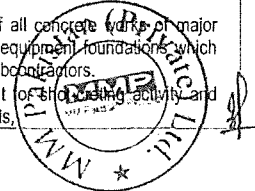


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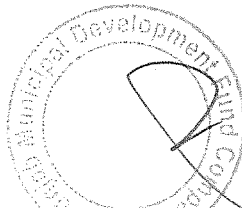


Detailed Tasks Assigned on Consultant's Team of Experts:	Reference to Prior Work/Assignments that Best Illustrates Capability to Handle the Assigned Tasks
	<ul style="list-style-type: none"> • Coordinating with Main Contractor (VINCI Construction) for scheduling daily site activities and approval of technical documents (Drawings, logistic plans, method statements etc.) • Managing the team of AutoCAD technicians for preparation of detailed reinforcement shop drawings and BBS for whole project involving large tonnage of reinforcement. • Resolution of all technical issues by preparing technical details in coordination with Project Manager, Construction Managers and Consultant's engineering staff. • Coordination with site store and purchase department for availability of construction material. Coordinating & controlling the rebar supply orders, ensuring minimum wastage & timely supply of rebar • Attending the weekly progress review meetings with client & consultants. • Design & emulative detailing of precast structural elements and coordinating with client & structural design consultant (KEO) for its approval. <p>Name of Assignment: Construction of 70ft long single span Bridge at Makri, Azad Kashmir, Pakistan</p> <p>Year: May 2008 - July 2009</p> <p>Position held: Assistant Engineer</p> <p>Client: Construction and Works Department, Government of AJK</p> <p>Location: Azad Kashmir</p> <p>Activities Performed: Construction of a 70ft long bridge at Marki in order to replace the existing bridge which was destroyed during floods.</p> <ul style="list-style-type: none"> • Participated in site surveys for bridge site selection, topographic surveys and assisted in hydrological studies. • Reviewed the bridge design drawings prepared by Halcrow Karachi office, visited the respective sites and discussed the details with RE & Construction Managers to review contractor's proposed construction methodology. • Improved the design drawings by preparing additional details according to site conditions (additional drawings/sketches/revised BBS etc.) to assist the Contractor for resolution of technical issues. • Supervision of all Civil Works including reinforcement and concreting of bridge foundations, abutments, retaining walls and river training works including rubble masonry & gabions. • Detailed inspections of Rebar fixing, concreting, rubble masonry and approach road works for conformance to design drawings. <p>Name of Assignment: Various Projects</p> <p>Year: May, 2008 - July, 2009</p> <p>Position held: Assistant Engineer (Site Supervision)</p> <p>Client: Various</p> <p>Location: Various</p> <p>Activities Performed: Name of Assignment: As the Assistant Engineer of the design and supervision consultant, worked on the following Participated in site surveys for bridge site selection, topographic surveys and assisted in hydrological studies. Reviewed the bridge design drawings prepared by Halcrow Karachi office, visited the respective sites and discussed the details with RE & Construction Managers to review contractor's proposed construction methodology. Improved the design drawings by preparing additional details according to site conditions (additional drawings/sketches/revised BBS etc.) to assist the Contractor for resolution of technical issues. Supervision of all Civil Works including reinforcement and concreting of bridge foundations, abutments, retaining walls and river training works including rubble masonry & gabions. Detailed inspections of Rebar fixing, concreting, rubble masonry and approach road works for conformance to design drawings.</p> <p>Name of Assignment: Various Projects</p> <p>Year: April 2005 - March, 2008</p> <p>Position held: Assistant Engineer (Structural Design)</p> <p>Client: Various</p> <p>Location: Various</p> <p>Activities Performed: As part of the engineering team working on the structural design projects:</p> <ul style="list-style-type: none"> • Preparing detailed Structural Design Calculations, compiling design reports, supervising & checking the work of AUTOCAD draftsmen for production of detailed rebar shop drawings & BBS. • Planning the work to ensure submissions within specified time schedule. • Regular correspondence & Coordination with the consultant.



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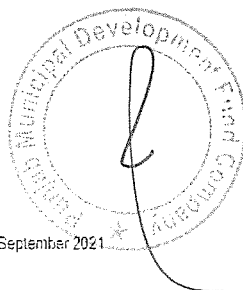
Detailed Tasks Assigned on Consultant's Team of Experts:	Reference to Prior Work/Assignments that Best Illustrates Capability to Handle the Assigned Tasks
	<ul style="list-style-type: none"> • Design review of Water Storage Projects. <p>Projects Completed:</p> <ul style="list-style-type: none"> • 33/11KV Electrical Substation in Industrial City, Abu-Dhabi, U.A.E. • 132/11KV Electrical Substation & associated Buildings in Khalifa City, Abu-Dhabi, U.A.E. • Sharjah Sewage Treatment Works-Phase-08 (Electrical Substation at Masaffa, UAE). • YAS Island Development, Zone-F, Ferrari- experience, Abu-Dhabi, U.A.E • Structural Design of Storm Water Tanks & Sea Outfall Structures • Harrogate South Pumping Station South Yorkshire, United Kingdom. • Dubai Festival City, Dubai, U.A.E. • "The Royal Atlantis Hotel", Palm Jumeirah, Dubai, U.A.E <p>Name of Assignment: Construction of Bridge at Gumrah Kas near Chak Shehzad, Islamabad.</p> <p>Year: October 2005 - March 2006</p> <p>Position held: Junior Engineer</p> <p>Client: CDA</p> <p>Location: Islamabad</p> <p>Activities Performed:</p> <p>Construction of a bridge over Gumrah Kas nala in order to replace the damaged existing road bridge</p> <ul style="list-style-type: none"> • Studied the geotechnical investigation reports, design drawings and reinforcement schedules. • Assisted the construction managers in the supervision of construction activities at bride abutments, retaining walls, deck slab and parapet walls. • Checked the post-tensioning tendons profiles and reinforcement details of girders to ensure that they match with the design drawings. • Observed the post tensioning and launching operation of bridge girders. • Assisted in construction supervision of the approach roads.

Expert's contact information: (e-mail: bd@mmnpakistan.com phone: 0423-6292525-26-27)

Certification:

I, the undersigned, certify that to the best of my knowledge and belief, this CV correctly describes myself, my qualifications, and my experience, and I am available, as and when necessary, to undertake the assignment in case of an award. I understand that any misstatement or misrepresentation described herein may lead to my disqualification or dismissal by the Client, and/or sanctions by the Bank.

<p>_____ Muhammad Asad Bhatti Name of Expert</p>	<p> _____ Signature</p>	<p>Date: 29 September 2021 Day/Month/Year</p>
<p>_____ Muhammad Irfan Gohar Name of authorized Representative of the Consultant</p>	<p> _____ Signature</p>	<p>Date: 29 September 2021 Day/Month/Year</p>





PMDFC PUNJAB MUNICIPAL DEVELOPMENT FUND COMPANY

MINUTES OF MEETING

Subject:	MINUTES OF PROCUREMENT EVALUATION COMMITTEE MEETING FOR CONTRACT NEGOTIATION FOR DETAILED DESIGN OF INFRASTRUCTURE SUB-PROJECTS, SECTORAL PLANNING & RESIDENT IN 16 CITIES OF PUNJAB FOR PACKAGE No.3.	
Date:	January 03, 2022	Time: 14:00 PM
Venue:	Conference Room, PMDFC, H#184, Upper Mall, Scotch Corner, Lahore	
PMDFC Committee Members:	<ul style="list-style-type: none">• Mr. M. Iftikhar Rasool - Deputy Program Director (Convener)• Mr. M. Ashiq Chaudhary - Sr. Program Officer (Infra. Dev.) (Member)• Mr. Shahzad Khan Sherwani, GM (F&A)/ SPO (A&A) (Member)• Mr. Nouman Akhter - Sr. Program Officer (I.S & ID) (Member)• Mr. Tariq Farooq Khan-Procurement Consultant (Technical Member)• Mr. Abdul Rahman- Program Officer (Procurement) (Technical Member)• Mr. Amjad Nazeer-Program Officer (Contract Management) (Technical Member)	
M/s MMP Pvt. Ltd. (Package – 03)	<ul style="list-style-type: none">• Mr. Pervez Anjum - Corporate Advisor	
Attendance Sheet	Attendance Sheets of PEC is attached at Annex-A and Consultant representatives at Annex-B.	

BACKGROUND

PMDFC invited M/s MMP Pvt. Ltd. for contract negotiations for "Hiring of Consultants for Detailed Design of Infrastructure Sub-Projects, Sectoral Planning & Resident In 16 Cities of Punjab for Package No.03 as per the provisions of "QCBS" defined under World Bank Procurement Regulations for IPF Borrowers July 2016 Revised November 2017, August 2018 and November 2020 on 3rd January 2022 at PMDFC Office, Lahore.

DISCUSSION AND RECOMMENDATION

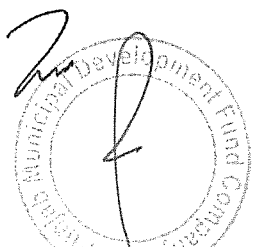
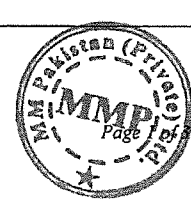
A meeting of the Procurement Evaluation Committee (PEC) was held on January 03, 2022 at 1400 hours in the Conference Room, PMDFC, under the Chairmanship of Deputy Program Director/Convener for contract negotiations of Package – 03 of above activity.

2. The Chair after recitation of Holy Quran welcomed the committee members of PMDFC and authorized representatives of M/s MM Pakistan (Pvt.) Ltd ("MMP"). He informed the participants that after due drill and exercise MMP Has been assessed as Most Advantageous Firm for Package No. 03. In the light of the instructions mentioned in the RFP, contract negotiation has to be arranged with the Most Advantageous Firm MMP Accordingly, the meeting has been arranged for contract negotiation. He further indicated the main contours and the areas for contract negotiations.

3. During the meeting, following points were discussed in detail:
i) Availability of Key experts as per ITC clause 12 and 28.3 of RFP Document.
ii) Scope of Work/Terms of Reference (TOR)/Approach Methodology/Reporting Requirements/Financial Proposal

Procurement Evaluation Committee Meeting

Handwritten signatures



- iii) Replacement/Substitution of Key Expert i.e., Procurement & Contract Management Specialist (Asif Khalid) who does not fulfill the required experience mentioned in the RFP and his replacement with equal or higher qualification and experience as mentioned in the TORs/RFP.
- iv) Availing the facility of 10% advance payment, if required.
- v) Tax liability of consultant (All indirect taxes).
- vi) Monthly Remuneration Rates as per Model Form 1
- vii) Auditor Certificate showing the Percentages (%) of social charges and overhead charges etc.
- viii) The insurance coverage against the risks as per GCC and SCC.
- ix) Reimbursable Cost was discussed in detail. The mechanism of the claim for Resident Construction Supervision reimbursable will be claimed on the basis of actual payments dully supported with proper documentation.
- x) Beneficial Ownership Disclosure Form will be submitted with the finally signed contract.
- xi) All the documents as required under Special Conditions of Contract will invariably be provided.
- xii) Appointment of focal person for exchanging all correspondence related to above activity.
- xiii) Consultant to provide account detail for payments as per SCC 53.1 (e).

4. Matters agreed are as follows:

- i) MMP confirmed the availability of all Key experts as proposed in the proposal **(Annex-C)**
- ii) There is no change in the TORs of subject assignment.
- iii) MMP Agreed to replace/substitute Procurement & Contract Mangt. Specialist (Mr. Asif Khalid) with equal or higher qualification and experience as mentioned in the TORs/RFP. **(Annex-D)**
- iv) M/s MMP Pvt. Ltd will avail the facility of 10% advance, *in case of need*, of the contract amount to the extent of Detailed design and Sectoral Planning in local currency on submission of verifiable bank guarantee to the equivalent amount.
- v) M/s MMP Pvt. Ltd will compute all the indirect taxes at the prevalent rates and add the same in payment clauses so that the payment should not exceed the agreed price.
- vi) Monthly Remuneration Rates as per Model Form 1. **(Annex-E)**
- vii) Auditor Certificate showing the Percentages (%) of social charges and overhead charges etc. **(Annex-F)**.
- viii) The insurance coverage against the risks shall be as per SCC 24.1 and at the Client's request, the Consultant shall provide evidence to the Client showing that such insurance has been taken out and maintained and that the current premiums therefore have been paid. The Consultant shall ensure that such insurance is in place prior to commencing the Services as stated in Clause GCC 13.
- ix) Reimbursable Cost: Reimbursable Cost will be charged on actual spending along with invoice with proper/verifiable documentation includes but not limited to GST invoices, Rental Deed/Agreements, ID Card Copies, Signed Rent Receipt, Third Party (Income Tax & GST Register) Invoices, The Consultant will provide documents as evidence for claiming reimbursable, acceptable by the Client.
- x) MMP will submit Beneficial Ownership Disclosure Form with the finally signed contract.
- xi) MMP will invariably provide all the documents as required under Special Conditions of Contract.



Handwritten signatures and initials, including 'Na' and 'A'.




xii) MMPd will appoint focal person for exchanging all correspondence related to above activity.

xiv) All payments under this Contract shall be made to the account of the Consultant specified in the SCC 53. 1 (e). MMP will provide account detail for such payments.

5. The Committee shared the draft Contract Agreement with MMP for their review before signing. After detail review, the authorized representative of M/s MM Pakistan (Pvt.) Ltd accepted and they will submit contract agreement with complete documents after putting initial on each page. The contract price for Package – 03 has been agreed PKR 199,000,000.00 exclusive of all indirect taxes.

For and behalf of the Client

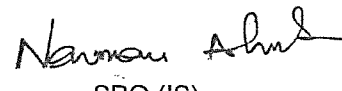

Procurement Consultant
Technical Member



PO(Contract)
Technical Member


PO (Procurement)
Technical Member


SPO (ID)
Member

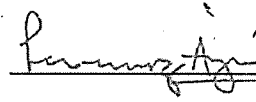


SPO (A&A)
Member

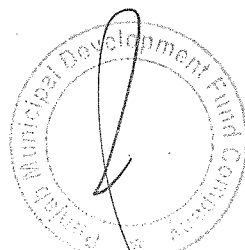


SPO (IS)
Member


Deputy Program Director
Convener

For and behalf of the Consultant

Mr. Pervez Anjum - Corporate Advisor
M/s MM Pakistan (Pvt.) Ltd.

Ref No: MMP/CORP-G&C/0011
Dated: 10 January 2022



MM Pakistan (Pvt) Ltd.

2nd Floor, CTI Building
27-Empress Road Lahore
042-36300440, 36300460
36363234, 36292525-7
042-36292528, 36360267
tariq.mahmood@mmpakistan.com
http://www.mmpakistan.com

Muhammad Iftikhar Rasool
Managing Director (MD) / Program Director (PD)
Punjab Municipal Development Fund Company (PMDFC)
House No. 184, Upper Mall, Scotch Corner,
Lahore – Pakistan
Ph: 042-99204386-89

Amir C

Subject: Hiring of an Engineering Firm for Detailed Design of Infrastructure Sub-Projects, Sectoral Planning & Resident Supervision in 16 Cities of Punjab Package No. 3. (Staff Confirmation Certificate)

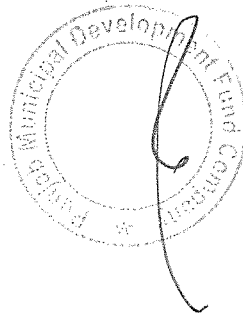
Dear Sir,

This is to confirm that Staff nominated as "Key Experts" in the above cited Project are available.

Yours Sincerely,
MM Pakistan (Pvt) Ltd.

Tariq
Tariq Mahmood

General Manager (Coordination)



6



Registered in Pakistan no K-527/9363
Offices:
Lahore, Karachi, Islamabad, Peshawar, Hyderabad

Curriculum Vitae (CV)

Ames D

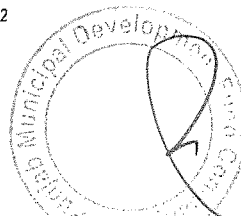
Position Title and No.	:	Procurement & Contract Management Specialist
Name of Expert	:	Rashid Ahmad
Date of Birth	:	20.11.1955
Country of Citizenship / Residence	:	Pakistani

Education:

- BSc Civil Engineering University of Engineering & Technology Lahore. 1979 to 1983

Employment Record relevant to the assignment:

Period	Employing organization and your title / position. Contact information for references	Country	Summary of activities performed relevant to the Assignment
2015 to date	Employer: MM Pakistan Pvt. Limited Position: Sr Engineer Contracts/Procurement/RE/ARE Ref contact: M.Irfan Gohar (Manager BD) 42-36300440	Pakistan	<ul style="list-style-type: none"> Scrutiny, verification and Certification of IPCs (Interim Payment Certificates), FPCs (Final Payment Certificates, Variation Orders and Contractor Claims of numerous contracts as per FIDIC contract clauses. Review of TOCs (Taking over Certificates), DLC (Defect Liability Claims) and EOT (Extension of Time) Claims i.e. Price Adjustment and Foreign Currency Fluctuations Rates. Supervised work of construction of bridges, fall structures, outlets & concrete lining of channels. Supervised Construction work of concrete lining, Bridges, Pile foundations, Head regulators, Fall structures, Meter flumes & Outlets
2013 to 2015	Employer: WAPDA Lahore. Position: Chief Engineer 042-99202211	Pakistan	<ul style="list-style-type: none"> Overall Incharge of Central Material Testing Laboratory, CMTL, WAPDA, Lahore. Administrative & Financial Control of CMTL Management / marketing capabilities and standard of testing work performed in various sections of Laboratory and also SSI work carried out in the field, especially Mega Projects throughout the country. Scrutiny and checking of estimates for deposit work and procurement.
2012 to 2013	Employer: WAPDA Mangla Position: Superintending Engineer	Pakistan	Surveillance of Mangla Dam Project, Hydrographic Survey of Lake, Monitoring of seepage from boiling points at Main Dam, Sukhian Dam & Jarry Dam Treatment of boiling points, Measurement of seepage in inspection galleries and from boiling points
2010 to 2012	Employer: FESCO, Faisalabad. Position: Executive Engineer Civil (Contracts)	Pakistan	Preparation of estimates, Bill of quantities and tender documents for different 132 kv grid stations along with construction supervision.
2004 to 2010	Employer: WAPDA. Position: Executive Engineer 042-99202211	Pakistan	<ul style="list-style-type: none"> Preparation of estimates, Bill of quantities and tender documents Vetting of contract documents along with specification of contracts Scrutiny checking and verification of interim payment certificates and final payment certificate of contract Evaluation of miscellaneous claims and price adjustment claims of contractors. Checking, evaluation and processing of Interim Payment certificates & Final Payment Certificates of contractors Supervision of construction works Main Canal earth work & concrete lining along with allied structures i.e. Head regulators of distributaries, escape structure, out fall structures, pile foundations, Distributaries off taking from Main Canal (earth work and concrete lining), Mankera branch canal (RD 90+00 to 211+00) earth work, concrete lining, bridges, pile foundations Head regulators of distributaries, Fall Structures & culverts etc.
2001 to 2004	Employer: Wapda Mangla	Pakistan	<ul style="list-style-type: none"> Preparation of estimates for various works



Period	Employing organization and your title / position. Contact information for references	Country	Summary of activities performed relevant to the Assignment
	Position: Technical Officer/Contract Engineer		<ul style="list-style-type: none"> Arranging monthly meetings and preparation of minutes of meeting & follow up. O&M of Turbine Hall for 10 units capacity 100 MW each (Total 1000 MW), Civil structures in Switchyard & Spillway etc
1995 to 2001	Employer: WAPDA, Muzaffargarh. Position: Senior Engr.Civil/Contracts	Pakistan	<ul style="list-style-type: none"> Preparation of estimates, Bill of quantities and tender documents for Turbine Hall foundation cooling towers, processed evaluated interim payment certificate of contractors and final payment certificates and price adjustment claims of contractors. Worked as Engineer's representative, prepared IFBs, evaluated Bids, awarded contracts and evaluated claims of contractors.
1984 to 1995	Employer: Irrigation Department Punjab Position: Junior Engr. (Civil)/Asst Engr Contracts/Procurement	Pakistan	<ul style="list-style-type: none"> Preparation of estimates and bill of quantities for various contracts of CRBC Bid evaluation of various contracts, Evaluation & scrutiny of IPC's & final payment certificates of contractors. Evaluation of claims of contractors. Survey of main CRBC canal distributaries and cross drainage structures

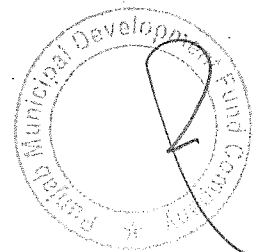
Membership in Professional Associations and Publications:

- Member, Pakistan Council of Architect and Town Planner (PCATP P-0662)

Language Skills (indicate only languages in which you can work): English, Urdu and Punjabi

Adequacy for the Assignment:

Detailed Tasks Assigned on Consultant's Team of Experts:	Reference to Prior Work/Assignments that Best Illustrates Capability to Handle the Assigned Tasks
<ul style="list-style-type: none"> Entirely responsible to assist the Team Leader in the meetings with client and contractor (on contractual matters) To evaluate and verify the variation orders and clauses as per the contract submitted by the contractor. To judge and evaluate the grant of time extension of project completion as per demands of the contractor. To prepare concession agreement Provide intermittent inputs as contracts / claims / disputes expert in order to support the team for Technical audit Regular monitoring Specialist Technical Support Preparation of bidding documents Assistance in Bid evaluation Relevant reports preparation 	<p>Name of Assignment: Project Supervision & Implementation Assistance (PSIA) of Tarbela Dam 5th Extension Hydropower Project.</p> <p>Year: June 2020 to date</p> <p>Position held: Senior Engineer Contracts/Procurement</p> <p>Client: WAPDA</p> <p>Location: Tarbela</p> <p>Activities Performed:</p> <ul style="list-style-type: none"> Prequalification of Contractors for E&M Works and 500 KV Transmission Line of T-5 Project. Bids Evaluation for Civil and E&M Works of T-5 Project. Preparation of Bidding Documents for 500 KV Transmission Line of T-5 Project. Bids Evaluation for Transmission Line Works of T-5 Project. Preparation of Contract Documents of T-5, Civil works. Preparation of Contract Documents of T-5, E&M Works. Preparation of Contract Documents for 500KV Transmission line of T-5 Project. Clarification of Employer's and World Bank's queries on prequalification reports and Bid Evaluation reports of Civil works, E&M Works and Transmission Line works. Preparation of Agreements for Civil Works, E&M Works and Transmission Line Works of T-5. Prepared DAAB agreement for Civil Work according to FIDIC 2017 and DB Agreement for E&M Works on ENAA Basis. Day to Day contractual correspondence with Civil and E&M contractor. <p>Name of Assignment: Project Supervision & Implementation Assistance (PSIA) of Tarbela Dam 4th Extension Hydropower Project (Assignment-B)</p> <p>Year: October 2017 - April 2019</p> <p>Position held: Senior Engineer Contracts</p> <p>Client: WAPDA</p> <p>Location: Tabela</p> <p>Activities Performed:</p> <ul style="list-style-type: none"> Responding Contractor's correspondence in accordance with Contract Clauses and FIDIC.

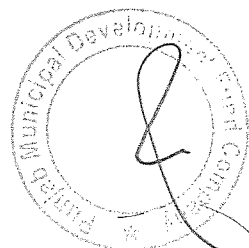



Detailed Tasks Assigned on Consultant's Team of Experts	Reference to Prior Work/Assignments that Best Illustrates Capability to Handle the Assigned Tasks
	<ul style="list-style-type: none"> Evaluating Contractor's Variation claims in accordance with variation and adjustment clause as per variation procedure. Evaluation and scrutiny of contractor's claim under "Value Engineering" clause. Interpretation of contract clauses on different issues. Review of taking over certificates (TOCs) of different parts of works of Civil Contract. <p>Name of Assignment: Detail Design and Construction Supervision of Rehabilitation and Upgradation of Balloki And Lower Bari Doab Canal System.</p> <p>Year: December 2016 - October 2017</p> <p>Position held: Resident Engineer</p> <p>Client: Punjab Irrigation and Power Department</p> <p>Location: Okara</p> <p>Activities Performed:</p> <ul style="list-style-type: none"> Worked as an in-charge of contract ICB-04 amounting Rs.4.2 billion and ICB-02 amounting to Rs. 3.33 billion observed Contractual obligations. ICB-04 consists of Rehabilitation and up gradation of 81 channels off taking from LBDC. ICB-02 consists of Rehabilitation and up gradation of LBDC main Canal from RD 227+454 to RD 526+000. Administrative and Financial control of Contract ICB-04 & ICB-02. Supervised Construction work of concrete lining, Bridges, Head regulators, Fall structures, Meter flumes, Outlets, & about 200 km long Farm to Market Roads. Verified & certified interim payment certificates (IPCs), scrutinized & verified variation orders and contractor claims. Periodical review of Contractor's Project control systems and procedures to make sure that they are effective and ensure timely completion of Project. <p>Name of Assignment: Detail Design and Construction Supervision of Rehabilitation and Upgradation of Balloki and Lower Bari Doab Canal System.</p> <p>Year: October 2016 - December 2016</p> <p>Position held: Assistant Resident Engineer</p> <p>Client: Punjab Irrigation and Power Department</p> <p>Location: Okara</p> <p>Activities Performed:</p> <ul style="list-style-type: none"> Worked as an in-charge of Okara section of contract ICB-04. It is an irrigation project containing 81 channels which are lined/upgraded. Supervised work of construction of Farm to Market roads, bridges, fall structures, outlets & concrete lining of channels. Verification & certification of IPC (Interim Payment Certificates) of ICB-04 as per Contract. Checking of shop drawings submitted by the contractor. <p>Name of Assignment: Project Management Consultancy Services for Balance Work of "Islamabad International Airport Project"</p> <p>Year: December 2015 - August 2016</p> <p>Position held: Islamabad Pakistan.</p> <p>Client: Civil Aviation Authority (CAA)</p> <p>Location: Cost Control & Management Engineer</p> <p>Activities Performed:</p> <ul style="list-style-type: none"> Scrutiny, verification and Certification of IPCs (Interim Payment Certificates), FPCs (Final Payment Certificates, Variation Orders and Contractor Claims of all the packages, Review of tender documents of different packages ranging from Rs.4.00 billion to Rs.5.00 billion as per FIDIC contract clauses. Evaluation of technical bid of different contracts. Review of TOCs (Taking Over Certificates), DLC (Defect Liability Certificates) and EOT (Extension of Time) Claims & Price Adjustment and Foreign Currency Fluctuations Claims.

Rashid Ahmad

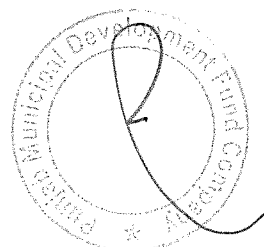


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Detailed Tasks Assigned on Consultant's Team of Experts:	Reference to Prior Work/Assignments that Best Illustrates Capability to Handle the Assigned Tasks
	<p>Name of Assignment: Central Material Testing Laboratory, CMTL, WAPDA, Lahore Year: February 2013 November 2015 Position held: Add. Chief Engineer (Civil)/Project Director Client: WAPDA Location: Lahore Activities Performed:</p> <ul style="list-style-type: none"> • Overall In-charge of Central Material Testing Laboratory, CMTL, WAPDA, Lahore. • Administrative & Financial Control of CMTL • Management/marketing capabilities and standard of testing work performed in various sections of Laboratory and also SSI work carried out in the field, especially Mega Projects throughout the country after observing contractual obligations. • Scrutiny and checking of estimates for deposit work and procurement. • Preparation of tender documents. Procurement of RCC (Roller Compacted Concrete) equipment's for CMTL under contract No.WCAP-B3 CMTL C2A & C2. In this regard visited Germany & Italy for pre-shipment inspection of equipment, opened L.C.S on behalf of WAPDA <p>Name of Assignment: Mangla Dam Project Year: June 2012 February 2013 Position held: Superintending Engineer (Surveillance) Client: Mangla Dam Organization, WAPDA Location: Mangla Activities Performed:</p> <ul style="list-style-type: none"> • Surveillance of Mangla Dam Project, Hydrographic Survey of Lake, Monitoring of seepage from boiling points at Main Dam, Sukhian Dam & Jarry Dam, Treatment of boiling points, Measurement of seepage in inspection galleries and from boiling points • Readings of vibrating Wire electrical piezo meters etc. • Prepared estimate & tender documents for the work of rehabilitation of damaged road & protection of left side embankment of road at Mangla Power House. <p>Name of Assignment: Various Construction works of Power Distribution Company Year: February 2010 June 2012 Position held: Executive Engineer Civil (Contracts) Client: Faisalabad Electric Supply Company (FESCO) Location: Faisalabad Activities Performed:</p> <ul style="list-style-type: none"> • Worked as an Engineer's representative for various construction works of Power Distribution Company • Supervision of construction works of 132 KV Grid Stations and Deputy Managers offices, multistory flats, Cat-A & Cat-B residences & internal metal roads in Colonies & Grid stations. • Preparation of contract documents, Bill of quantities, tender documents and processing of interim payment certificates and final payment certificates of Contractor and price adjustment claim of several Contractors. • Prepared IFBs, evaluated Bids, awarded contracts and completed execution and evaluated numerous claims of the contractors. <p>Name of Assignment: Greater Thal Canal Project Year: August 2004 January 2010 Position held: Executive Engineer Civil Client: WAPDA Location: Khushab Activities Performed:</p> <ul style="list-style-type: none"> • Supervision of Construction of Main Canal earth work & concrete lining along with allied structures i.e. Head regulators of distributaries, escape structure, out fall structures, pile foundations, Distributaries off taking from Main Canal (earth work and concrete lining), Mankera branch canal (RD



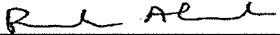
Detailed Tasks Assigned on Consultant's Team of Experts:	Reference to Prior Work/Assignments that Best Illustrates Capability to Handle the Assigned Tasks
	<p>Activities Performed:</p> <ul style="list-style-type: none"> • Preparation of contract documents and bill of quantities for various contracts of CRBC 1st, 2nd and 3rd stage varying from Rs.30 million to Rs.200 million each. • Preparation of tender documents & specification of various contracts of CRBC 1st& 2nd stage. • Bid evaluation of various contracts, Evaluation & scrutiny of IPC's & final payment certificates of contractors. • Review of tender documents according to FIDIC clauses. • Evaluation of claims of contractors. • Survey of main CRBC canal, distributaries and cross drainage structures • Supervision of Construction work of 1st & 2nd Stage of Chashma Right Bank Canal Project, Demarcation of ROW, Supervision of construction works i.e Earth work, Concrete/ Tile Lining, bridges, Well Foundations & Pile Foundations. • Supervision of Construction of drainage structures i.e. super passages, siphons & culverts etc. • Supervision of construction of two Super Passages with discharge capacity 25000 cusecs & 50000 cusecs. Containing more than 400 concrete pile foundations. Supervision of construction work of approach roads Ramps.

Expert's contact information: (e-mail: bdu@mmpakistan.com phone: 0423-6292525-26-27)

Certification:


I, the undersigned, certify that to the best of my knowledge and belief, this CV correctly describes myself, my qualifications, and my experience, and I am available, as and when necessary, to undertake the assignment in case of an award. I understand that any misstatement or misrepresentation described herein may lead to my disqualification or dismissal by the Client, and/or sanctions by the Bank.

Rashid Ahmad
 Name of Expert

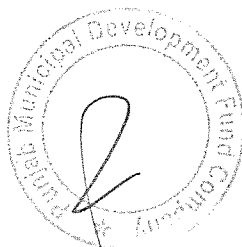

 Signature

Date: 29 September 2021
 Day/Month/Year

Muhammad Irfan Gohar
 Name of authorized Representative of the Consultant


 Signature

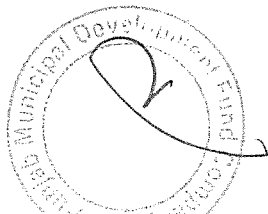
Date: 29 September 2021
 Day/Month/Year



Rashid Ahmad

10 January 2022

Detailed Tasks Assigned on Consultant's Team of Experts:	Reference to Prior Work/Assignments that Best Illustrates Capability to Handle the Assigned Tasks
	<p>90+00 to 211+00) earth work, concrete lining, bridges, pile foundations Head regulators of distributaries, Fall Structures, Roads crossings Culverts, roads ramps and approach metaled Roads etc.</p> <ul style="list-style-type: none"> Preparation of contract documents, Bill of quantities for tender documents of contract No.GTC-03 for Rs.1800 million, GTC-04 Rs.450 million, GTC-05 Rs.2800 million, GTC-06 Rs.3750 million GTC-07 Rs.4200 million and GTC-08 Rs.3950 million. Vetting of contract documents along with specification of contracts GTC-03, GTC-04, GTC-05 and GTC-06 according to FIDIC clauses. Scrutiny checking and verification of interim payment certificates and final payment certificate of contract GTC-03 amounting to Rs.1800 million (interim payment certificate vary from Rs.50 million to Rs.100 million). Evaluation of bids for contract GTC-04 & GTC-05. Evaluation of miscellaneous claims and price adjustment claims of contractors. Checking, evaluation and processing of Interim Payment certificates & Final Payment Certificates of contractors for contract No. GTC-03 amounting to Rs.1800 million, GTC-04 amounting to Rs.450 million and GTC-05 amounting to Rs.2800 million rupees (Interim payment certificates vary from Rs.100 to Rs.250 million). <p>Name of Assignment: Mangla Dam Hydro Power Project Year: September 2001 August 2004 Position held: Technical Officer/Contract Engineer Client: WAPDA Location: Mangla</p> <p>Activities Performed:</p> <ul style="list-style-type: none"> Preparation of contract documents for various works amounting to Rs.300 million to 400 million each. Arranging monthly meetings and preparation of minutes of meeting & follow up. O&M of Turbine Hall for 10 units capacity 100 MW each (Total 1000 MW), Civil structures in Switchyard & Spillway & maintenance of Service Roads etc. <p>Name of Assignment: Thermal Power, Station Year: September 1995 September 2001 Position held: Senior Engr. Civil / Contracts Client: WAPDA Location: Muzaffargarh</p> <p>Activities Performed:</p> <ul style="list-style-type: none"> Preparation of contract documents, Bill of quantities and tender documents for Turbine Hall foundations and cooling towers, processed and scrutinized interim payment certificate, final payment certificates and price adjustment claims of contractors. Worked as Engineer's representative, prepared IFBs, evaluated Bids, awarded contracts and evaluated claims of contractors. Supervised construction work of Turbine Hall, Foundations, Cooling Towers and related structure of Unit No.4, 5 & 6 Capacity 320 & 210 MW each respectively. Multi-story office building, Laying of 30" dia Water supply pipelines Store Building, Concrete Roads, Metal Roads, Pavements, Residential Buildings & Simulator Building. Maintenance of 1360 MW Thermal Power Complex powerhouse building, Residential Colony Consisting of 1500 houses, High Schools, Rest House, Officer Club, Two Bachelor Hostels, Training Center, Admin Block & Auxiliary Building Turbine Halls, Cooling Towers, Water Supply System & Sewerage System etc. <p>Name of Assignment: Chashma Right Bank Canal (CRBC) Irrigation Project Year: January 1984 September 1995 Position held: Junior Engr. (Civil) / Assistant Engineer Contracts/Procurement Client: WAPDA Location: D.I. Khan</p>

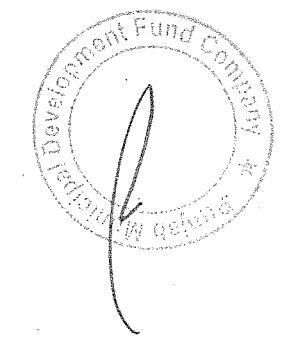



Project Name: Detailed Design of Infrastructure Sub-Projects, Sectoral Planning & Resident Supervision in 16 Cities of Punjab (Package No. 3)

Model Form - I

Amey E

Ref	Name	Position	Personnel					Proposed Fixed Rate per Working Month
			1	2	3	4	5	
			Basic Monthly Salary	Social Charges	Overhead	Subtotal (1+2+3)	Fee	
			1	2	3	4	5	6
				43.0%	100.0%		10%	
Design + Sectoral Planning								
Key Experts								
1	Jahanzeb Chaudry	Team Leader / Chief Resident Engineer (Design+Sectoral Planning+Resident Supervision)	224,467	96,521	224,467	545,455	54,545	600,000
2	Dr. Syed Shahid-ul-Hassan Zaidi	Urban Planner	168,350	72,391	168,350	409,091	40,909	450,000
3	Shaleeq ur Rehman	GIS Specialist	149,645	64,347	149,645	363,636	36,364	400,000
4	Umar Javid	GIS Analyst	93,528	40,217	93,528	227,273	22,727	250,000
5	Ihsan Ul Haq Farooqi	Social Safeguard Specialist	149,645	64,347	149,645	363,636	36,364	400,000
6	Omer Rasheed	Environmental Specialist	149,645	64,347	149,645	363,636	36,364	400,000
7	Wahaj Ahmed Farooqi	Water Supply Specialist (Design)	187,056	80,434	187,056	454,545	45,455	500,000
8	Muhammad Alam Shahtzad	Sewerage Specialist (Design)	187,056	80,434	187,056	454,545	45,455	500,000
9	Muhammad Zaheer Abbas	Wastewater Treatment Specialist (Design)	149,645	64,347	149,645	363,636	36,364	400,000
10	Dr. Kiran Farhan	SWM Specialist (Design)	187,056	80,434	187,056	454,545	45,455	500,000
11	Syeda Sadia Sharafat	Roads Specialist (Design)	187,056	80,434	187,056	454,545	45,455	500,000
12	Rashid Ahmed	Procurement & Contract Management Specialist	149,645	64,347	149,645	363,636	36,364	400,000
13	Syed Ali Zeeshan Rizvi	Architect	93,528	40,217	93,528	227,273	22,727	250,000
Non - Key Experts								
1	Sr. Engineers, Urban Planners, GIS Analyst, Environmentalist, Architect, Quantity Surveyors etc.		74,822	32,174	74,822	181,818	18,182	200,000
2	Technical Support Staff (Surveyors, AutoCAD Operators etc.)		56,117	24,130	56,117	136,364	13,636	150,000
Resident Supervision								
Key Experts								
1	Jahanzeb Chaudry	Team Leader / Chief Resident Engineer (Design+Sectoral Planning+Resident Supervision)	224,467	96,521	224,467	545,455	54,545	600,000
2	Malik Shahid Fareed Khan	Resident Engineer	187,056	80,434	187,056	454,545	45,455	500,000
3		Assistant Resident Engineer (04)	102,881	44,239	102,881	250,000	25,000	275,000
Non - Key Experts								
1	Contract Engineer, Planning Engineer, Quantity Surveyor, Electrical & Mechanical Engineer and Sr. Engineers		74,822	32,174	74,822	181,818	18,182	200,000
2	Technical Support Staff (Site Inspectors, Surveyors, AutoCAD Operators etc.)		56,117	24,130	56,117	136,364	13,636	150,000





AHMED MUSHIR & SALARIYA
CHARTERED ACCOUNTANTS Formerly: Ahmed Mushir & Co

Amer F

AMSL/640/2021

September 20, 2021

The Board of Directors,
MM Pakistan (Pvt.) Limited,
17-A/1 Zafar Road,
Lahore Cantt

**CERTIFICATE OF BREAK-UP OF SOCIAL CHARGES
FOR THE YEAR ENDED JUNE 30, 2020**

Dear Sirs,

We report that that as per books of accounts of MM Pakistan (Private) Limited and other record produced to us, the break-up of Social Charges for the year ended June 30, 2020, is as follows:

<u>Description</u>	<u>Social Charges</u> (Rs. 000)	<u>% of Total Tech. Staff Salaries</u> (%)
Medical Expenses	4,850	0.8 %
Staff Welfare	26,000	4.5 %
Gratuity & EOBI	36,722	6.3%
Subsistence Allowance/ Expenses	35,228	6.0%
Leave Salary (Earned & sick/casual leave)	59,824	10.3%
Recreation & other incentives	67,484	11.6%
Leave Fare Assistance	20,320	3.5%
TOTAL	250,428	43.0 %

Very truly yours

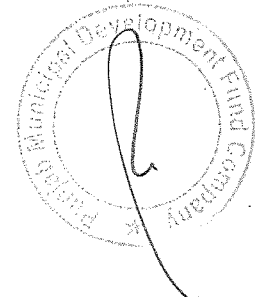
Ahmed Mushir & Salariya
(Ahmed Mushir & Salariya)
CHARTERED ACCOUNTANTS



16 Bank Square, Shahrah-e-Quaid-e-Azam, Lahore - Pakistan
Tel: +92 42 37243845 / +92 42 37322981 / +92 42 37239983
Fax: +92 42 37320797

Email: info@amsca.net
contact@amsca.net

10





AMSL/0642/2021

August 16, 2021

The Board of Directors,
MM Pakistan (Pvt.) Limited,
17-A/1 Zafar Road,
Lahore Cantt

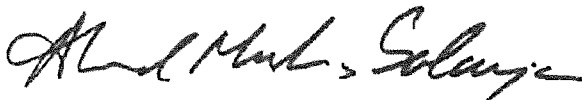
**CERTIFICATE OF BREAK-UP OF SOCIAL CHARGES
FOR THE YEAR ENDED JUNE 30, 2019**

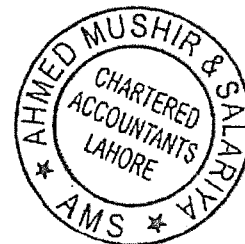
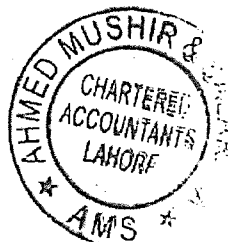
Dear Sirs,

We report that that as per books of accounts of MM Pakistan (Private) Limited and other record produced to us, the break-up of Social Charges for the year ended June 30, 2019, is as follows:

Description	Social Charges (Rs. 000)	% of Total Tech. Staff Salaries (%)
Medical Expenses	8,995	1.4 %
Staff Welfare	35,158	5.6%
Gratuity & EOBI	25,429	4.0 %
Subsistence Allowance/ Expenses	55,839	8.9 %
Leave Salary (Earned & sick/casual leave)	64,194	10.2 %
Recreation & other incentives	59,708	9.5%
Leave Fare Assistance	15,764	2.5%
TOTAL	265,087	42.1 %

Very truly yours


(Ahmed Mushir & Salariya)
CHARTERED ACCOUNTANTS



SALARIYA & CO.
CHARTERED ACCOUNTANTS

11-14 & 15, EXHIBIT CENTRE
14-A, SECTOR 1, FATEMA TOWN,
LAHORE.
Ph: 042-3666333, 36314331 Fax: 36615334
E-MAIL: salsariya.com.pk & salsariya@ptd.com

April 13, 2019

The Board of Directors,
MM Pakistan (Pvt.) Limited,
Lahore.

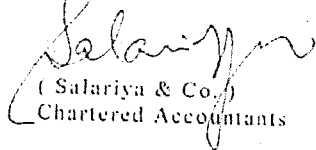
**BREAK-UP OF SOCIAL CHARGES
FOR THE YEAR ENDED JUNE 30, 2018**

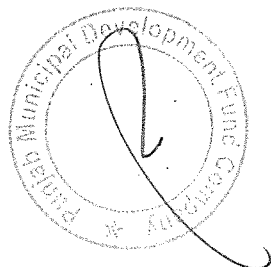
Dear Sirs,

As per books of accounts of MM Pakistan (Private) Limited and other record produced to us, the break-up of social charges for the year ended June 30, 2018 is as follows:

<u>Overhead Description</u>	<u>Social Charges</u> (Rs. 000)	<u>% of Total Tech. Staff Salaries</u> (%)
Medical Expenses	19,345	3.5%
Staff Welfare	20,076	3.7%
Gratuity & EOBI	23,508	4.3%
Subsistence Allowance / Expenses	65,407	11.9%
Leave Salary (Earned & Sick/casual leave)	46,188	8.4%
Recreation & other incentives	54,314	10.0%
TOTAL	228,838	41.8%

Very truly yours


(Salaria & Co.)
Chartered Accountants







AHMED MUSHIR & SALARIYA
CHARTERED ACCOUNTANTS

Formerly: Ahmed Mushir & Co.

AMSL/641/2021

September 20, 2021

The Board of Directors,
MM Pakistan (Pvt.) Limited,
17-A/1 Zafar Road,
Lahore Cantt

**CERTIFICATE OF BREAK-UP OF OVERHEAD COSTS
FOR THE YEAR ENDED JUNE 30, 2020**

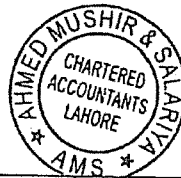
Dear Sirs,

We report that that as per books of accounts of MM Pakistan (Private) Limited and other record produced to us, the break-up of Overhead Cost for the year ended June 30, 2020, is as follows:

Description	Overhead Costs (Rs. 000)	% of Total Tech. Staff Salaries (%)
Salaries – (Non-technical)	456,434	78.4%
Travelling & conveyance	19,000	3.3%
Communications	7,152	1.2%
Entertainment	3,237	0.6%
Office rent	7,134	1.2%
Electricity	19,000	3.3%
Promotional expenses	899	0.2%
Printing & stationery	27,131	4.7%
Legal & professional	3,022	0.5%
Repair & maintenance	6,987	1.2%
Depreciation & amortization	21,339	3.7%
Others	10,052	1.7%
TOTAL	581,387	100.0%

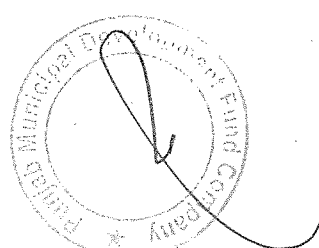
Very truly yours


(Ahmed Mushir & Salariya)
CHARTERED ACCOUNTANTS



16 Bank Square, Shahrah-e-Quaid-e-Azam, Lahore - Pakistan
Tel: +92 42 37243845 / +92 42 37322981 / +92 42 37239983
Fax: +92 42 37320797

Email: info@amsca.net
contact@amsca.net





AHMED MUSHIR & SALARIYA
CHARTERED ACCOUNTANTS

Formerly, Ahmed Mushir & Co

AMSL/0643/2021

August 16, 2021

The Board of Directors,
MM Pakistan (Pvt.) Limited,
17-A/1 Zafar Road,
Lahore Cantt

**CERTIFICATE OF BREAK-UP OF OVERHEAD COSTS
FOR THE YEAR ENDED JUNE 30, 2019**

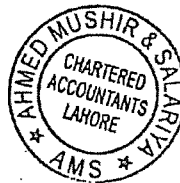
Dear Sirs,

We report that that as per books of accounts of MM Pakistan (Private) Limited and other record produced to us, the break-up of Overhead costs for the year ended June 30, 2019, is as follows:

Description	Overhead Costs (Rs. 000)	% of Total Tech. Staff Salaries (%)
Salaries (Non-technical)	498,038	79.3 %
Travelling & conveyance	1,998	0.3 %
Communications	7,770	1.2 %
Entertainment	1,250	0.2 %
Office rent	3,633	0.6 %
Electricity	14,742	2.3 %
Promotional expenses	976	0.2 %
Printing & stationery	17,854	2.8 %
Legal & professional	3,392	0.5 %
Repair & maintenance	25,574	4.1 %
Depreciation/amortization	13,019	2.1 %
Others	37,809	6.0 %
TOTAL	626,055	99.6 %

Very truly yours

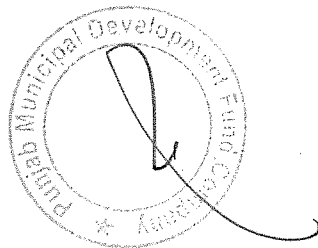

(Ahmed Mushir & Salariya)
CHARTERED ACCOUNTANTS



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Fax: +92 42 37320797

Email: info@amsca.net
contact@amsca.net





SALARIYA & CO.
CHARTERED ACCOUNTANTS

F-14 & 15, FAYYAZ CENTRE,
 11-A, NABBAR E, FAYYAZ JENNAH,
 LAHORE
 P.O. BOX - 10101, 111, 107, 11333, FAYYAZ JENNAH
 E-MAIL: s&c@salariva.com.pk & s&c@salariya.com

April 13, 2019

The Board of Directors,
 MM Pakistan (Pvt.) Limited,
 Lahore.


**BREAK-UP OF OVERHEAD COSTS
 FOR THE YEAR ENDED JUNE 30, 2018**

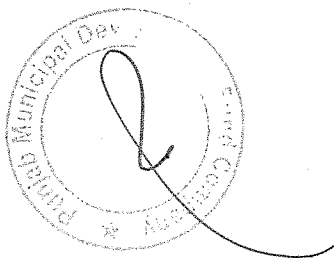
Dear Sirs,

As per books of accounts of MM Pakistan (Private) Limited and other record produced to us, the break-up of overhead costs for the year ended June 30, 2018 is as follows:

Overhead Description	Overhead Amount (Rs. 000)	% of Total Tech. Staff Salaries (%)
Salaries (Non-technical)	398,144	72.6 %
Travelling & conveyance	15,754	2.9 %
Communications	9,180	1.7 %
Entertainment	1,838	0.3 %
Office rent	16,717	3.1 %
Electricity	18,353	3.5 %
Promotional expenses	2,600	0.5 %
Printing & stationery	25,354	4.6 %
Legal & professional	2,292	0.4 %
Repair & maintenance	24,481	4.5 %
Depreciation/amortization	11,279	2.1 %
Others	15,867	2.9 %
TOTAL	541,839	98.9%

Very truly yours


 (Salaria & Co.)
 Chartered Accountants



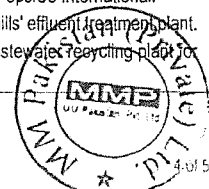


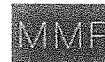
Detailed Tasks Assigned on Consultant's Team of Experts	Reference to Prior Work/Assignments that Best Illustrates Capability to Handle the Assigned Tasks
	<p>Position held: Deputy Manager (Engineering Division)</p> <p>Client: PepsiCo. International Lahore, Lucky Textile Mills, Al-Karam Textile mills (Pvt) Ltd Karachi, Lucky Tex, Korangi Creek Industrial Park (Project of National industrial Parks, Management and Development Company, Akhtar Textile Industry</p> <p>Location: Lahore, Karachi</p> <p>Activities Performed:</p> <p>Process & hydraulic design and Tender Documents:</p> <ul style="list-style-type: none"> • Preparation of Process and hydraulic Design report including detailed process design of wastewater treatment units. A combination of Preliminary treatment (coarse screen, Grit removal and fine screens), physical treatment (coagulation/flocculation, primary settling, and final settling) biological (aerobic and anaerobic i.e. activated sludge, trickling filters, anaerobic digesters, UASB etc.) and chemical treatment units (chemical oxidation, chlorination, UV disinfection). • Sludge management, including, sludge thickeners, sludge pumping station, sludge conditioning, drying through mechanical means and disposal. • Hydraulic design of overall wastewater treatment plant including pumping station design, pumping station piping, selection of pumps, head loss calculation, pipe material selection, yard piping, storm water drainage system etc), • Alternative evaluation, preliminary capital and O&M cost estimation), Tender documents including: BOQ, Specifications, conditions of contract, engineers estimate and detailed functional drawings (include process flow diagram PFD and P&IDs, hydraulic profile, piping layout and functional drawings). • Worked for the wastewater treatment plants of the following clients: <ul style="list-style-type: none"> • PepsiCo. International Lahore (capacity 680 m3/d) • Lucky Textile Mills-4 (capacity 3,400 m3/d) • Al-Karam Textile mills (Pvt) Ltd Karachi (capacity 4,000 m3/d) • Lucky Tex(capacity 2,700 m3/d) • Korangi Creek Industrial Park (Project of National Industrial Parks, Management and Development Company. (capacity 13,600 m3/d) • Akhtar Textile Industry (capacity 2000 m3/day) • Team member for the Preparation of hydraulic and process design report including design of overall treatment plant units, detailed hydraulic design, treatment alternative evaluation, preliminary capital and O&M cost estimation, plan layout and evaluation of treated water recycling potential for combined effluent treatment plant of Pakistan Textile city (PTC), project of Pakistan Textile City Limited. Overall Process and hydraulic design and Report reviewed, commented and certified by Royal Haskoning (consultants and architects), The Nederland. (capacity 84,000 m3/d) <p>Structural Design:</p> <ul style="list-style-type: none"> • Structural design and preparation of construction drawings of wastewater treatment plants of the following industries: <ul style="list-style-type: none"> • PepsiCo. International Lahore • Al Karam Textile Mills (Pvt) Ltd, • Luckytex. • Structure Design and preparation of construction drawings of Combined Effluent Treatment Plant for Korangi Creek Industrial Park (Project of National Industrial Parks, Management and Development Company Karachi) • Structure design and preparation of design report and construction drawings of various units of Sewerage treatment plant in North Jeddah. • Codes of practice for structural design: <ul style="list-style-type: none"> • ACI 318, ACI 350, BS 8110, BS 8007, BS 5400, BD 31/01 <p>Reports and Manuals:</p> <ul style="list-style-type: none"> • Operation and maintenance manual for wastewater treatment plant for PepsiCo International. • Performance evaluation and Assessment report for Gul Ahmed Textile mills' effluent treatment plant. • Evaluation of performance and recommendation for improvement of wastewater recycling plant for Afroze Textile Mills.

Wahaj Ahmad Farooqui



29 September 2021





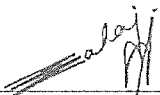
Detailed Tasks Assigned on Consultant's Team of Experts	Reference to Prior Work/Assignments that Best Illustrates Capability to Handle the Assigned Tasks
	<ul style="list-style-type: none"> Evaluation of performance and recommendation for improvement (or further treatment) of wastewater treatment plant at sugar mill at Matiari, Sindh (Matol (Pvt.) Ltd). Treatment plant is mainly comprising of anaerobic digesters. Feasibility report of combined effluent treatment plant for Faisalabad M3 Industrial City. A project of Faisalabad Industrial Estate development and Management Company (FIEDMC) Assessment Report of wastewater treatment plant at Al-Karam <p>Construction Supervision:</p> <ul style="list-style-type: none"> Top supervision of "Combined Effluent Treatment Plant" for Korangi Tanneries (CETP-KT) project. (Joint venture of the "Royal Haskoning" consultants and architects, The Nederland and NEC consultants. Responsibilities include civil construction and installation of mechanical equipments. <p>Audits:</p> <ul style="list-style-type: none"> Environmental Audits of various Tanneries at Korangi under "Cleaner Technology Programme for Korangi Tanneries" Project. <p>Name of Assignment:</p> <ul style="list-style-type: none"> Green Community Dubai Investment Park Hotel Building, Laboratory Building Extension for PARCO Punjab, Green Community Dubai Investment Park Garden <p>Year: November 2001 – July 2002</p> <p>Position held: Jr. Structural Designer</p> <p>Client: Local government</p> <p>Location: Punjab</p> <p>Activities Performed: Structural design of Green Community Dubai Investment Park Hotel Building, Laboratory Building Extension for PARCO Punjab, Green Community Dubai Investment Park Garden and apartments & pool houses and various Bungalows</p> <p>Name of Assignment: Design of water supply and sewerage systems</p> <p>Year: June 2001–October 2001</p> <p>Position held: Assistant Engineer</p> <p>Client: Local</p> <p>Location: Punjab</p> <p>Activities Performed:</p> <ul style="list-style-type: none"> Worked as a Design Engineer for designing water supply. Sewerage system design for both National and International Project.

Expert's contact information: (e-mail: bdu@mmpakistan.com phone: 0423-6292525-26-27)

Certification:

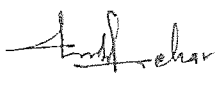
I, the undersigned, certify that to the best of my knowledge and belief, this CV correctly describes myself, my qualifications, and my experience, and I am available, as and when necessary, to undertake the assignment in case of an award. I understand that any misstatement or misrepresentation described herein may lead to my disqualification or dismissal by the Client, and/or sanctions by the Bank.

Wahaj Ahmad Farooqui
Name of Expert

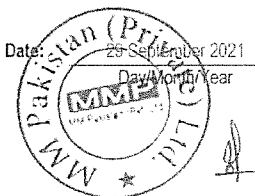

Signature

Date: 29 September 2021
Day/Month/Year

Muhammad Irfan Gohar
Name of authorized Representative of the Consultant


Signature

Date: 29 September 2021
Day/Month/Year




Wahaj Ahmad Farooqui



29 September 2021



Curriculum Vitae (CV)

Position Title and No.	:	K-1, Team Leader / Chief Resident Engineer for Design Sectoral Planning & Resident Supervision
Name of Expert	:	Jahanzaib Chaudhry
Date of Birth	:	October 27, 1966
Country of Citizenship/Residence	:	Pakistani

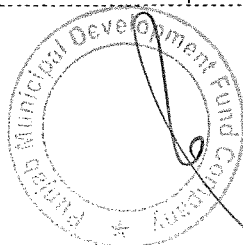
Education :

- B.Sc. Civil Engineering University of Engineering and Technology, Lahore, Pakistan 1991

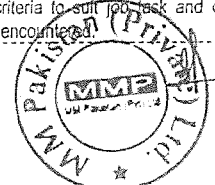
Employment Record relevant to the assignment:

Period	Employing organization and your title / position. Contact information for references	Country	Summary of activities performed relevant to the Assignment
July 2019 – to date	Employer: Pakistan Navy Position: Chief Resident Engineer, Naval Anchorage Ref Contact: 051-20063286 staffoff@navalanchorage.com	Pakistan	<p>As Chief Resident Engineer on "Infrastructure Development of Naval Anchorage, Islamabad, responsible to interact with Director Naval Anchorage Islamabad (North), Project Director NAI, Administrator NAI, Design Consultants, Construction Contractors and Government Departments in the jurisdiction. Overall in charge of the Engineering team of Naval Anchorage Islamabad (NAI) and organize and manage Administrative, Financial and Technical activities of the development Projects including infrastructure and high rise buildings of the Naval Anchorage and Building Control Section while adhering to the procedures in vogue. Furthermore, responsible to</p> <p>Technical:</p> <ul style="list-style-type: none"> • Assist Project Director in the hiring of Design Consultants. Designing will be done by the hired Design Consultants but contracting and execution of project shall be managed and supervised by the CRE. • Scrutinize the design and bidding documents prepared by Design Consultants and verify the payments to be made to the Consultants. • Scrutinize reports submitted by Design Consultants for pre-qualification of Contractors. • Examine bids Evaluation reports submitted by Design Consultants. • Submit report to the Project Director. • Help Project Director in preparation of Cost Estimates of proposed project and annual Construction program and obtaining Administrative Approval from the Competent Authority as per procedure in vogue. • Help Project Director in Tendering process to conclude Construction Contracts. • Supervise Development work and construction of different types of Buildings. • Performing the contractual duties on site, i.e., the duties of the Engineer that will be stipulated in Construction project to be administered by CRE. • Approve Contractor's construction program and organization structure of Contractor's site team, hold kick off meetings with the site team of the Contractor at the very start of project and monthly progress review meeting. • He will brief Contractor site team about procedures and methodology that Contractor team will have to follow. • Ensure timely handing over/taking over of the completed projects. • Grant technical Sanction of project cost estimates. • Place emphasis on safe construction practices. • Lead by example in motivating well disciplined, honest and hardworking practices. • Ensure that the project quality control procedure are being followed and monitor it for the improvement. • Evaluate, select and adopt construction and management and control techniques, procedure, and criteria to suit job task and devise and implement solution to problem encountered.

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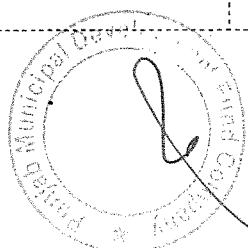
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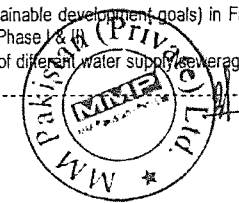


Period	Employing organization and your title / position. Contact information for references	Country	Summary of activities performed relevant to the Assignment
			<ul style="list-style-type: none"> Extension in time, variation order and amendment in specification shall not be ordered without prior approval of competent authority as per procedure in vogue. Initiate cases for amendment of Contracts if required. Hand over the completed projects to the project director. Amicably settle claim and disputes of the Contractors. Provide assistance to land acquisition makers involving surveying acquired land for demarcation of boundaries, preparing engineering maps containing coordinates of the corner of boundaries calculating and verifying the area of land, verification of boundaries of acquired land and erection of boundary pillars. Ensure that standard prequalification and bidding documents approved and issued by the Anchorage Directorate are used and sequence of tendering activities as per procedure in vogue shall be followed for procurement of works (Construction Contracts) and for the procurement of Engineering services (Consultancy Services Contracts). <p>Finance:</p> <ul style="list-style-type: none"> Supervise the technical checking of payment invoices. Initiate cost estimates of proposed project for obtaining administrative approval of competent authority and ensure the cost of project does not exceed the contract price and approved amount. <p>Admin:</p> <ul style="list-style-type: none"> Organize the engineering team, distribute duties and assign tasks to the team. Warrant disciplined engineering team. Manage proper upkeep and disposal of record as per procedure of the anchorage directorate. Ensure that all reports and other output are timely delivered to the project director. Cooperate with auditors for audit required in accordance with the contract requirements and complying with internal systems and procedures of the department. Evaluate the performance of the Engineering Team annually and ensure their on job training to make them understand works procedure, tender documents, tendering process, types of contracts, condition of contracts, proper documentation of different activities of the projects at every supervision stage.
Apr 2013 – Oct 2018	Employer: Enviro-Consult Position: GM Infrastructure Ref Contact: (042) 36655113	Pakistan	As Project Manager/Team Leader on <ul style="list-style-type: none"> Water Supply and Sewerage Schemes Kasur Water Supply and Sewerage Schemes Mandi Bahauddin Yazman Mandi Sewerage Project Bahawalpur Okara Water Supply Scheme Water Supply, Sewerage and Drainage Scheme, Hujra Shah Muqem "Urban Sewerage Scheme Sargodha", "Augmentation of Water Supply Scheme Sargodha based on Canal Water, Phase-I", "Comprehensive Water Supply & Sewerag/Drainage Scheme Jauharabad, Khushab" (PHED North-Punjab), Comprehensive Sewerage Schemes Sagian, Islampura and Bhummay Jugian of WASA Lahore Top and Resident Supervision of Water Supply & Sanitation Schemes of PHED South (Faisalabad and Multan Circles) Top and Resident Supervision of Water Supply & Sanitation Schemes of PHED North (Gujranwala Circle) Third party Validation of Schemes under Prime Minister's Global Achievement Program (sustainable development goals) in Faisalabad, Jhang, TT Singh & Chiniot (Phase I & II) Post completion evaluation of different water supply/sewerage projects of WASA Multan

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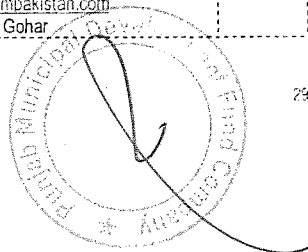


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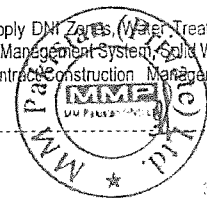


Period	Employing organization and your title / position, Contact information for references	Country	Summary of activities performed relevant to the Assignment
			<ul style="list-style-type: none"> • Top supervision of eligible expenditure program (EEP) of WASA Rawalpindi and And as Project Manager/Chief Resident Engineer on "Gastro Phase-II" Project (WASA Lahore), involved in the following. • Examining of work execution proposals submitted by the Contractor. • Approval and scrutiny of shop drawings/bar bending schedules and review of construction drawings according to prevailing/changed site conditions. • Issuing instructions to contractor on various site related issues for better quality control according to the provisions of contract. • Measurement of executed works and verification of interim payment certificates and final payment certificates of the contractor. • Technical assistance to contractor and subordinate site staff on various site related issues. • Performing other services like supervision of various field/lab tests of construction materials and commissioning of systems. • Review and verification of claims submitted by the contractor. • Coordination with Client for resolving site related issues. <p>As Project Manager on "Sewerage Scheme Rahim Yar Khan" (PHED South-Punjab) and "Rehabilitation of Sewerage Scheme Kot Momin", involved in the following.</p> <ul style="list-style-type: none"> • Planning and Contract Management • Preparation of Inception Report • Prequalification of Contractors • Concept/Detailed design of Sewage Lift Station (alongwith electrical & mechanical works), Force Main, 72 inch dia RCC sewer and plugs for screening chamber, wet & dry well • Preparation of Tender Documents, Cost Estimate, Geotech, Surety & Mapping Report • Preparation of EIA Report • Bid Evaluation Report • Construction Supervision of the Works • Survey, Planning, Designing, preparation of PC-I, Detailed design, cost estimate and Tender Documents of Sewerage Scheme Kot Momin <p>As Water Quality Engineer on "SAAF Pani Project" (Package-5) of Punjab Saaf Pani Company, involved in the following.</p> <ul style="list-style-type: none"> • Planning and contract management • Android based data collection and its review • Design of cluster based water supply schemes • Preparation of EPC tender documents <p>As Planning/Infrastructure Specialist on "Design, Procurement, Supply and Installation of 40 cusec Water Treatment Plant (Pellet Reactor Technology) alongwith allied civil works required for its installation at RD ±93 RBOD (MNVD), Dadu", responsible for the Project Planning & Contract Management. Activities involved are,</p> <ul style="list-style-type: none"> • Involved in conceptual design of water treatment plant, detailed design of irrigation channels, aqueduct, access road and other allied civil works. • Preparation of EPC tender documents (two stage two envelope system), BOQs, Cost Estimate, Specifications and Conditions of Contract. • Bid evaluation of first stage EPC bids. • Pre-qualification of bidders. • Preparation of Inception Report. • Preparation of "Scope of Work" for topographic survey and geotech investigations.
June 2011 – Jan 2013	<p>Employer: Mott Macdonald Pakistan (Pvt) Ltd Position: Team Leader/Water Supply Specialist Ref Contact: 042-36363234, 36292525-8 bdu@mmpakistan.com M. Irfan Gohar</p>	Pakistan	<p>As Team Leader/Water Supply Specialist on ADB funded SCIP-04 Project (loan No. 2499-Pak) in Sukkur, Rohri, Khairpur, Shikarpur and Larkana, responsible for the Design of Water Supply DHI Zones, Water Treatment Plants, Transmission Mains, Wastewater Management System, Solid Waste Management, Master Planning and Contract Construction Management. Activities involved are</p>

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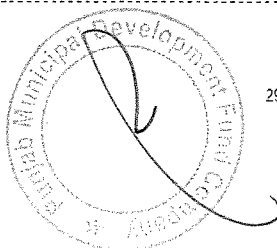


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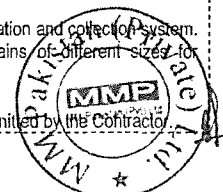


Period	Employing organization and your title/ position. Contact information for references	Country	Summary of activities performed relevant to the Assignment
	Manager (Business Development)		<ul style="list-style-type: none"> Overall Project Planning, Management, GIS based Survey & Mapping using satellite imageries, Detailed Design, preparation of Tender Documents and Construction Supervision of execution stage. Monitoring of both the Planning, Design and Construction Supervision teams. Successful implementation of 24/7 Water Supply DNIs (Distribution Network Improvement Zones) after detailed design Data collection on the basis of survey report and calculation of water demand 2030 for future expansion and master planning. Carryout Detail Design of Tranche-1 sub project and preliminary design of Tranche-2 works for water supply and water treatment, wastewater and wastewater treatment, solid waste management, small capital works. Check willingness to pay and prepare water connection procedure. Involved in preparation of EIAs and Socio-economic surveys Involved in preparation of conceptual design of sanitary landfill sites
December 2008 – June 2011	<p>Employer: Inland Water Engineering Corporation</p> <p>Position: Project Director</p> <p>Ref Contact: +92-42-36127858</p>	Pakistan	<p>As Project Director on "Infrastructure Development of Defence Raya Golf & Country Club", and "Infrastructure Development of Y & Z Blocks of DHA, Phase-VII" responsible for the Contract/Construction Management, design review and overall Construction Supervision of the Road Network, Water Supply, Sewerage & Drainage Systems. Activities involved are</p> <ul style="list-style-type: none"> Overall Contract Management, Construction Supervision and design review of Roads, Water Supply, and Sewerage & Drainage Systems as per actual site conditions according to FIDIC Conditions of Contract, Specifications and Construction Drawings. Road network involved construction of major roads in a length of 10 km, Water Supply System involved one overhead tank (100,000 g), a pump house and distribution network. Sewerage System involved collection system of RCC pipes of different diameter. Drainage system involved construction of drains of different sizes for storm water. Other activities involved Preparation and submission to the client, the work execution proposals. Preparation and submission to the client, shop drawings after review of construction drawings according to prevailing/changed site conditions. Close coordination with the client on various site related issues for better quality control according to the provisions of contract. Measurement of executed works and submission to the client the payment certificates. Technical assistance to site staff on various site related issues. Performing other services like supervision of various field/lab tests of construction materials and commissioning of systems. Preparation and submission to the client, the claims of the Contractor.
August 2007 – December 2008	<p>Employer: National Engineering Services Pakistan (Pvt) Ltd</p> <p>Position: Project Manager/Resident Engineer</p> <p>Ref Contact: +92-42-99090000 info@nespak.com.pk md@nespak.com.pk</p>	Pakistan	<p>As Resident Engineer on "Infrastructure Development of Multan Industrial Estate Phase-II", responsible for the Contract/Construction Management, Vetting of Design and Construction Supervision of the Road Network, Water Supply, Sewerage & Drainage Systems. Activities involved are</p> <ul style="list-style-type: none"> Overall Contract Management, Construction Supervision and Vetting of Design of Roads, Water Supply, Sewerage & Drainage Systems as per actual site conditions according to FIDIC Conditions of Contract, Specifications and Construction Drawings. Road network involved construction of major roads (ROW 80, 100, 200 ft) in a length of 18 km. Water Supply System involved 4 overhead tanks (100,000 g), pump houses and distribution network. Sewerage System involved sewage pumping station and collection system. Drainage system involved construction of drains of different sizes for industrial effluent. Other activities involved Examining of work execution proposals submitted by the Contractor

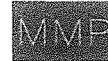
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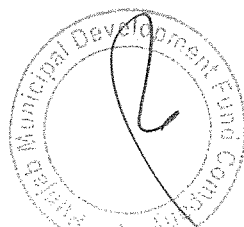


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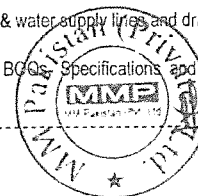


Period	Employing organization and your title / position, Contact information for references	Country	Summary of activities performed relevant to the Assignment
			<ul style="list-style-type: none"> Approval and scrutiny of shop drawings/bar bending schedules and review of construction drawings according to prevailing/changed site conditions. Issuing instructions to contractor on various site related issues for better quality control according to the provisions of contract. Measurement of executed works and verification of interim payment certificates and final payment certificates of the contractor. Technical assistance to contractor and subordinate site staff on various site related issues. Performing other services like supervision of various field/lab tests of construction materials and commissioning of systems. Review and verification of claims submitted by the contractor. Coordination with Client for resolving site related issues.
August 2005 – December 2008	<p>Employer: National Engineering Services Pakistan (Pvt) Ltd Position: Project Manager / Resident Engineer Ref Contact: +92-42-99090000 info@nespak.com.pk md@nespak.com.pk</p>	Pakistan	<p>As Project Manager/Resident Engineer on "Infrastructure Development of Quaid-e-Azam Industrial Estate", Lahore, responsible for the Contract Management, Vetting of Design and Construction Supervision of the Road Network, Water Supply, Sewerage & Drainage Systems, Street Lighting and Landscaping Works. Activities involved</p> <ul style="list-style-type: none"> Overall Contract Management, Construction Supervision and Vetting of Design of Roads, Water Supply, Sewerage & Drainage Systems as per actual site conditions according to FIDIC Conditions of Contract, Specifications and Construction Drawings. <p>Road network involved construction of major roads (ROW 80,100,200 ft) in a length of 8 km. Water Supply System involved overhead tank (100,000 g), pump house and distribution network. Sewerage System involved sewage pumping station and collection system. Drainage system involved construction of storm water drains of different sizes.</p> <p>Other activities involved</p> <ul style="list-style-type: none"> Examining of work execution proposals submitted by contractor. Approval and scrutiny of shop drawings/bar bending schedules and review of construction drawings according to prevailing/changed site conditions. Issuing instructions to contractor on various site related issues for better quality control according to the provisions of contract. Measurement of executed works and verification of interim payment certificates and final payment certificates of the contractor. Technical assistance to contractor and subordinate site staff on various site related issues. Performing other services like supervision of various field/lab tests of construction materials and commissioning of systems. Review and verification of claims submitted by the contractor. Coordination with Client for resolving site related issues.
May 2004 – August 2005	<p>Employer: National Engineering Services Pakistan (Pvt) Ltd Position: Senior Engineer Ref Contact: +92-42-99090000 info@nespak.com.pk md@nespak.com.pk</p>	Pakistan	<p>As Senior Engineer involved in preparation of Business Promotional Technical and Financial Proposals for Pakistan, Qatar, Oman & KSA Projects.</p> <p>Also worked for planning and design of "Infrastructure Development in Quaid-e-Azam Industrial Estate", Lahore. Following works were involved in planning and design of Roads, Water Supply, Sewerage and Drainage Systems.</p> <ul style="list-style-type: none"> Data collection from concerned agencies regarding existing systems. Estimation of present and future population Establishment of design criterion for all the systems Estimation of water demands and calculation of sewage and drainage flows <ul style="list-style-type: none"> Evaluation of existing systems Selection of route for sewerage & water supply lines and drains Design of new systems Preparation of cost estimates, BQs, Specifications and Tender Documents Pre-qualification of Contractors

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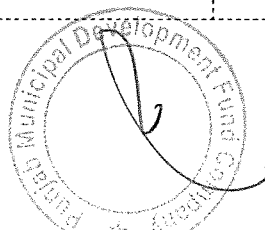


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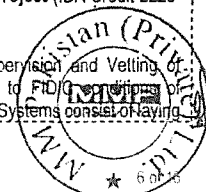


Period	Employing organization and your title / position. Contact information for references	Country	Summary of activities performed relevant to the Assignment
			<ul style="list-style-type: none"> Bid Evaluation and award of Tenders
July 2002 – May 2004	<p>Employer: National Engineering Services Pakistan (Pvt) Ltd Position: Civil Engineer Ref Contact: +92-42-99090000 info@nespak.com.pk md@nespak.com.pk</p>	Buraidah – Kingdom of Saudi Arabia	<p>As Civil Engineer on Buraidah Water Feeder Line Project (QCF/CF1), a project of SWCC (Saline Water Conversion Corporation), which provides 130,000 m³/day to Buraidah city and costs Saudi Riyals 62 million, responsible for the following activities.</p> <ul style="list-style-type: none"> Construction Supervision of 12 m wide and 1.25 km long asphalted access road Review of design and checking of work execution proposals (method statements) submitted by the Contractor regarding civil works that includes structural design & drawings of electrical building, valve shafts, concrete mix design, asphalt mix design, design of thrust blocks and design of roads etc. Supervision of survey work for main pipe line route and access road Supervision of laying of 1100 mm dia welded steel, PE coated and cement mortar lined main pipe line having 13.50 km length Supervision of laying of station piping of welded steel, FBE coated and lined pipes Construction Supervision of 1000 m³ capacity steel operating tank Carrying out compaction tests for pipe bedding, backfilling, foundation of steel operating tank and access road sub-base Supervision of coating of welded joints of main pipe line by application of CANUSA heat shrink sleeves Carrying out peel test, holiday test and thickness test for heat shrink sleeves Supervision of coating of welded joints of station piping with fuslon bonded and cold applied epoxy Construction Supervision of Cement Mortar Lining of 1100 mm dia steel pipe Construction supervision of pre-cast and in-situ RCC yard shafts Preparation of Monthly & Quarterly Progress Reports
October 2000 – June 2002	<p>Employer: National Engineering Services Pakistan (Pvt) Ltd Position: Senior Engineer Ref Contact: +92-42-99090000 info@nespak.com.pk md@nespak.com.pk</p>	Pakistan	<p>As Senior Engineer, involved in preparation of cost estimates and BOQ's for Roads, water supply and sewerage system of "Nisar Town" and "Wheatman Road", a Project of Pakistan Housing Authority. In addition, Tender Drawings of the following were also prepared for the above Project.</p> <ul style="list-style-type: none"> Two elevated water tanks having 30,000 and 20,000 gallons capacity Pumping stations Water Distribution networks Sewage pumping station, soakage pits & community septic tanks Miscellaneous drawings of allied facilities Also involved in Business promotional activities by way of making different overseas technical and financial Proposals. Following Proposals were prepared in this context and the same were AWARDED to NESPAK. Water Supply to Aswad Area – Sultanate of Oman Water Supply to Bahla Wilayat – Sultanate of Oman Water Supply to Ghallia Village – Sultanate of Oman Water Supply to Hadhf & Al Qarta – Sultanate of Oman Sewerage System for Sumail Town – Sultanate of Oman Sewerage System for Ibra Town – Sultanate of Oman Sewerage System for Ibri Town – Sultanate of Oman
May 1998 – October 2000	<p>Employer: National Engineering Services Pakistan (Pvt) Ltd Position: Resident Engineer Ref Contact: +92-42-99090000 info@nespak.com.pk md@nespak.com.pk</p>	Pakistan	<p>As Resident Engineer, responsible for the Contract Management, Vetting of Design and Construction Supervision of the following WORLD BANK financed Projects.</p> <p>Balochistan Rural Water Supply & Sanitation Project (IDA Credit 2228-Pak)</p> <ul style="list-style-type: none"> Mastung / Kharan Water Supply Schemes Overall Contract Management, Construction Supervision and Vetting of Design as per actual site conditions according to FIDIC conditions of contract, specifications and construction drawings. Systems consist of having

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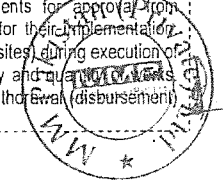
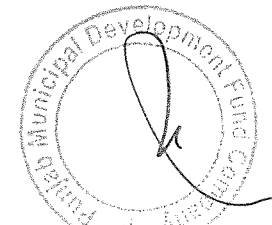
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Period	Employing organization and your title / position. Contact information for references	Country	Summary of activities performed relevant to the Assignment
			<p>of 150 km length of AC pipes having sizes from 80 mm dia to 350 mm dia, installation of submersible pumps (10 No.) with different setting depths, vertical turbine pumps (2 No.), centrifugal pumps (2 No.). RCC works consist of elevated water tanks (40,000 gallons), pump house, house connections, valves and workshop building.</p> <ul style="list-style-type: none"> Mastung / Kharan Drainage Schemes <p>Overall Contract Management, Construction Supervision and Vetting of Design as per changed site conditions according to FIDIC conditions of contract, specifications and construction drawings. Project comprises of the wastewater and stormwater disposal system of open and covered brick/block masonry drains (75 km length) of different sizes, road culverts, house connections and different disposal structures.</p> <p>Other duties according to the contract included</p> <ul style="list-style-type: none"> Examining of work execution proposals submitted by contractors. Approval and scrutiny of shop drawings/bar bending schedules and review of construction drawings according to prevailing/changed site conditions. Issuing instructions to contractors on various aspects for better quality control according to the provisions of contract. Measurement of executed works and verification of interim payment certificates and final payment certificates of the contractors Technical assistance to contractors and subordinate site staff on various site related issues. Performing other services like supervision of various field/lab tests of construction materials and commissioning of works (system energization). Review of claims submitted by the contractors. Coordination with Client, WORLD BANK and Contractor.
June 1997 - May 1998	<p>Employer: National Engineering Services Pakistan (Pvt) Ltd Position: Assistant Resident Engineer Ref Contact: +92-42-99090000 info@nespak.com.pk md@nespak.com.pk</p>	Pakistan	<p>As A/Resident Engineer, responsible for the construction supervision of the following WORLD BANK financed Projects.</p> <p>Balochistan Rural Water Supply & Sanitation Project (IDA Credit 2228-Pak)</p> <ul style="list-style-type: none"> Mastung Water Supply Scheme <ul style="list-style-type: none"> Overall construction management of site according to conditions of contract/specifications/drawings. Project comprises of laying of 93 km length of AC pipes having sizes from 80 mm dia to 350 mm dia, house connections, valves and installation of submersible pumps (10) with different setting depths. RCC works consists of pump house and workshop building. Furthermore, works regarding selection of route for transmission mains, survey of selected routes, alignment control during excavation and laying, preparation of bedding for pipe laying, backfilling and reinstatement of roads were also supervised. Issuing instructions to contractors on various aspects for better quality control according to the provisions of contract. Mastung Drainage Scheme <p>Project comprises of the wastewater and storm water disposal system of open and covered brick/block masonry drains (42 km length) of different sizes, road culverts, house connections and different disposal structures.</p>
July 1992 - June 1997	<p>Employer: National Engineering Services Pakistan (Pvt) Ltd Position: Senior Field Engineer Ref Contact: +92-42-99090000 info@nespak.com.pk md@nespak.com.pk</p>	Pakistan	<p>As Field Engineer, responsible for the design review and construction supervision of the following WORLD BANK financed Projects.</p> <p>1992 Flood Damages Restoration Project (IDA Credit 2468-Pak)</p> <ul style="list-style-type: none"> Duties were, preparation of subproject summaries indicating brief history of NHA roads in Balochistan (like N-25, N-65, N-50, N-70, N-40), irrigation schemes and description/extent of damages after deciding their eligibility based on World Bank criteria. Technical/design review of subprojectssubmitted by the Govt. Departments for approval from Federal Flood Commission and World Bank for their implementation. Top supervision (random/spot checking of the sites) during execution of works on sample basis to ensure both quality and quantity. Processing of procurement documents and withdrawal (disbursement) applications to World Bank.

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Period	Employing organization and your title / position. Contact information for references	Country	Summary of activities performed relevant to the Assignment
April 1991 – July 1992	Employer: Pioneer Construction Company Position: Site Engineer Ref Contact:	Pakistan	<p>Second Irrigation Systems Rehabilitation Project (IDA Credit 1888-Pak)</p> <ul style="list-style-type: none"> • Top construction supervision of various irrigation canals/schemes to ensure quality and quantity of works. <p>As Site Engineer: Responsible for Construction Supervision of infrastructural facilities of Wapda Employees Cooperative Housing Society, Gujranwala. The major components of project executed under my supervision are as follows.</p> <ul style="list-style-type: none"> • Construction supervision of road works • Construction of elevated water tanks of different capacities. • Supervised drilling, development and testing operations for the installation of tubewells of one cubic capacity each. • Construction of pump houses. • Laying of Water Supply distribution network ranging from 3" to 12" dia pipes. • Construction of sewage pumping station. • Manufacturing of R.C.C pipe for sewerage ranging from 6" dia to 30" dia. • Laying of sewerage system ranging from 9" dia to 30" dia. • Installation of earthing system for elevated water tanks. • Installation of electrical poles for street lighting. • Installation of LT-Panel and electrification of pump houses.

Membership in Professional Associations and Publications:

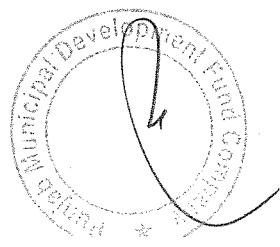
- Member Pakistan Engineering Council (Civil-13291)

Language Skills (Indicate only languages in which you can work): English and Urdu

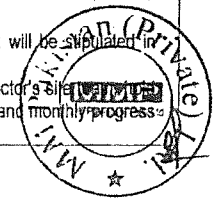
Adequacy for the Assignment:

Detailed Tasks Assigned on Consultant's Team of Experts:	Reference to Prior Work/Assignments that Best Illustrates Capability to Handle the Assigned Tasks
<ul style="list-style-type: none"> • Feasibility Study & Design of selected sub-projects • Leading the tendering & PC-I • Preparation of sectoral plans • Timely preparation of reports • Overall in charge of supervision • Keep close coordination with the Client & contractors • Guide in preparing work plan • Co-ordinate in review of Project Reports • Advice on critical issues as and when needed during the project 	<p>Name of Assignment: Infrastructure Development of Naval Anchorage, Islamabad Year: July 2019 – to date Position held: Chief Resident Engineer, Naval Anchorage Client: Naval Anchorage Islamabad Location: Islamabad Activities Performed: As Chief Resident Engineer on "Infrastructure Development of Naval Anchorage, Islamabad, responsible to interact with Director Naval Anchorage Islamabad (North), Project Director NAI, Administrator NAI, Design Consultants, Construction Contractors and Government Departments in the jurisdiction. Overall incharge of the Engineering team of Naval Anchorage Islamabad (NAI) and organize and manage Administrative, Financial and Technical activities of the development Projects including infrastructure and high rise buildings of the Naval Anchorage and Building Control Section while adhering to the procedures in vogue. Furthermore, responsible to</p> <p>Technical:</p> <ul style="list-style-type: none"> • Assist Project Director in the hiring of Design Consultants. Designing will be done by the hired Design Consultants but contracting and execution of project shall be managed and supervised by the CRE. • Scrutinize the design and bidding documents prepared by Design Consultants and verify the payments to be made to the Consultants. • Scrutinize reports submitted by Design Consultants for pre qualification of Contractors. • Examine bids Evaluation reports submitted by Design Consultants. • Submit report to the Project Director. • Help Project Director in preparation of Cost Estimates of proposed project and annual Construction program and obtaining Administrative Approval from the Competent Authority as per procedure in vogue. • Help Project Director in Tendering process to conclude Construction Contracts. • Supervise Development work and construction of different types of Buildings. • Performing the contractual duties on site, i.e., the duties of the Engineer that will be stipulated in Construction project to be administered by CRE. • Approve Contractor's construction program and organization structure of Contractor's site. Conduct kick off meetings with the site team of the Contractor at the very start of project and monthly progress review meeting.

Jahanzaib Chaudhry



29 September 2021

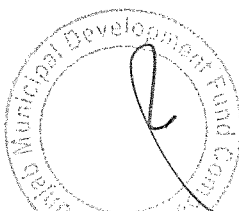


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Detailed Tasks Assigned on Consultant's Team of Experts:	Reference to Prior Work/Assignments that Best Illustrates Capability to Handle the Assigned Tasks
	<ul style="list-style-type: none"> • He will brief Contractor site team about procedures and methodology that Contractor team will have to follow. • Ensure timely handing over/taking over of the completed projects. • Grant technical Sanction of project cost estimates. • Place emphasis on safe construction practices. • Lead by example in motivating well disciplined, honest and hardworking practices. • Ensure that the project quality control procedure are being followed and monitor it for the improvement. • Evaluate, select and adopt construction and management and control techniques, procedure, and criteria to suit job task and devise and implement solution to problem encountered. • Extension in time, variation order and amendment in specification shall not be ordered without prior approval of competent authority as per procedure in vogue. • Initiate cases for amendment of Contracts if required. • Hand over the completed projects to the project director. • Amicably settle claim and disputes of the Contractors. • Provide assistance to land acquisition matters involving surveying acquired land for demarcation of boundaries, preparing engineering maps containing coordinates of the corner of boundaries calculating and verifying the area of land, verification of boundaries of acquired land and erection of boundary pillars. • Ensure that standard prequalification and bidding documents approved and issued by the Anchorage Directorate are used and sequence of tendering activities as per procedure in vogue shall be followed for procurement of works (Construction Contracts) and for the procurement of Engineering services (Consultancy Services Contracts). <p>Finance:</p> <ul style="list-style-type: none"> • Supervise the technical checking of payment invoices. • Initiate cost estimates of proposed project for obtaining administrative approval of competent authority and ensure the cost of project does not exceed the contract price and approved amount. <p>Admin:</p> <ul style="list-style-type: none"> • Organize the engineering team, distribute duties and assign tasks to the team. • Warrant disciplined engineering team. • Manage proper upkeep and disposal of record as per procedure of the anchorage directorate. • Ensure that all reports and other output are timely delivered to the project director. • Cooperate with auditors for audit required in accordance with the contract requirements and complying with internal systems and procedures of the department. • Evaluate the performance of the Engineering Team annually and ensure their on job training to make them understand works procedure, tender documents, tendering process, types of contracts, condition of contracts, proper documentation of different activities of the projects at every supervision stage. <p>Name of Assignment:</p> <ul style="list-style-type: none"> • Water Supply and Sewerage Schemes Kasur • Water Supply and Sewerage Schemes Mandi Bahauddin • Yazman Mandi Sewerage Project Bahawalpur • Okara Water Supply Scheme • Water Supply, Sewerage and Drainage Scheme, Hujra Shah Muqem • "Urban Sewerage Scheme Sargodha", • "Augmentation of Water Supply Scheme Sargodha based on Canal Water, Phase-I", • "Comprehensive Water Supply & Sewerage/Drainage Scheme Jauharabad, Khushab • Gastro Phase-II" Project • Sewerage Scheme Rahim Yar Khan" (PHED South-Punjab) and "Rehabilitation of Sewerage Scheme Kot Momin" • SAAF Pani Project" (Package-5) • Design, Procurement, Supply and Installation of 40 cusec Water Treatment Plant (Pellet Reactor Technology) along with allied civil works required for its installation at RD ±93 RBOD (MNVD) <p>Year: Apr 2013 – Oct 2018 Position held: GM Infrastructure Client: PHED (North Punjab), WASA Lahore, PHED-South-Punjab), Punjab Saaf Pani Company Punjab</p> <p>Location: Punjab</p> <p>Activities Performed: As Project Manager/Team Leader on</p> <ul style="list-style-type: none"> • Water Supply and Sewerage Schemes Kasur

Munazeb Chaudhry



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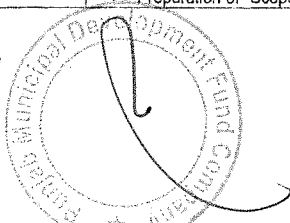


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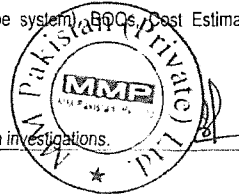


Detailed Tasks Assigned on Consultant's Team of Experts	Reference to Prior Work/Assignments that Best Illustrates Capability to Handle the Assigned Tasks
	<ul style="list-style-type: none"> • Water Supply and Sewerage Schemes Mandi Bahauddin • Yazman Mandi Sewerage Project Bahawalpur • Okara Water Supply Scheme • Water Supply, Sewerage and Drainage Scheme, Hujra Shah Muqam • "Urban Sewerage Scheme Sargodha", • "Augmentation of Water Supply Scheme Sargodha based on Canal Water, Phase-I", • "Comprehensive Water Supply & Sewerage/Drainage Scheme Jauharabad, Khushab" (PHED North-Punjab), • Comprehensive Sewerage Schemes Sagian, Istampura and Bhummay Jugian of WASA Lahore • Top and Resident Supervision of Water Supply & Sanitation Schemes of PHED South (Faisalabad and Multan Circles) • Top and Resident Supervision of Water Supply & Sanitation Schemes of PHED North (Gujranwala Circle) • Third party Validation of Schemes under Prime Minister's Global Achievement Program (sustainable development goals) in Faisalabad, Jhang, TT Singh & Chiniot (Phase I & II) • Post completion evaluation of different water supply/sewerage projects of WASA Multan • Top supervision of eligible expenditure program (EEP) of WASA Rawalpindi and And as Project Manager/Chief Resident Engineer on "Gastro Phase-II" Project (WASA Lahore), involved in the following. <ul style="list-style-type: none"> • Examining of work execution proposals submitted by the Contractor. • Approval and scrutiny of shop drawings/bar bending schedules and review of construction drawings according to prevailing/changed site conditions. • Issuing instructions to contractor on various site related issues for better quality control according to the provisions of contract. • Measurement of executed works and verification of interim payment certificates and final payment certificates of the contractor. • Technical assistance to contractor and subordinate site staff on various site related issues. • Performing other services like supervision of various field/lab tests of construction materials and commissioning of systems. • Review and verification of claims submitted by the contractor. • Coordination with Client for resolving site related issues. As Project Manager on "Sewerage Scheme Rahim Yar Khan" (PHED South-Punjab) and "Rehabilitation of Sewerage Scheme Kot Momin", involved in the following. <ul style="list-style-type: none"> • Planning and Contract Management • Preparation of Inception Report • Prequalification of Contractors • Concept/Detailed design of Sewage Lift Station (alongwith electrical & mechanical works), Force Main, 72 inch dia RCC sewer and plugs for screening chamber, wet & dry well • Preparation of Tender Documents, Cost Estimate, Geotech, Surey & Mapping Report • Preparation of EIA Report • Bid Evaluation Report • Construction Supervision of the Works • Survey, Planning, Designing, preparation of PC-I, Detailed design, cost estimate and Tender Documents of Sewerage Scheme Kot Momin As Water Quality Engineer on "SAAF Pani Project" (Package-5) of Punjab Saaf Pani Company, involved in the following. <ul style="list-style-type: none"> • Planning and contract management • Android based data collection and its review • Design of cluster based water supply schemes • Preparation of EPC tender documents As Planning/Infrastructure Specialist on "Design, Procurement, Supply and Installation of 40 cusec Water Treatment Plant (Pellet Reactor Technology) alongwith allied civil works required for its installation at RD ±93 RBOD (MNVD), Dadu", responsible for the Project Planning & Contract Management. Activities involved are, <ul style="list-style-type: none"> • Involved in conceptual design of water treatment plant, detailed design of irrigation channels, aqueduct, access road and other allied civil works. • Preparation of EPC tender documents (two stage two envelope system), BOCs, Cost Estimate, Specifications and Conditions of Contract. • Bid evaluation of first stage EPC bids. • Pre-qualification of bidders. • Preparation of Inception Report. • Preparation of "Scope of Work" for topographic survey and geotech investigations.

Ishaan Chaudhry



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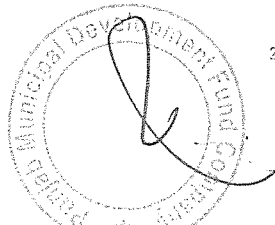


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Detailed Tasks Assigned on Consultant's Team of Experts:	Reference to Prior Work/Assignments that Best Illustrates Capability to Handle the Assigned Tasks
	<p>Name of Assignment: Sindh Cities Improvement Project Year: June 2011 – Jan 2013 Position held: Team Leader/Water Supply Specialist Client: North Sindh Urban Services Corporation Location: Sukkur, Rohri, Khairpur, Shikarpur and Larkana, Activities Performed: As Team Leader/Water Supply Specialist on ADB funded SCIP-04 Project (loan No. 2499-Pak) in Sukkur, Rohri, Khairpur, Shikarpur and Larkana, responsible for the Design of Water Supply DNI Zones, Water Treatment Plants, Transmission Mains, Wastewater Management System, Solid Waste Management, Master Planning and Contract/Construction Management. Activities involved are</p> <ul style="list-style-type: none"> • Overall Project Planning, Management, GIS based Survey & Mapping using satellite imageries, Detailed Design, preparation of Tender Documents and Construction Supervision of execution stage. • Monitoring of both the Planning, Design and Construction Supervision teams. • Successful implementation of 247 Water Supply DNIs (Distribution Network Improvement Zones) after detailed design • Data collection on the basis of survey report and calculation of water demand 2030 for future expansion and master planning. • Carryout Detail Design of Tranche-1 sub project and preliminary design of Tranche-2 works for water supply and water treatment, wastewater and wastewater treatment, solid waste management, small capital works. • Check willingness to pay and prepare water connection procedure. • Involved in preparation of EIAs and Socio-economic surveys • Involved in preparation of conceptual design of sanitary landfill sites <p>Name of Assignment: <ul style="list-style-type: none"> • Infrastructure Development of Defence Raya Golf & Country Club • Infrastructure Development of Y & Z Blocks of DHA, Phase-VII Year: December 2008 – June 2011 Position held: Project Director Client: DHA Lahore Location: Lahore Activities Performed: As Project Director on "Infrastructure Development of Defence Raya Golf & Country Club", and "Infrastructure Development of Y & Z Blocks of DHA, Phase-VII" responsible for the Contract/Construction Management, design review and overall Construction Supervision of the Road Network, Water Supply, Sewerage & Drainage Systems. Activities involved are</p> <ul style="list-style-type: none"> • Overall Contract Management, Construction Supervision and design review of Roads, Water Supply, and Sewerage & Drainage Systems as per actual site conditions according to FIDIC Conditions of Contract, Specifications and Construction Drawings. <p>Road network involved construction of major roads in a length of 10 km, Water Supply System involved one overhead tank (100,000 g), a pump house and distribution network. Sewerage System involved collection system of RCC pipes of different diameter. Drainage system involved construction of drains of different sizes for storm water.</p> <p>Other activities involved</p> <ul style="list-style-type: none"> • Preparation and submission to the client, the work execution proposals. • Preparation and submission to the client, shop drawings after review of construction drawings according to prevailing/changed site conditions. • Close coordination with the client on various site related issues for better quality control according to the provisions of contract. • Measurement of executed works and submission to the client the payment certificates. • Technical assistance to site staff on various site related issues. • Performing other services like supervision of various field/lab tests of construction materials and commissioning of systems. • Preparation and submission to the client, the claims of the Contractor. <p>Name of Assignment: Infrastructure Development of Multan Industrial Estate Phase-II Year: August 2007 – December 2008 Position held: Project Manager/Resident Engineer Client: Punjab Industrial Estates Development and Management Company (PIEDMC) Location: Multan</p>

Jaswanza Chaudhry



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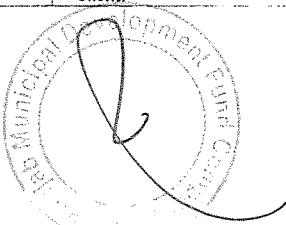
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Detailed Tasks Assigned on Consultant's Team of Experts:	Reference to Prior Work/Assignments that Best Illustrates Capability to Handle the Assigned Tasks
	<p>Activities Performed: As Resident Engineer on "Infrastructure Development of Multan Industrial Estate Phase-II", responsible for the Contract/Construction Management, Vetting of Design and Construction Supervision of the Road Network, Water Supply, and Sewerage & Drainage Systems. Activities involved are</p> <ul style="list-style-type: none"> Overall Contract Management, Construction Supervision and Vetting of Design of Roads, Water Supply, Sewerage & Drainage Systems as per actual site conditions according to FIDIC Conditions of Contract, Specifications and Construction Drawings. <p>Road network involved construction of major roads (ROW 80, 100, 200 ft) in a length of 18 km. Water Supply System involved 4 overhead tanks (100,000 g), pump houses and distribution network. Sewerage System involved sewage pumping station and collection system. Drainage system involved construction of drains of different sizes for industrial effluent.</p> <p>Other activities involved</p> <ul style="list-style-type: none"> Examining of work execution proposals submitted by the Contractor. Approval and scrutiny of shop drawings/bar bending schedules and review of construction drawings according to prevailing/changed site conditions. Issuing instructions to contractor on various site related issues for better quality control according to the provisions of contract. Measurement of executed works and verification of interim payment certificates and final payment certificates of the contractor. Technical assistance to contractor and subordinate site staff on various site related issues. Performing other services like supervision of various field/lab tests of construction materials and commissioning of systems. Review and verification of claims submitted by the contractor. Coordination with Client for resolving site related issues. <p>Name of Assignment: Infrastructure Development of Quaid-e-Azam Industrial Estate Year: August 2005 – December 2008 Position held: Project Manager / Resident Engineer Client: PIEDMC Location: Lahore</p> <p>Activities Performed: As Project Manager/Resident Engineer on "Infrastructure Development of Quaid-e-Azam Industrial Estate", Lahore, responsible for the Contract Management, Vetting of Design and Construction Supervision of the Road Network, Water Supply, Sewerage & Drainage Systems, Street Lighting and Landscaping Works. Activities involved</p> <ul style="list-style-type: none"> Overall Contract Management, Construction Supervision and Vetting of Design of Roads, Water Supply, Sewerage & Drainage Systems as per actual site conditions according to FIDIC Conditions of Contract, Specifications and Construction Drawings. <p>Road network involved construction of major roads (ROW 80,100,200 ft) in a length of 8 km. Water Supply System involved overhead tank (100,000 g), pump house and distribution network. Sewerage System involved sewage pumping station and collection system. Drainage system involved construction of storm water drains of different sizes.</p> <p>Other activities involved</p> <ul style="list-style-type: none"> Examining of work execution proposals submitted by contractor. Approval and scrutiny of shop drawings/bar bending schedules and review of construction drawings according to prevailing/changed site conditions. Issuing instructions to contractor on various site related issues for better quality control according to the provisions of contract. Measurement of executed works and verification of interim payment certificates and final payment certificates of the contractor. Technical assistance to contractor and subordinate site staff on various site related issues. Performing other services like supervision of various field/lab tests of construction materials and commissioning of systems. Review and verification of claims submitted by the contractor. Coordination with Client for resolving site related issues. <p>Name of Assignment: Planning and design of "Infrastructure Development in Quaid-e-Azam Industrial Estate Year: May 2004 – August 2005 Position held: Senior Engineer Client: PIEDMC</p>

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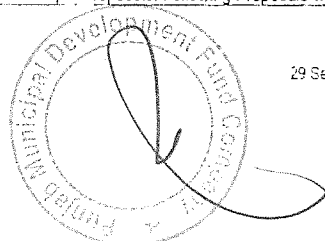
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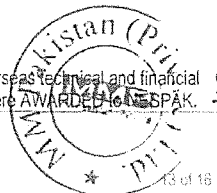


Detailed Tasks Assigned on Consultant's Team of Experts	Reference to Prior Work/Assignments that Best Illustrates Capability to Handle the Assigned Tasks
	<p>Location: Pakistan</p> <p>Activities Performed: As Senior Engineer involved in preparation of Business Promotional Technical and Financial Proposals for Pakistan, Qatar, Oman & KSA Projects. Also worked for planning and design of "Infrastructure Development in Quaid-e-Azam Industrial Estate", Lahore. Following works were involved in planning and design of Roads, Water Supply, Sewerage and Drainage Systems.</p> <ul style="list-style-type: none"> • Data collection from concerned agencies regarding existing systems. • Estimation of present and future population • Establishment of design criterion for all the systems • Estimation of water demands and calculation of sewage and drainage flows • Evaluation of existing systems • Selection of route for sewerage & water supply lines and drains • Design of new systems • Preparation of cost estimates, BOQs, Specifications and Tender Documents • Pre-qualification of Contractors • Bid Evaluation and award of Tenders <p>Name of Assignment: Buraidah Water Feeder Line Project Year: July 2002 – May 2004 Position held: Civil Engineer Client: SWCC (Saline Water Conversion Corporation) Location: Buraidah – Kingdom of Saudi Arabia</p> <p>Activities Performed: As Civil Engineer on <i>Buraidah Water Feeder Line Project</i> (QCF/CF1), a project of SWCC (Saline Water Conversion Corporation), which provides 130,000 m³/day to Buraidah city and costs Saudi Riyals 62 million, responsible for the following activities.</p> <ul style="list-style-type: none"> • Construction Supervision of 12 m wide and 1.25 km long asphalted access road • Review of design and checking of work execution proposals (method statements) submitted by the Contractor regarding civil works that includes structural design & drawings of electrical building, valve shafts, concrete mix design, asphalt mix design, design of thrust blocks and design of roads etc • Supervision of survey work for main pipe line route and access road • Supervision of laying of 1100 mm dia welded steel, PE coated and cement mortar lined main pipe line having 13.50 km length • Supervision of laying of station piping of welded steel, FBE coated and lined pipes • Construction Supervision of 1000 m³ capacity steel operating tank • Carrying out compaction tests for pipe bedding, backfilling, foundation of steel operating tank and access road sub-base • Supervision of coating of welded joints of main pipe line by application of CANUSA heat shrink sleeves • Carrying out peel test, holiday test and thickness test for heat shrink sleeves • Supervision of coating of welded joints of station piping with fusion bonded and cold applied epoxy • Construction Supervision of Cement Mortar Lining of 1100 mm dia steel pipe • Construction supervision of pre-cast and in-situ RCC yard shafts • Preparation of Monthly & Quarterly Progress Reports <p>Name of Assignment: Design for Roads, Water Supply and Sewerage Systems of Nisar Town and Wheatman Road Year: October 2000 – June 2002 Position held: Senior Engineer Client: Pakistan Housing Authority Location: Lahore</p> <p>Activities Performed: As Senior Engineer, involved in preparation of cost estimates and BOQ's for Roads, water supply and sewerage system of "Nisar Town" and "Wheatman Road", a Project of Pakistan Housing Authority. In addition, Tender Drawings of the following were also prepared for the above Project.</p> <ul style="list-style-type: none"> • Two elevated water tanks having 30,000 and 20,000 gallons capacity • Pumping stations • Water Distribution networks • Sewage pumping station, soakage pits & community septic tanks • Miscellaneous drawings of allied facilities <p>Also involved in Business promotional activities by way of making different overseas technical and financial Proposals. Following Proposals were prepared in this context and the same were AWARDED IN ESPAK.</p>

Mianzab Chaudhry



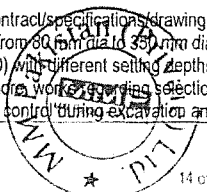
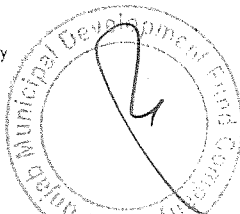
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Detailed Tasks Assigned on Consultant's Team of Experts	Reference to Prior Work Assignments that Best Illustrates Capability to Handle the Assigned Tasks
	<ul style="list-style-type: none"> • Water Supply to Aswad Area – Sultanate of Oman • Water Supply to Bahla Wilayat – Sultanate of Oman • Water Supply to Ghalila Village – Sultanate of Oman • Water Supply to Hadhf & Al Qarta – Sultanate of Oman • Sewerage System for Sumail Town – Sultanate of Oman • Sewerage System for Ibra Town – Sultanate of Oman • Sewerage System for Ibri Town – Sultanate of Oman <p>Name of Assignment: <ul style="list-style-type: none"> • Baluchistan Rural Water Supply & Sanitation Project (World Bank Funded) • Mastung / Kharan Drainage Schemes (World Bank Funded) </p> <p>Year: May 1998 - October 2000</p> <p>Position held: Resident Engineer</p> <p>Client: GOB & LGRDD (Local Government & Rural Development Department) Baluchistan</p> <p>Location: Mastung & Kharan (Baluchistan)</p> <p>Activities Performed: As Resident Engineer, responsible for the Contract Management, Vetting of Design and Construction Supervision of the following WORLD BANK financed Projects.</p> <p>Baluchistan Rural Water Supply & Sanitation Project (IDA Credit 2228-Pak)</p> <ul style="list-style-type: none"> • Mastung / Kharan Water Supply Schemes <p>Overall Contract Management, Construction Supervision and Vetting of Design as per actual site conditions according to FIDIC conditions of contract, specifications and construction drawings. Systems consist of laying of 150 km length of AC pipes having sizes from 80 mm dia to 350 mm dia, installation of submersible pumps (10 No.) with different setting depths, vertical turbine pumps (2 No.), centrifugal pumps (2 No.). RCC works consist of elevated water tanks (40,000 gallons), pump house, house connections, valves and workshop building.</p> <ul style="list-style-type: none"> • Mastung / Kharan Drainage Schemes <p>Overall Contract Management, Construction Supervision and Vetting of Design as per changed site conditions according to FIDIC conditions of contract, specifications and construction drawings. Project comprises of the wastewater and stormwater disposal system of open and covered brick/block masonry drains (75 km length) of different sizes, road culverts, house connections and different disposal structures. Other duties according to the contract included</p> <ul style="list-style-type: none"> • Examining of work execution proposals submitted by contractors. • Approval and scrutiny of shop drawings/bar bending schedules and review of construction drawings according to prevailing/changed site conditions. • Issuing instructions to contractors on various aspects for better quality control according to the provisions of contract. • Measurement of executed works and verification of interim payment certificates and final payment certificates of the contractors • Technical assistance to contractors and subordinate site staff on various site related issues. • Performing other services like supervision of various field/lab tests of construction materials and commissioning of works (system energization). • Review of claims submitted by the contractors. • Coordination with Client, WORLD BANK and Contractor. <p>Name of Assignment: Baluchistan Rural Water Supply & Sanitation Project (World Bank Funded)</p> <p>Year: June 1997 - May 1998</p> <p>Position held: Assistant Resident Engineer</p> <p>Client: GOB & LGRDD (Local Government & Rural Development Department) Baluchistan</p> <p>Location: Mastung & Kharan (Baluchistan)</p> <p>Activities Performed: As A/Resident Engineer, responsible for the construction supervision of the following WORLD BANK financed Projects.</p> <p>Baluchistan Rural Water Supply & Sanitation Project (IDA Credit 2228-Pak)</p> <ul style="list-style-type: none"> • Mastung Water Supply Scheme <ul style="list-style-type: none"> ■ Overall construction management of site according to conditions of contract/specifications/drawings. Project comprises of laying of 93 km length of AC pipes having sizes from 60 mm dia to 350 mm dia, house connections, valves and installation of submersible pumps (10) with different setting depths. RCC works consists of pump house and workshop building. Furthermore, work comprising selection of route for transmission mains, survey of selected routes, alignment control during excavation and

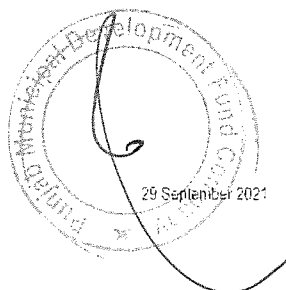


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	<p>laying, preparation of bedding for pipe laying, backfilling and reinstatement of roads were also supervised.</p> <ul style="list-style-type: none"> ■ Issuing instructions to contractors on various aspects for better quality control according to the provisions of contract. • Mastung Drainage Scheme • Project comprises of the wastewater and storm water disposal system of open and covered brick/block masonry drains (42 km length) of different sizes, road culverts, house connections and different disposal structures. <p>Name of Assignment: 1992 Flood Damages Restoration Project (World Bank Funded) Second Irrigation Systems Rehabilitation Project</p> <p>Year: July 1992 - June 1997</p> <p>Position held: Senior Field Engineer</p> <p>Client: Federal Flood Commission</p> <p>Location: Pakistan</p> <p>Activities Performed: As Field Engineer, responsible for the design review and construction supervision of the following WORLD BANK financed Projects.</p> <p>1992 Flood Damages Restoration Project (IDA Credit 2468-Pak)</p> <ul style="list-style-type: none"> • Duties were, preparation of subproject summaries indicating brief history of NHA roads in Baluchistan (like N-25, N-55, N-50, N-70, N-40), irrigation schemes and description/extent of damages after deciding their eligibility based on World Bank criteria. Technical/design review of subprojects submitted by the Govt. Departments for approval from Federal Flood Commission and World Bank for their implementation. Top supervision (random/spot checking of the sites) during execution of works on sample basis to ensure both quality and quantity of works. Processing of procurement documents and withdrawal (disbursement) applications to World Bank. • Second Irrigation Systems Rehabilitation Project (IDA Credit 1888-Pak) • Top construction supervision of various irrigation canals/schemes to ensure quality and quantity of works. <p>Name of Assignment: Construction Supervision of infrastructural facilities of WAPDA Employees Cooperative Housing Society, Gujranwala</p> <p>Year: April 1991 - July 1992</p> <p>Position held: Site Engineer</p> <p>Client: WAPDA</p> <p>Location: Gujranwala</p> <p>Activities Performed: As Site Engineer: Responsible for Construction Supervision of infrastructural facilities of Wapda Employees Cooperative Housing Society, Gujranwala. The major components of project executed under my supervision are as follows.</p> <ul style="list-style-type: none"> • Construction supervision of road works • Construction of elevated water tanks of different capacities. • Supervised drilling, development and testing operations for the installation of tube wells of one Cusic capacity each. • Construction of pump houses. • Laying of Water Supply distribution network ranging from 3" to 12" dia pipes. • Construction of sewage pumping station. • Manufacturing of R.C.C pipe for sewerage ranging from 6" dia to 30" dia. • Laying of sewerage system ranging from 9" dia to 30" dia. • Installation of earthing system for elevated water tanks. • Installation of electrical poles for street lighting. • Installation of LT-Panel and electrification of pump houses.

Expert's contact information: (e-mail: bdy@mmpakistan.com phone: 0423-6292525-26-27)



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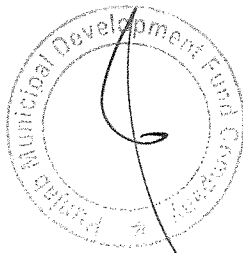



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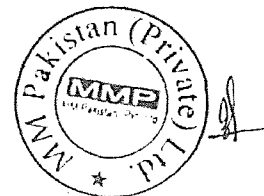
I, the undersigned, certify that to the best of my knowledge and belief, this CV correctly describes myself, my qualifications, and my experience, and I am available, as and when necessary, to undertake the assignment in case of an award. I understand that any misstatement or misrepresentation described herein may lead to my disqualification or dismissal by the Client, and/or sanctions by the Bank.

Jahanzaib Chaudhry Name of Expert	 Signature	Date: 29 September 2021 Day/Month/Year
Muhammad Irfan Gohar Name of authorized Representative of the Consultant	 Signature	Date: 29 September 2021 Day/Month/Year

Jahanzaib Chaudhry



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Curriculum Vitae (CV)

Position Title and No.	:	K-2, Urban Planner
Name of Expert	:	Dr. Shabih ul Hassan Zaidi
Date of Birth	:	1952
Country of Citizenship / Residence	:	Pakistani

Education:

- Ph. D. Urban and Regional Planning (Birmingham, UK), 1990
- M.Sc. Human Settlements Planning (AIT, Bangkok), 1982
- B.Sc. City and Regional Planning (UET, Lahore), 1975

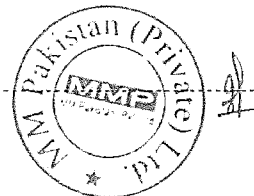
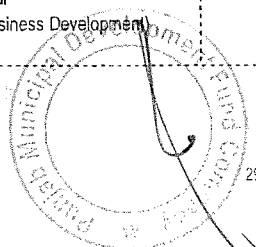
Employment Record relevant to the assignment:

Period	Employing organization and your title / position. Contact information for references	Country	Summary of activities performed relevant to the Assignment
June 2019 to date	Employer: MM Pakistan (Pvt.) Ltd. Position: Team Leader Ref Contact: 042-36363234, 36292525-8 bdu@mmpakistan.com M. Irfan Gohar Manager (Business Development)	Pakistan	Supervised and monitor the traffic and transportation surveys, prepare transportation connectivity plan and prepare various options for urban mobility using public transportation system in Gilgit.
May 2017 to date	Employer: MM Pakistan (Pvt.) Ltd. Position: Team Leader Ref Contact: 042-36363234, 36292525-8 bdu@mmpakistan.com M. Irfan Gohar Manager (Business Development)	Pakistan	Provide overall guidance on preparation of Master Plans of 15 DHQ Towns in Sindh. Key deliverables also include future plans for overall improvement of urban mobility and improved infrastructure development.
November 2016 to date	Employer: MM Pakistan (Pvt.) Ltd. Position: Team Leader	Pakistan	Concept plans preparation for an improved road connectivity, detailed layout planning and infrastructure designing with tender documents for selection of developer for Aifalah Housing Scheme.
November 2016 to February 2017	Employer: National Environment Consultants (NEC) Position: Consultant Ref Contact: 0300-8454061 Azhar Uddin CEO NEC	Pakistan	Was responsible for review and generation of Rapid Urban Assessment reports for three cities in Punjab (Bahawalpur, Rahim Yar Khan and Sargodha) under PICIP funded by ADB.
December 2016 – April 2017	Employer: MM Pakistan (Pvt.) Ltd. Position: Spatial Planning Expert Ref Contact: 042-36363234, 36292525-8 bdu@mmpakistan.com M. Irfan Gohar Manager (Business Development)	Pakistan	Review of flood mitigation measures and preparation of resettlement plan for Basha Dam affected people

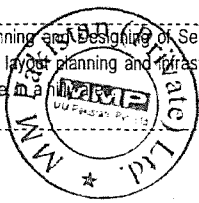
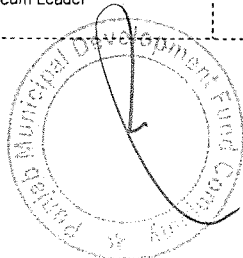
Dr. Shabih ul Hassan Zaidi

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Period	Employing organization and your title / position. Contact information for references	Country	Summary of activities performed relevant to the Assignment
Dec 2014 - Aug 2017	Employer: MM Pakistan (Pvt.) Ltd. Position: Team Leader	Pakistan	Supervised and monitor the traffic and transportation surveys, prepare transportation connectivity plan and prepare various options for urban mobility using public transportation system
June 2012 - Nov 2014	Employer: MM Pakistan (Pvt.) Ltd. Position: Team Leader	Pakistan	Supervised and monitor the traffic and transportation surveys, prepare transportation connectivity plan and prepare various options for urban mobility using public transportation system
Nov 2012 - Jan 2013	Employer: MM Pakistan (Pvt.) Ltd. Position: Spatial Planning Expert	Pakistan	Worked on Review and Finalization of the Land Use Plan for Thar Coal Area of Tharparker District, Sindh.
April 2011 to August 2011	Employer: UN-Habitat Position: Consultant Planner Ref Contact: (+92) 51 835 7363 info@unhabitat.org.pk	Pakistan	Prepared a Study Report on Lahore Chapter as part of the World City Report, for UN-Habitat, Islamabad, 2011.
March 2006 - March 2007	Employer: ERRA, Pakistan Position: Project Manager Ref Contact: 051-9030833 Anf.dg@erra.gov.pk	Pakistan	Responsible and supervised GIS technology was used in this project for information gathering, storage and analysis of data. The Master Plan proposals were also prepared using GIS tools.
March, 2002 to May, 2002	Employer: Govt of Punjab Position: Project Manager	Pakistan	An Evaluation of Building Byelaws prepared for Tehsil Municipal Administrations (TMAs), Punjab, 2002. The evaluation was based on a study of various sets of Building Byelaws for various development authorities in Pakistan.
Dec 1998 - Dec 1999	Employer: IUCN Position: Consultant Ref Contact: +66 (2) 662 4029	Pakistan	Following the National Conservation Strategy (NCS), conservation strategies were prepared for various provinces of Pakistan also. The sector paper on Urban Environment was the heart and soul of the Baluchistan Conservation Strategy.
March 1996 - Dec 1997	Employer: Faisalabad Development Authority Position: Team Leader Ref Contact: (041) 9200097	Pakistan	Responsible for Transportation Planning Process Modeling which was done using Traffic Generation and Traffic Attraction with Modal Split models. The traffic assignment on existing and future roads was proposed on the basis of these models.
July 1995 - March 1996	Employer: Ministry of Housing and Works, Pakistan Position: Associate Consultant in PEPAC Ltd., Lahore Ref Contact: (051) 9205941	Pakistan	The project was about the preparation of a detailed report on housing activity including the policies and program relating to the housing sector in the entire country. The report contained all the basic information on housing sector in Pakistan. Some best practices regarding low income housing, such as Orangi Pilot Project, Khuda Ki Basti Project
1993 - 1994	Employer: Sindh Town Planning Department, Govt. of Sindh Position: Chief Consultant Planner, PEPAC, Ltd., Lahore	Pakistan	The project was about the preparation of sub-regional plan for Dhabeji and Gharo Region. It included a study of the existing industrial development in the region and proposals for sustainable development of the area in future.
Jul 1994 - Dec 1994	Employer: Mirpur Development Authority Position: Team Leader	Pakistan	Responsible for Planning and Designing of Sector 4, Mirpur Azad Kashmir. Involved in layout planning and infrastructure design of a large housing scheme in a hillside area.



Period	Employing organization and your title / position. Contact information for references	Country	Summary of activities performed relevant to the Assignment
1993 - 1994	Employer: Mirpur Development Authority Position: Chief Town Planner of Design Link Ltd. Lahore Ref Contact: +92 05827 926755 info@mdamirpur.gov.pk	Pakistan	The project included layout planning and infrastructure design of a large housing scheme, in a hilly area. The implementation/development works of the housing scheme were linked with the layout planning and designing of the scheme on site.
1991 -1992	Employer: Lahore Development Authority (<i>World Bank assisted Project</i>) Position: Chief Consultant Town Planner of Riaz Ahmad & Co. Management Consultants, Lahore and Arthur Anderson Ltd. Philippines	Pakistan	The project was a detailed financial study of the Lahore Development Authority which included the study and proposals for improved planning and programming of development projects by LDA.
May 1987 - Oct 1987	Employer: Govt. of Punjab (UNICEF assisted Project) Position: Visiting Planner, PEPAC, Ltd. Lahore	Pakistan	The project included a detailed household based sample survey of a large number of villages of Punjab where sanitary latrines were provided under a UNICEF assisted program. The data was analyzed on computer using SPSS software available in WAPDA House Computer Center. Later a comprehensive evaluation report was prepared for UNICEF.
Jun 1986 - Oct 1986	Employer: Planning and Development Department, Govt of Baluchistan Position: Sub-Consultant for PEPAC Ltd., Lahore	Pakistan	The project included a detailed household based socio-economic sample survey of all the villages and towns included in Murree and Bugti tribal area. The main purpose was to evaluate the impact of educational and health facilities provided in all the villages of the project area.
1978 - 1981	Employer: Quetta Development Authority Position: Team Member of UET Design Group	Pakistan	This project included the development of comprehensive strategic and development plan for Quetta. A topographic survey of the entire city of Quetta and its environs was conducted before carrying out of the detailed planning surveys including land use, socio-economic, housing, traffic and transportation, education, health, industry, parks and recreational facilities, commercial area (shops), basic utility services, and environmental conditions. The data was analysed on computer (during 1970s!), and a detailed Master Plan was prepared to provide guidelines for comprehensive development of the city.
1978 - 1979	Employer: Municipal Committees of Jaranwala and Gujranwala Position: Project Incharge, UET Design Group	Pakistan	Participated in the Physical Survey & Re-planning Project of Jaranwala and Gujranwala Katchi Abadis as Project In-charge. This project included the preparation of base maps for all the Katchi Abadis of Jaranwala and Gujranwala based on topographical survey (Plane Table) and detailed land use survey.
1977 - 1980	Employer: Govt of NWFP (Now KPK) Position: Visiting Planner, PEPAC, Ltd. Lahore	Pakistan	the activities included the collection of primary and secondary data, study of past trends, population profile, land use and socio-economic & housing studies, transportation studies, infrastructure studies, and studies about education, health and recreational facilities and industrial development.

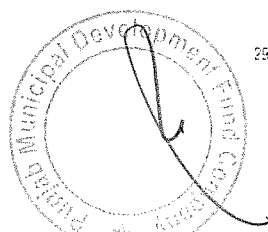
Membership In Professional Associations and Publications:

- Life Fellow Member, Institute of Planners Pakistan (IPP)
- Life Member Pakistan Council of Architects and Town Planners (PCATP) #P-00071
- Member Pakistan Society of Geographical Information Systems (PSGIS)
- Member American Planners Association (APA), USA



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Dr. Shahab ul Hassan Zaidi

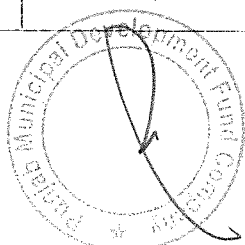


25 September 2021

Language Skills (indicate only languages in which you can work): English, Urdu

Adequacy for the Assignment:

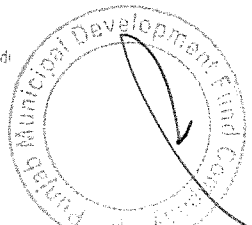
Detailed Tasks Assigned on Consultant's Team of Experts:	Reference to Prior Work/Assignments that Best Illustrates Capability to Handle the Assigned Tasks
<ul style="list-style-type: none"> Review of available Maps, study reports for MC Area/Cities Assessment of existing urban built-up area boundary marked on available maps will be made Review of available land use maps of urban areas and its compatibility assessment with updated land use status of MCs Review of existing gap analysis report and identification of shortcomings in the report 	<p>Name of Assignment: Consultancy Services for Master Plan of Gilgit & Baltistan 2040 Year: June 2019 to date Position held: Team Leader Client: Gilgit Development Authority Location: Gilgit Activities Performed: Responsible for overall monitoring and team guidance for data collection, analysis, preparation and review of various plans and reports including vision development, situation analysis, economic development, disaster & hazard risk, transportation, institutional framework reports as per the requirement of Contract.</p> <p>Name of Assignment: Development Master Plans of 15 DHQ Towns in Sindh Year: May 2017 to date Position held: Team Leader Client: Urban Policy & Strategic Planning Unit, P & D Department, Govt. of Sindh Location: Sindh Activities Performed: Responsible for team guidance of primary survey and secondary data collection, data analysis, existing situational reports, economic development plans, disaster risk management plans, Strategic Development Plans and Final Strategic Development Plans of 15 DHQ Towns of Hyderabad, Mirpur Khas, Shaheed Benazirabad and Islamkot Divisions.</p> <p>Name of Assignment: Planning and Design of Alfalah Bank Cooperative Housing Society, Lahore Year: November 2016 to date Position held: Team Leader Client: Alfalah Bank Cooperative Housing Society, Lahore Location: Bedian Road Lahore Activities Performed: Responsible for review of survey reports, Concept Plans, guidance for Layout Planning, Infrastructure Designing. Carried out team management for preparation Technical Specifications, BOQs, cost estimates, Bidding Document and Transaction advisory services for the selection of a developer.</p> <p>Name of Assignment: PICIP Rapid Urban Assessment of the three cities (Bahawalpur, Sargodha & Rahim Yar Khan) (ADB Funded) Year: December 2016 – April 2017 Position held: Consultant Client: Local Government & Community Development, GOP Location: Lahore Activities Performed: Collected data about water supply, sewerage system, solid waste management, housing, parks and open spaces etc. Analyzed data and documented Rapid Urban Assessment reports for three cities.</p> <p>Name of Assignment: Basha Dam Project Year: December 2016 – April 2017 Position held: Spatial Planning Expert Client: WAPDA Location: Chillas, Basha Dam Project Area Activities Performed: Involved in review of protection measures of existing Thor Colony Basha Dam and Town Planning of Sagachal Das Model Village Scheme for resettlement plan.</p> <p>Name of Assignment: Topographical surveys and Master Planning of Six new DHQ and THQ Towns</p>



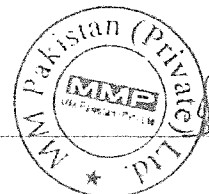
Detailed Tasks Assigned on Consultant's Team of Experts	Reference to Prior Work/Assignments that Best Illustrates Capability to Handle the Assigned Tasks
	<p>Year: Dec 2014 - Aug 2017 Position held: Team Leader Client: Central Design Office, Govt; of AJK Location: AJK Activities Performed: Managed and supervised the team that worked on Master Planning of Six New District and Tehsil Headquarter Towns in Azad Jammu & Kashmir (Haveli, Sharda, Athmuqam, Hajira, Barnala and Dudyal). The project included topographical surveys and all Master Planning surveys, data analysis, stakeholder meetings, Draft Master Plans and Final Master Plan for the above six cities of AJK.</p> <p>Name of Assignment: Topographical surveys and Master Planning of Three DHQ Towns of AJK Year: June 2012 - Nov 2014 Position held: Team Leader Client: Central Design Office, Govt; of Azad Jammu and Kashmir Location: AJK Activities Performed: Worked on Master Plans for Hattian Bala, Pallandri and Bhimber, Azad Jammu and Kashmir. Overall responsible for review of topographical surveys and supervision of all Master Planning surveys, data analysis, stakeholder meetings, Draft and Final Master Plan of mentioned cities.</p> <p>Name of Assignment: Land Use Planning for Thar Coal Area, Sindh Year: Nov 2012 - Jan 2013 Position held: Spatial Planning Expert Client: Government of Sindh Location: Thar, Sindh Activities Performed: Worked on Review and Finalization of the Land Use Plan for Thar Coal Area of Tharparker District, Sindh.</p> <p>Name of Assignment: Study Report on Lahore Chapter as part of the World City Report, for UN-Habitat Year: April 2011 to August 2011 Position held: Consultant Planner Client: UN-Habitat Location: Lahore Activities Performed: Prepared a Study Report on Lahore Chapter as part of the World City Report, for UN-Habitat, Islamabad, 2011.</p> <p>Name of Assignment: Sector Paper on 'Urban Environment' for Baluchistan Conservation Strategy, IUCN, Quetta Year: Dec 1998 - Dec 1999 Position held: Consultant Client: IUCN Location: Quetta Activities Performed: Following the National Conservation Strategy (NCS), conservation strategies were prepared for various provinces of Pakistan also. The sector paper on Urban Environment was the heart and soul of the Baluchistan Conservation Strategy.</p> <p>Name of Assignment: Traffic studies in Faisalabad Project Year: March 1996 - Dec 1997 Position held: Team Leader Client: Faisalabad Development Authority Location: Faisalabad Activities Performed:</p>



Dr. Shehbaz ul Hassan Zaidi



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Detailed Tasks Assigned on Consultant's Team of Experts:	Reference to Prior Work/Assignments that Best Illustrates Capability to Handle the Assigned Tasks
	<p>Responsible for Transportation Planning Process Modeling which was done using Traffic Generation and Traffic Attraction with Modal Split models. The traffic assignment on existing and future roads was proposed on the basis of these models.</p> <p>Name of Assignment: Preparation of HABITAT-II Country Report Year: July 1995 – March 1996 Position held: Associate Consultant in PEPAC Ltd., Lahore Client: Environment and Urban Affairs Division, Ministry of Housing and Works, Pakistan</p> <p>Location: Activities Performed: The project was about the preparation of a detailed report on housing activity including the policies and program relating to the housing sector in the entire country.</p> <p>Name of Assignment: LDA Financial Planning Study (WB Funded) Year: 1991 -1992 Position held: Chief Consultant Town Planner of Riaz Ahmad & Co. Management Consultants, Lahore and Arthur Anderson Ltd. Philippines Client: Lahore Development Authority Location: Lahore Activities Performed: World Bank assisted "LDA Financial Planning Study". The project was a detailed financial study of the Lahore Development Authority which included the study and proposals for improved planning and programming of development projects by LDA.</p> <p>Name of Assignment: Evaluation of Punjab Rural Sanitation Program (UNICEF Funded) Year: May 1987 - Oct 1987 Position held: Visiting Planner, PEPAC, Ltd. Lahore Client: Govt; of Punjab Location: Punjab Activities Performed: The project included a detailed household based sample survey of a large number of villages of Punjab where sanitary latrines were provided under a UNICEF assisted program.</p>

Expert's contact information: (e-mail: bd@mpakistan.com phone: 0423-6292525-26-27)

Certification:

I, the undersigned, certify that to the best of my knowledge and belief, this CV correctly describes myself, my qualifications, and my experience, and I am available, as and when necessary, to undertake the assignment in case of an award. I understand that any misstatement or misrepresentation described herein may lead to my disqualification or dismissal by the Client, and/or sanctions by the Bank.

Dr. Shabih ul Hassan Zaidi

Name of Expert

Signature

Date: 29 September 2021

Day/Month/Year

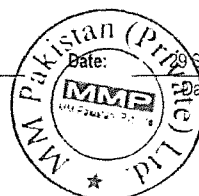
Muhammad Irfan Gohar

Name of authorized Representative of the Consultant

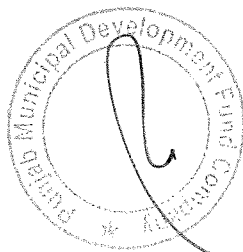
Signature

Date: 29 September 2021

Day/Month/Year



Dr. Shabih ul Hassan Zaidi



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Curriculum Vitae (CV)

Position Title and No.	:	K-3, GIS Specialist
Name of Expert	:	Shafeeq ur Rehman
Date of Birth	:	January 2, 1966
Country of Citizenship / Residence	:	Pakistani

Education:

- PhD (In Progress) from URP Department, NIT, SCEE, NUST, Islamabad. Course work of 18.0 Credit hours completed. Comprehensive Exams passed. Research Work in Progress. Off Campus work allowed.
- M.Sc. Geographical Information System GIS Centre, Punjab University 2001-2003
- Post Graduate Diploma (PGD) Software Engineering Computer Centre, Govt. FC College, Lahore, Pakistan 1999-2000
- B.Sc. (honors) City & Regional Planning (CRP) UET, Lahore 1985-1989

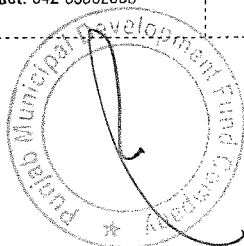
Employment Record relevant to the assignment:

Period	Employing organization and your title / position. Contact information for references	Country	Summary of activities performed relevant to the Assignment
21 July 2013 to date	Employer: MM Pakistan (Pvt.) Ltd. Position: GIS Specialist at various projects Ref Contact: 042 36300440, bdur@mmpakistan.com	Pakistan	Managed GIS/RS activities for Managing acquisition of spatial data, establishment of Spatial GIS Database of Study Area and associating with it attributes data from field survey investigations. Actively participated in Monitoring of implementation progress, identification key-issues and development of solution using GIS/RS techniques and Analysis.
October 2010 to July 2013	Employer: WAPDA Position: Manager (Water Resources Dalabase) Ref Contact: (042) 99202211	Pakistan	Lead a team of professionals for Web GIS Application Development for optimized canal water diversions form barrages and Power and water management by integrating GIS with IBMR for entire Indus Basin.
03.11.2008 to 20.10.2010	Employer: National Development Consultants Position: GIS and Dalabase Expert Ref Contact: (042) 37135034	Pakistan	Managed acquisition of spatial data using GIS/RS techniques and associating with it attributes data from field survey investigations to build an information system for Storm Water Planning of Ibb City, Yemen.
Nov 2006 to Nov 2008	Employer: GIS Centre, Punjab University Lahore. Position: Lecturer	Pakistan	Served as a Lecturer in GIS Centre, PUCIT, Punjab University Lahore
November 2006 to November 2006	Employer: BARQAAB Consulting Services Position: GIS/RS Specialist Ref Contact: (042) 99202093	Pakistan	Managed GIS/RS activities to mark Rout Corridor for the 765 kv Transmission Line, 765 KV Transmission line Project from Bunji to Basha to Mansehra, taking into consideration the topographic conditions of the terrain using Spot DEM Satellite images.
October 2005 to February 2006	Employer: National Development Consultants Position: GIS/CAD Engineer Ref Contact: (042) 37135034	Pakistan	Managed GIS/RS activities for planning layout Design of different Dam components, Associated power House and transmission lines layout and EIA studies. Activities include satellite images spatial data acquisition, Data processing and Spatial Data visualization
July 2005 to November 2005	Employer: EASE-Pak Engineering Consultants Position: RS/GIS Specialist Ref Contact: 042-35302658	Pakistan	Main Project Features include GIS/Remote Sensing data acquisition, processing, analysis. Provided GIS Input for Environmental Impact Assessment

Shafeeq ur Rehman

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Period	Employing organization and your title / position. Contact information for references	Country	Summary of activities performed relevant to the Assignment
28 July 2004 to 27 June 2005	Employer: EASE-Pak Engineering Consultants Position: GIS Specialist Ref Contact: 042-35302658	Pakistan	Managed GIS/RS activities for Planning and remodelling of drain. Managed digitization of geographic features of study area from SOP maps. Geo-referenced the spatial data, via acquired Satellite Images, GPS and Total stations.
1989 to 27 July 2004	Employer: NDC Position: GIS/CAD Spatial Planner Ref Contact: (042) 37135034	Pakistan	Managed GIS/CAD activities for several projects. Established spatial database covering various Geographical features of the dam site

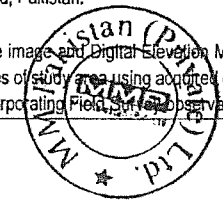
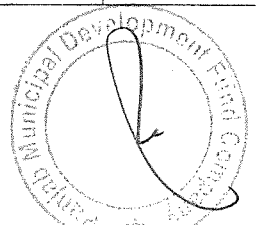
Membership in Professional Associations and Publications:

- Member, Pakistan Council of Architect and Town Planner (PCATP P-0662)

Language Skills (indicate only languages in which you can work): English, Urdu and Punjabi

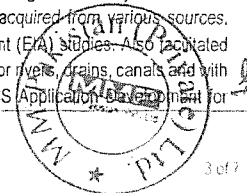
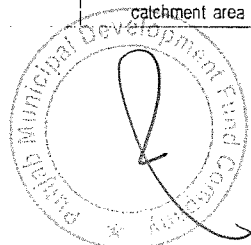
Adequacy for the Assignment:

Detailed Tasks Assigned on Consultant's Team of Experts	Reference to Prior Work/Assignments that Best Illustrates Capability to Handle the Assigned Tasks
<ul style="list-style-type: none"> • Establishment of GIS/RS Database of Study Area for Master Planning. • To lead a team of GIS professionals to conduct Topographic Survey for Master Planning of Study Area. • To manage spatial analysis in line with project aims and objectives. • To supervise establishment of Desktop GIS Development and Module development for handling Project spatial information. 	<p>Name of Assignment: Improving Access to Sustainable Water & Sanitation Services in Rural Areas of Punjab. (March 28, 2020 to Date) – World Bank</p> <ul style="list-style-type: none"> • Naltar-Gilgit Master Planning Project 2040. (July 2019 to Date) • Chowkel Khwar Hydropower Project. (June 2018 to Date) <p>Year: June 2018 to Date</p> <p>Position held: GIS Specialist</p> <p>Client: World Bank Group in collaboration with GoPb, Pakistan, Gilgit Baltistan Government & KPK Government</p> <p>Location: Khushab, Mianwali, Pakpattan, Bhakkar, Lodhran, Bahawalnagar, Rahimyarkhan, Bahawalpur Districts of Punjab, Pakistan Naltar, Nomal, Gilgit, Pakistan.</p> <p>Activities Performed:</p> <ul style="list-style-type: none"> • Managed GIS/RS activities by acquiring high resolution 0.3 meter Satellite Image and high resolution Digital Elevation Model (DEM) of Study Area. Actively participating in planning process by mapping of geographic features of study area using acquired Satellite images and field observations. • Mapping of Road Network (Primary, Secondary, Tertiary and Tracks) in entire Study Area. • GIS Application Development for Asset Management Information System of Study Area. • Managed Socio-economic and physical Field Survey investigations and their data posting via Web into Database being maintained at Project Office, using Android Application installed Smart Phone Devices. • Actively participated in Resettlement Planning and Environmental Planning of Study Area. Web GIS Application Development for Asset Management Information System for Project Study Area. • Actively participated in Urban, Regional and Master Planning of Study Area by generating various, current and projected, thematic maps. <p>Name of Assignment: Feasibility Study & detailed design of new 4-lane express way starting from Korai on Indus highway N-55 (Km 930+00) traversing through different towns crossing Indus river at Kala Bagh (Mianwali) connecting Pindigeb Fatehjang and terminating at Bahtar Barahma interchange on M1</p> <p>Year: June 2015 to June 2016</p> <p>Position held: GIS Expert</p> <p>Client: National Highway Authority (NHA)</p> <p>Location: D.I Khan to Hakla on M-1 near Islamabad, Pakistan.</p> <p>Activities Performed:</p> <ul style="list-style-type: none"> • Managed GIS/RS activities by acquiring high resolution Satellite image and Digital Elevation Model (DEM) of Study Area. Managed digitization of geographic features of study area using acquired data. Established a GIS based spatial database of Study Area by incorporating Field Survey observations.





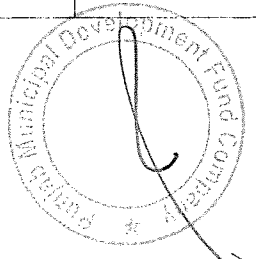
Detailed Tasks Assigned on Consultant's Team of Experts:	Reference to Prior Work/Assignments that Best Illustrates Capability to Handle the Assigned Tasks
	<p>from Study Area and integrating the primary and secondary data acquired from various sources. Facilitated Project Professions for Environmental Impact Assessment (EIA) studies. Also facilitated Hydrological study and location of various hydraulic structures of major rivers, drains, canals and with catchment area demarcation of various water bodies. Managed GIS Application Development for Asset Management Information System of Study Area. Managed Socio-economic and physical Field Survey investigations and their data posting via Web into Database being maintained at Project Office, using Android Application installed Smart Phone Devices.</p> <ul style="list-style-type: none"> Actively participated in Regional Transportation Planning and Remodeling of existing road network <p>Name of Assignment:</p> <ul style="list-style-type: none"> Peshawar Sustainable Bus Rapid Transit (BRT) Corridor Project (Feb 2017 to Date) – ADB funded TA 8990 PAK - Enabling Economic Corridors through Sustainable Transport Sector Development, Pakistan. (September 2016 to date) Detailed Engineering Design and Procurement Karachi Bus Rapid Transit (BRT) Redline Project. (August 2017 to date) – ADB funded <p>Year: September 2016 to Date Position held: GIS Expert Client: Transport and Mass Transit Department, Government of Khyber Pakhtunkhwa, Asian Development Bank (ADB) & Ministry of Planning, Development and Reform Infrastructure Wing, Islamabad, Transport and Mass Transit Department, Government of Sindh. Location: Peshawar, Karachi Pakistan</p> <p>Activities Performed:</p> <ul style="list-style-type: none"> Managed GIS/RS activities by acquiring high resolution Satellite image and Digital Elevation Model (DEM) of Study Area. Managed digitization of geographic features of study area using acquired data. Established a GIS based spatial database of Study Area by incorporating Field Survey observations from Study Area and integrating the primary and secondary data acquired from various sources. Facilitated Project Professions for Environmental Impact Assessment (EIA) studies. Also facilitated Hydrological study and location of various hydraulic structures of major rivers, drains, canals and with catchment area demarcation of various water bodies. Managed GIS Application Development for Asset Management Information System of Study Area. Managed Socio-economic and physical Field Survey investigations and their data posting via Web into Database being maintained at Project Office, using Android Application installed Smart Phone Devices. Actively participated In Regional Transportation Planning and Remodeling of existing road network <p>Name of Assignment:</p> <ul style="list-style-type: none"> Consultancy Services for Detailed Design Review and Construction Supervision of Improvement and Widening of Chakdara – Mingora – Fatehpur Section of National Highway N-95 (82 Km). (August 2017 to November 2019) Detailed Design of Construction of Rajanpur – D.G Khan Section as 4-Lane Highway and Dualization and Rehabilitation of D.G Khan – D.I Khan Section of N-55 (237 Km). (November 2017 to Dec 2018) <p>Year: November 2017 – November 2019 Position held: GIS Expert Client: National Highway Authority Islamabad. Location: Pakistan</p> <p>Activities Performed:</p> <ul style="list-style-type: none"> Managed GIS/RS activities by acquiring high resolution Satellite image and Digital Elevation Model (DEM) of Study Area. Managed digitization of geographic features of study area using acquired data. Established a GIS based spatial database of Study Area by incorporating Field Survey observations from Study Area and integrating the primary and secondary data acquired from various sources. Facilitated Project Professions for Environmental Impact Assessment (EIA) studies. Also facilitated Hydrological study and location of various hydraulic structures of major rivers, drains, canals and with catchment area demarcation of various water bodies. Managed GIS Application Development for





Detailed Tasks Assigned on Consultant's Team of Experts:	Reference to Prior Work Assignments that Best Illustrates Capability to Handle the Assigned Tasks
	<p>Asset Management Information System of Study Area. Managed Socio-economic and physical Field Survey investigations and their data posting via Web into Database being maintained at Project Office, using Android Application installed Smart Phone Devices.</p> <ul style="list-style-type: none"> Actively participated in Regional Transportation Planning and Remodeling of existing road network <p>Name of Assignment: Master Planning of District Lahore Water Supply, Sewerage and Drainage.</p> <p>Year: July 2014 to December 2018</p> <p>Position held: GIS Expert</p> <p>Client: WASA, Lahore</p> <p>Location: Lahore</p> <p>Activities Performed:</p> <ul style="list-style-type: none"> Managed GIS/RS activities by acquiring high resolution 0.3 meter Satellite image. Also managed to acquire high resolution Digital Elevation Model (DEM) of Study Area. Actively participating in Planning and Remodeling of storm water drains Network, Water Supply Lines Network & Sewerage Lines Network, in Lahore District Study Area. Managed digitization of geographic features of study area using data acquired via Satellite images. GIS Application Development for Asset Management Information System of WASA Assets. Managed Socio-economic and physical Field Survey investigations and their data posting via Web into Database being maintained at Project Office, using Android Application installed Smart Phone Devices. <p>Name of Assignment: Monitoring & Evaluation (M&E) of Jinnah Barrage Project – <i>WB Funded</i></p> <p>Year: July, 2014 – June 2017</p> <p>Position held: GIS Specialist</p> <p>Client: Client Irrigation & Power Department, Govt. Of Punjab</p> <p>Location: Lahore</p> <p>Activities Performed:</p> <ul style="list-style-type: none"> Managed GIS/RS activities for Managing acquisition of spatial data, establishment of Spatial GIS Database of Study Area and associating with it attributes data from field survey investigations. Parcel mapping of physical features in Study Area. Actively participated in Monitoring of implementation progress, identification key-issues and development of solution using GIS/RS techniques and Analysis. Actively participated in Environment Management Plan activity using GIS/RS techniques and Analysis. Actively participated in Consultations/liaison with WWF on flora and fauna impacts using GIS/RS techniques <p>Name of Assignment: Kurram Tangi Multipurpose Dam Project – <i>USAID funded</i></p> <p>Year: July 2016 – To date</p> <p>Position held: GIS Specialist</p> <p>Client: WAPDA</p> <p>Location: Lahore</p> <p>Activities Performed:</p> <ul style="list-style-type: none"> Managed to acquire high resolution 0.3 meter Satellite image of Study Area. Also managing to acquire high resolution Digital Elevation Model (DEM) of Study Area. Actively participating in Planning and Management of Detailed Topographic Survey of Study Area. Managed digitization of geographic features of study area using data acquired via Satellite images, GPS and Total stations. Scope of work include Generation of Plan and Profile maps along center line of canals and other irrigation network using field survey investigations via AutoLisp Programming GIS Application Development for Asset Management Information System. Managed Socio-economic and physical Field Survey investigations and their data posting via Web into Database being maintained at Project Office, using Android Application installed Smart Phone Devices.

Shafeeq ur Rehman



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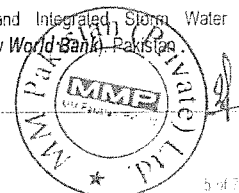
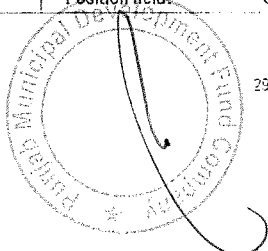
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Detailed Tasks Assigned on Consultant's Team of Experts:	Reference to Prior Work/Assignments that Best Illustrates Capability to Handle the Assigned Tasks
	<p>Name of Assignment: Topographic Survey and Master Planning of District and Tehsil Headquarters in AJK (Auth Muqam, Sharda, Havalli, Hajira, Barnala, Dudya).</p> <p>Year: November 2014 – 2018</p> <p>Position held: GIS Specialist</p> <p>Client: Client Central Design Office, Muzaffarabad, AJK.</p> <p>Location: AJ&K</p> <p>Activities Performed:</p> <ul style="list-style-type: none"> Managed to establish a spatial database of study area. Supervised spatial analysis in line with project aims and objectives. Supervised establishment of GIS Development and Module development for handling Project spatial information. GIS Application Development for Asset Management Information System. Managed Socio-economic and physical Field Survey investigations and their data posting via Web into Database being maintained at Project Office, using Android Application installed Smart Phone Devices. <p>Name of Assignment: Planning and Preparation of Detailed Design & PC-1 of 7 Medium Dams in Kirihar Mountain Range in Kohistan Region, Sindh.</p> <p>Year: 2014 - 2015</p> <p>Position held: GIS Specialist</p> <p>Client: Small Dam Organization, Irrigation and Power Department, Govt. of Sindh</p> <p>Location: Kohistan Region Sind</p> <p>Activities Performed:</p> <ul style="list-style-type: none"> Procurement of Survey of Pakistan (SOP) Topographic Sheets, DEM, Satellite Images for the Project Area. Geo-referencing of Topographic Sheets. Supervision in Digitization of Topographic Sheets. Geological Mapping of the Project Area. Mapping of Proposed Dam sites and Catchment Area. Drainage Network and Contour Mapping. Land-use/Land-cover mapping of the Project Area. Parcel mapping of existing physical features in Study Area for planning the rehabilitation plan for population GIS Mapping of Proposed Canals and Distributaries network in Canal Command Area. <p>Name of Assignment: Upgrading of Tools, Water Resources Database, Management Systems and Models, WCAP-B1* funded by World Bank Pakistan</p> <p>Year: 20.10.2010 – 20.07.2013</p> <p>Position held: Manager (Water Resources Database)</p> <p>Client: WAPDA, Ministry of Water and Power, Pakistan</p> <p>Location: Lahore, Pakistan</p> <p>Activities Performed:</p> <ul style="list-style-type: none"> Lead a team of professionals for Web GIS Application Development for optimized canal water diversions form barrages and Power and water management by integrating GIS with IBMR for entire Indus Basin. Managed Spatial Data acquisition including SOP Topographical maps, Satellite images, and Secondary data Also managed GIS Data Processing and Spatial database establishment in line with Project aims and Objectives. Performed various GIS Analysis for extraction of information from existing data. <p>Name of Assignment: Priority Flood Protection Investments and Integrated Storm Water Management Plan for Ibb, Yemen (funded by World Bank, Pakistan)</p> <p>Year: 03.11. 2008 – 20.10.2010</p> <p>Position held: GIS and Database Expert</p>

Shafeeq ur Rehman

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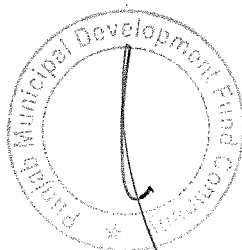


Detailed Tasks Assigned on Consultant's Team of Experts:	Reference to Prior Work/Assignments that Best Illustrates Capability to Handle the Assigned Tasks
	<p>Client: Ibb City Government, Yemen. Location: Yemen Activities Performed: Managed acquisition of spatial data using GIS/RS techniques and associating with it attributes data from field survey investigations to build an information system for Storm Water Planning of Ibb City, Yemen. Developed Desktop GIS Applications for handling field data and for automated generation of plan and profile maps of study area drains.</p> <p>Name of Assignment: Basha DiAmer Dam Design Project Year: Oct.2005 to Feb.2006 Position held: Senior Engineer GIS/CAD Client: WAPDA Location: Pakistan Activities Performed: Managed GIS/RS activities for planning layout Design of different Dam components, Associated power House and transmission lines layout and EIA studies. Activities include satellite images spatial data acquisition, Data processing and Spatial Data visualization. Provided GIS input for topographic analysis of terrain to propose route corridor for proposed power transmission lines from power house to other selected points. Lead a team to prepare Land Information System (LIS), of settlements falling into the Reservoir area.</p> <p>Name of Assignment: World Bank funded Project, 'Environmental Concerns of Four Provinces, Study III' Year: 07.2005 – 09.2005 Position held: GIS/RS Specialist. Client: Client Federal Flood Commission (FFC) Location: Pakistan Activities Performed: Provided GIS input for Environmental Impact Assessment along the riverine areas of four provinces due to variation in available water in the rivers in different seasons of the year, using GIS/RS techniques. Draw Cross section of rivers at various selected points for storm water estimation studies. Used Landsat satellite images for the study.</p> <p>Name of Assignment: World Bank funded Project, Right Bank Outfall Drain – Project III (RBOD-III) Year: 28.07.2004 - 27.06.2005 Position held: GIS/RS Specialist Client: WAPDA Location: Pakistan Activities Performed: Managed GIS/RS activities for Planning and remodelling of drain. Managed digitization of geographic features of study area from SOP maps. Geo-referenced the spatial data, via acquired Satellite images, GPS and Total stations. Generated Plan and Profile maps along centre line of drains. Also generated X-Sections at selected points at centre line of remodelled drains using field survey investigations.</p>

Expert's contact information: (e-mail: bdu@mmpakistan.com phone: 0423-6292525-26-27)



Shafeeq ur Rehman



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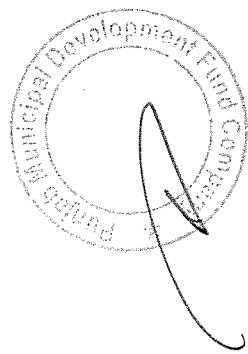


Certification:

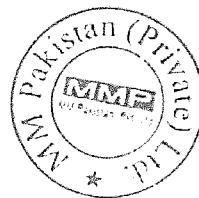
I, the undersigned, certify that to the best of my knowledge and belief, this CV correctly describes myself, my qualifications, and my experience, and I am available, as and when necessary, to undertake the assignment in case of an award. I understand that any misstatement or misrepresentation described herein may lead to my disqualification or dismissal by the Client, and/or sanctions by the Bank.

_____ Shafeeq ur Rehman Name of Expert	_____  Signature	Date: _____ 29 September 2021 Day/Month/Year
_____ Muhammad Irfan Gohar Name of authorized Representative of the Consultant	_____  Signature	Date: _____ 29 September 2021 Day/Month/Year


Shafeeq ur Rehman



29 September 2021





Curriculum Vitae (CV)

Position Title and No.	:	K-4, GIS Analyst
Name of Expert	:	Umar Javaid
Date of Birth	:	28 th October, 1988
Country of Citizenship / Residence	:	Pakistani

Education:

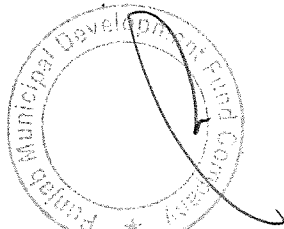
- M. Phil Geomatics (GIS) , University of the Punjab, Lahore, Pakistan, 2011-2013
- B.Sc. (Hons) in Space Science (GIS/RS), University of the Punjab, Lahore, Pakistan, 2007-2011

Employment Record relevant to the assignment:

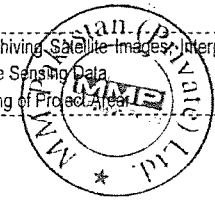
Period	Employing organization and your title / position. Contact information for references	Country	Summary of activities performed relevant to the Assignment
2018 to date	Employer: MM Pakistan (Pvt.) Ltd. Position: GIS Expert Ref Contact: 042-36363234, 36292525-8 bdu@mmpakistan.com M. Irfan Gohar Manager (Business Development)	Pakistan	<ul style="list-style-type: none"> • Base Map Preparation. • Master Planning Survey using Mobile GIS. • GIS based Land Management System. • Land-use Mapping and Master Planning. • Mapping Peshawar BRT Corridor and Feeder Routes.
2018	Employer: PIU-Provincial Disaster Management Authority Position: Data Analyst (GIS) Ref Contact: (92-42) 99204408, 99204409 pdma.gop@gmail.com	Pakistan	<ul style="list-style-type: none"> • Preparation of flood inundation maps. • QA/QC of Socio-Demographic data which will be used for MHVRA. • Mauza Boundary delineation of flood affected Districts.
2015 to 2017	Employer: Tech Buttons IT Solutions Position: GIS Specialist Ref Contact: +966 92000 7282 info@techbuttons.com	Saudi Arabia	<ul style="list-style-type: none"> • GIS/MIS for the SWCC Water Transmission System covers entire KSA. • Configure Enterprise Geodatabase in Oracle. • Management of Centralized GIS Database System. • Administering ArcGIS Server.
2012 to 2015	Employer: MM Pakistan (Pvt.) Ltd. Position: GIS Analyst Ref Contact: 042-36363234, 36292525-8 bdu@mmpakistan.com M. Irfan Gohar Manager (Business Development)	Pakistan	<ul style="list-style-type: none"> • Mapping of Dam sites and Catchment Area. • Mapping of Punjab Irrigation System. • Landuse Classification and Reclassification. • Site Suitability Analysis. • EIA Study Maps.
2012	Employer: Ora-Tech Systems (Pvt) Ltd. Position: GIS Associate Ref Contact: 042-111672253 / 6674598 / 6677015	Pakistan	<ul style="list-style-type: none"> • Land-use Mapping of DHA Administrative Area. • Geo-referencing and Digitization of Revenue Maps.
2011 to 2012	Employer: World Wide Fund for Nature (WWF)-Pakistan Position: GIS Associate	Pakistan	<ul style="list-style-type: none"> • Procuring and Archiving Satellite Images, Interpretation and Analysis of Remote Sensing Data • Land-cover Mapping of Project Area



Umar Javaid



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Period	Employing organization and your title / position. Contact information for references	Country	Summary of activities performed relevant to the Assignment
	Ref Contact: (042) 35465977		<ul style="list-style-type: none"> Land-cover Change Analysis of the Project Area

Membership in Professional Associations and Publications:

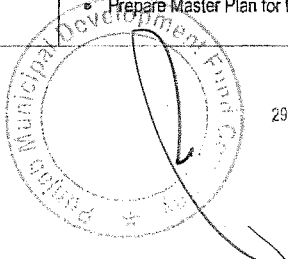
- Member of International Geo-Spatial Society (IGS).
- Member of National Academy of Young Scientists (NAYS).
- Member of Global Innovation through Science and Technology (GIST).
- Member of Pakistan Geography Alumni Association (PakGAA).

Language Skills (indicate only languages in which you can work): English, Urdu

Adequacy for the Assignment:

Detailed Tasks Assigned on Consultant's Team of Experts:	Reference to Prior Work/Assignments that Best Illustrates Capability to Handle the Assigned Tasks
<ul style="list-style-type: none"> • Establishment of GIS/RS Database of Study Area for Master Planning. • To manage spatial analysis in line with project aims and objectives. • Establishment of Desktop GIS Development and Module development for handling Project spatial information. 	<p>Name of Assignment: Consultancy Services for Master Plan for Gilgit & Naltar-2040 Year: 2019 - 2020 Position held: GIS Expert Client: Gilgit Development Authority Location: Gilgit Activities Performed:</p> <ul style="list-style-type: none"> • Configure Enterprise Geodatabase in PostgreSQL. • Supervise the Extraction of Earth Features from high Resolution Satellite Imagery using Multi-user Editing Environment. • Spatio-Temporal Urban Growth Analysis of Gilgit City using GEE. • Preparation of Base Maps for Master Planning Survey. • Master Planning Survey using Mobile GIS. • Development of GIS based Land Management System for Gilgit City. • Prepare Master Plan for Naltar & Gilgit City. <p>Name of Assignment: Peshawar Sustainable Bus Rapid Transit Corridor Project-ADB Funded Year: 2018-2019 Position held: GIS Analyst Client: TMTD,GOKP,PDA,Trans-Peshawar Location: Lahore Activities Performed:</p> <ul style="list-style-type: none"> • Mapping Peshawar BRT Approved Corridor. • Mapping Peshawar BRT Feeder Routes. <p>Name of Assignment: Additional Consultancy Services for Topographic Survey & Master Planning of 02 No. District and 04 No. Tehsil Headquarter Towns in AJK. (Haveli, Athmuqam, Sharda, Hajira, Barnala and Dadyal) Year: 2018 - 2019 Position held: GIS Analyst Client: AJK Central Design Office, Muzaffarabad Location: AJK Activities Performed:</p> <ul style="list-style-type: none"> • Import Topographic Survey (CAD Data) into Geodatabase. • Preparation of Base Maps for Master Planning Survey. • Land-use Mapping of Project Area. • Land-use and Slope Analysis for Master Planning. • Prepare Master Plan for the Project Area.

Umar Javaid

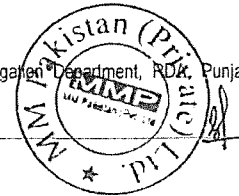
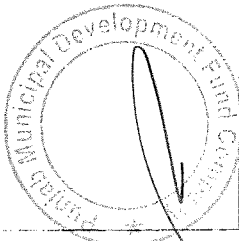


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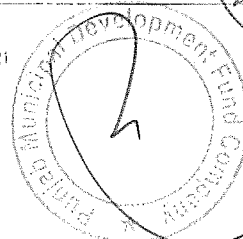


Detailed Tasks Assigned on Consultant's Team of Experts:	Reference to Prior Work/Assignments that Best Illustrates Capability to Handle the Assigned Tasks
	<p>Name of Assignment: Flood Emergency Reconstruction & Resilience Project (FERRP) - <i>ADB & WB Funded</i></p> <p>Year: 2018</p> <p>Position held: Data Analyst (GIS)</p> <p>Client: PDMA</p> <p>Location: Lahore</p> <p>Activities Performed:</p> <ul style="list-style-type: none"> Preparation of flood inundation maps. QA/QC of Socio-Demographic data which will be used for MHVRA. Coordination with District team regarding the survey status and Mauza Boundary delineation of flood affected Districts. <p>Name of Assignment: GIS Mapping and GIS/MIS for SWCC (Saline Water Conversion Corporation) Water Transmission Network</p> <p>Year: 2016 – 2017</p> <p>Position held: GIS Specialist</p> <p>Client: Saline Water Conversion Corporation (SWCC)</p> <p>Location: Riyadh, Saudi Arabia</p> <p>Activities Performed:</p> <ul style="list-style-type: none"> Development of GIS/MIS for the SWCC Water Transmission System (covers entire KSA). Coordinate with the field survey team for the ground verification of SWCC Assets. i.e. Drain and Vent Stations etc. Present the GIS/MIS to Client/SWCC Engineers and Managers in each Desalination Plant. <p>Name of Assignment: Development of Enterprise Geodatabase and Web-GIS Portal for MEWA (Ministry of Environment, Water and Agriculture), Riyadh, KSA.</p> <p>Year: 2015 – 2016</p> <p>Position held: Geodatabase/GIS Expert</p> <p>Client: Ministry of Environment Water Agriculture (MEWA)</p> <p>Location: Riyadh, Saudi Arabia</p> <p>Activities Performed:</p> <ul style="list-style-type: none"> Creating and Configuring the Geodatabase in Oracle. Data compilation from various sources and formats and QA/QC check. Import Geospatial data into Enterprise Geodatabase. Implementation of Geodatabase Standards. Management of Centralized GIS Database System. Administering ArcGIS Server. Feasibility Study for the implementation of NSDI in coordination with ESRI Saudi Arabia. Cartographic map generation as per client need. Provide the technical support and training to client. <p>Name of Assignment:</p> <ul style="list-style-type: none"> Planning and Preparation of Detailed Design & PC-1 of 7 Medium Dams in Kirthar Mountain Range in Kohistan Region, Sindh. Monitoring and Evaluation (M&E) for Punjab Barrages Improvement Phase II Project (PBIP-II) Jinnah Barrage – <i>WB funded</i> Preparation of Land-use Classification, Re-classification and Redevelopment Plan for the Rawalpindi City. Feasibility Study of 2x50 MW Coal Fired Power Plant in Lahore and Faisalabad. <p>Year: 2012 – 2015</p> <p>Position held: GIS Analyst</p> <p>Client: Small Dam Organization, Punjab Irrigation Department, P.D.A. Punjab Power Development Company Limited</p> <p>Location: Lahore</p>





Detailed Tasks Assigned on Consultant's Team of Experts:	Reference to Prior Work/Assignments that Best Illustrates Capability to Handle the Assigned Tasks
	<p>Activities Performed: Planning and Preparation of Detailed Design & PC-1 of 7 Medium Dams in Kirthar Mountain Range in Kohistan Region, Sindh.</p> <ul style="list-style-type: none"> • Procurement of Survey of Pakistan (SOP) Topographic Sheet, DEM, Satellite Images for the Project Area. • Geo-referencing of Topographic Sheets. • Supervision in Digitization of Topographic Sheets. • Geological Mapping of the Project Area. • Mapping of Proposed Dam sites and Catchment Area. • Drainage Network and Contour Mapping. • Land-use/Land-cover mapping of the Project Area. • Mapping of Proposed Canals and Distributaries network in Canal Command Area. <p>Monitoring and Evaluation (M&E) for Punjab Barrages Improvement Phase II Project (PBIP-II) Jinnah Barrage. World Bank Funded</p> <ul style="list-style-type: none"> • Mapping of Punjab Barrages and Irrigation System. • Mapping of Selected Villages for monitoring of Seed Distribution Program. • Mapping of Water Supply Schemes at Mahajir Branch, District Khushab. • Base maps preparation of LBDC and Eastern Saadqia canal system for field survey of Real time flow monitoring (RTFM) system. <p>Preparation of Land-use Classification, Re-classification and Redevelopment Plan for the Rawalpindi City.</p> <ul style="list-style-type: none"> • Digitization of High Resolution Satellite Image. • Preparation of Base Maps for Land-use Survey. • Supervision in Land-use Survey. • Land-use Mapping of Project Area. • Mapping of Commercial Identified Roads. • Prepare Redevelopment Plan for the Project Area. <p>Feasibility Study of 2x50 MW Coal Fired Power Plant in Lahore and Faisalabad.</p> <ul style="list-style-type: none"> • Land-use Mapping of Project Area. • Suitability Analysis for Coal Fired Power Plant location. • Find Optimum route for coal transport from three different Coal reservoirs in Punjab and Baluchistan provinces to Coal Fired Power Plant. • Develop Environmental Impact Assessment (EIA) Studies Maps. <p>Name of Assignment: TO BE-Automation of Defence Housing Authority (DHA), Lahore. Year: March 2012-Nov 2012 Position held: GIS Associate Client: Defence Housing Authority (DHA) Location: Lahore.</p> <p>Activities Performed:</p> <ul style="list-style-type: none"> • Collection of Master Planning Drawings, Satellite Images and Revenue Maps. • Land-use Mapping of DHA Administrative Area. • Geo-referencing and Digitization of Revenue Maps. <p>Name of Assignment: <ul style="list-style-type: none"> • District-Wise Forest Cover Assessment of Pakistan. • Land-cover Change Analysis of the Selected Hindu Kush-Himalayan (HKH) Region in Pakistan. Year: Aug 2011 – Feb 2012 Position held: GIS Associate Client: ICIMOD Location: Lahore</p> <p>Activities Performed:</p> <ul style="list-style-type: none"> • Procuring and Archiving Satellite Images, Interpretation and Analysis of Remote Sensing Data. • Land-cover Mapping of Project Area.






Detailed Tasks Assigned on Consultant's Team of Experts:	Reference to Prior Work/Assignments that Best Illustrates Capability to Handle the Assigned Tasks
	<ul style="list-style-type: none"> Land-cover Change Analysis of the Project Area.

Expert's contact information: (e-mail: bdu@mmpakistan.com phone: 0423-6292525-26-27)

Certification:

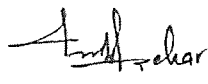
I, the undersigned, certify that to the best of my knowledge and belief, this CV correctly describes myself, my qualifications, and my experience, and I am available, as and when necessary, to undertake the assignment in case of an award. I understand that any misstatement or misrepresentation described herein may lead to my disqualification or dismissal by the Client, and/or sanctions by the Bank.

 Umar Javaid
 Name of Expert

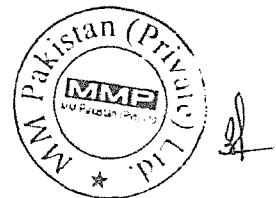
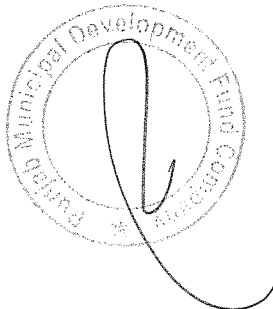

 Signature


Date: 29 September 2021
 Day/Month/Year

 Muhammad Irfan Gohar
 Name of authorized Representative of the Consultant


 Signature

Date: 29 September 2021
 Day/Month/Year




 Umar Javaid



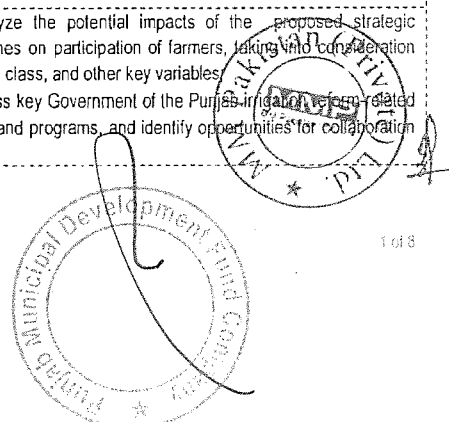
Curriculum Vitae (CV)

Position Title and No.	:	K-5, Social Safeguard Specialist
Name of Expert	:	Ihsan-ul-Haq Farooqi
Date of Birth	:	17 September 1973
Country of Citizenship/Residence	:	Pakistani
Education	:	

- M.A, Sociology, Department of Sociology, University of the Punjab, Lahore, 1995-97
- M.A, History, University of the Punjab, Lahore, 1998
- M.A., Political Science, University of the Punjab, Lahore, 1999

Employment Record:

Period	Employing organization and your title / position. Contact information for references	Country	Summary of activities performed relevant to the Assignment
2011 to date	<p>Employer: MM Pakistan (Pvt.) Limited Position: Social Development Specialist Ref Contact: 042-36363234, 36292525-8 bcu@mmepakistan.com M. Irfan Gohar Manager (Business Development)</p>	Punjab, Pakistan	<ul style="list-style-type: none"> • Leading, motivating and managing a team in all aspects of social development/resettlement projects. • Identification of target groups and their engagement by consultation process. • To determine the social/resettlement cost for tariff that provides sustainable growth of power sector. • Identification of project affectees and beneficiaries and community orientation, advice and assistance in addressing basic needs. • Conducting information closure session with affectees, institutions, and communities. • Identification of vulnerable and indigenous people. • Process of need assessment. • Preparation of affectees profile and analysis. • Review of legal framework and policy issues. • Preparation of compensation packages • Preparation of income restoration, livelihood and community development programs. • Suggesting implementation and monitoring arrangements.
2009 to 2011	<p>Employer: Punjab Irrigation & Drainage Authority (PIDA) Govt. of the Punjab Position: Manager (Social Mobilization Cell) Ref Contact: +92 42 99212771-72-73 Pidahq@yahoo.com pidahq@yahoo.com Shaique Hussain Abidi DGM (SM)</p>	Punjab, Pakistan	<ul style="list-style-type: none"> • Leading, motivating and managing a team in all aspects of estimating, planning and resource evaluation. • Social mobilization activities regarding participatory irrigation management. • Maintaining proper documentation (general project plans, action items, timelines, call notes, etc.). • Managing project funding and resources, negotiating project changes, and adjusting resources across multiple projects. • Developing and managing tasks to drive improvements and deliver performance. • Establish an effective grievance mechanism. • Maintain and update the complaints record.
2008 to 2009	<p>Employer: Punjab Irrigation & Drainage Authority (PIDA) Position: Resettlement Specialist Ref Contact: +92 42 99212771-72-73 Pidahq@yahoo.com</p>	Punjab, Pakistan	<ul style="list-style-type: none"> • To analyze the potential impacts of the proposed strategic approaches on participation of farmers, taking into consideration ethnicity, class, and other key variables. • To assess key Government of the Punjab irrigation reform-related policies and programs, and identify opportunities for collaboration



Period	Employing organization and your title / position. Contact information for references	Country	Summary of activities performed relevant to the Assignment
	pidahq@yahoo.com Shaique Hussain Abidi DGM (SM)		and mutual strengthening of approaches between community and government. <ul style="list-style-type: none"> • Identification of vulnerable and indigenous people. • Identification of project affectees and beneficiaries. • To prepare public consultation plan. • Review and finalization of land acquisition and resettlement plan. • Monitoring of social impact assessment.
2002 to 2007	Employer: (PIDA) Government of the Punjab. Position: Worked as Field Officer Ref Contact: +92 42 99212771-72-73 Pida_hq@yahoo.com pidahq@yahoo.com Shaique Hussain Abidi DGM (SM)	Punjab, Pakistan	<ul style="list-style-type: none"> • Responsible for delivering development projects of varying size and complexity and responsible for directing, organizing and controlling project activities, under the direction of a Project Manager (PM) & Project Director. • Social mobilization activities regarding participatory irrigation management.
1998 to 2001	Employer: "LIFE" (Live in Flawless Environment) NGO Position: Worked as Research Associate (Cultural Wing) Ref Contact: +92 42 6372373 Waqar Ahmed (SG)	Punjab, Pakistan	<ul style="list-style-type: none"> • Integral member of the project team responsible for delivering development projects of varying size and complexity and responsible for directing, organizing and controlling project activities, under the direction of a Project Manager (PM) & Project Director. • Identify and arrange introductory meetings with the contact persons for the program expansion. • Hold first dialogues meetings with the communities. • Introduce the program concept and develop a long-term vision of the program in the organized communities.

Membership in Professional Associations and Publications:

- Member of International Council of Sociology.
- Member of Sociology Network Pakistan.
- Member of Lahore Art Forum an NGO working for the promotion of literacy and cultural activities in the city of Lahore.
- Member of Theatre Group JAGWATI a group working for establishing a noncommercial theatre to raise the consciousness of communities regarding their socio-economic problems.

Language Skills (indicate only languages in which you can work): English, Urdu and Punjabi

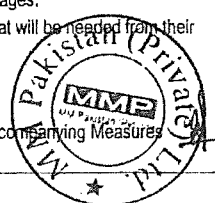
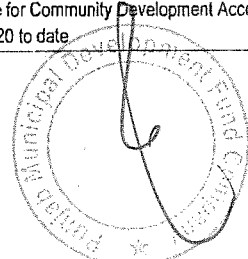
Adequacy for the Assignment:

Detailed Tasks Assigned on Consultant's Team of Experts:	Reference to Prior Work/Assignments that Best Illustrates Capability to Handle the Assigned Tasks
<ul style="list-style-type: none"> • Designing of survey methodology and conduct all socio economic surveys required to establish a representative socio-economic baseline of the related area of the proposed project. • Prepare a socioeconomic impact assessment of the project. 	<p>Name of Assignment: Improving access to the water and sanitation services in rural areas of Punjab - 30 selected villages in 08 tehsils / districts May 2020 to date Position held: Social Expert Client: World Bank Location: Punjab Activities Performed:</p> <ul style="list-style-type: none"> • As Social expert, responsible to get socio economic data from the selected villages. • Work with technical teams to define the quality of outcome/impact evidence that will be needed from their programs. <p>Name of Assignment: Rehabilitation of Warsak Hydropower Plant Assistance for Community Development Accompanying Measures Year: August 2020 to date</p>



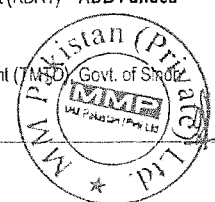
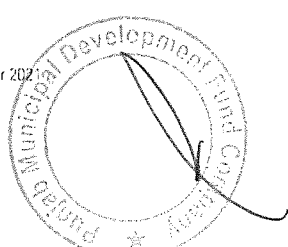
Ihsan-ul-Haq Farooqi

29 September 2021



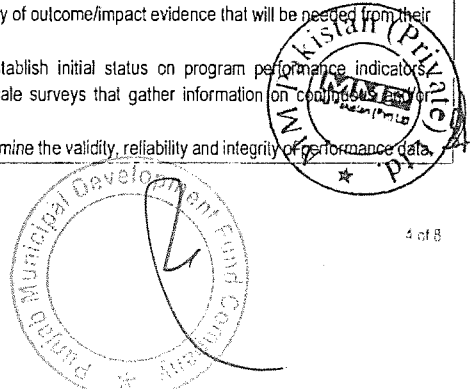


Detailed Tasks Assigned on Consultant's Team of Experts:	Reference to Prior Work/Assignments that Best Illustrates Capability to Handle the Assigned Tasks
<ul style="list-style-type: none"> Design and implement the grievance redress mechanism of the project, and install it on site at the early stage of project design. Such as identify community representatives and sensitize them to the steps and stages of the GRM. 	<p>Position held: Social Development Specialist Client: WAPDA Location: Peshawar Activities Performed: Preparation of Environmental and Social Impact Assessment (ESIA) report, Consultation, Participation and Information disclosure process, Assessment and Impacts Reports and Preparation of Socio-Economic Baseline and Social Development Plan.</p> <p>Name of Assignment: Peshawar Sustainable Bus Rapid Transit Corridor Project – ADB funded Year: Jan 2017 to date Position held: Sociologist / Resettlement Expert Client: PDA Location: Peshawar Activities Performed:</p> <ul style="list-style-type: none"> Identified and addressed barriers to successful resettlement as necessary Assisted the international expert to review and understand all laws and regulations pertaining to land acquisition, resettlement, and assistance to disadvantaged citizens, and ensure that local governments and affected communities understand the requirements of ADB policy and LARP requirements. Reviewed the LARP and updated as necessary. Coordinated with design review team during review of detailed design to discuss and explore design measure/options to avoid/minimize the resettlement impacts of subprojects and ensure involuntary resettlement impacts are minimized, if not avoided. Based on detailed design review, prepare social safeguards due diligence reports conforming sub projects/projects road sections with and without LAR impacts including linear plans with clearly marked LAR and non-LAR sections and assisted PIU and the Engineer in notifying the LAR sections to contractors that are not open for construction. <p>Name of Assignment: Construction Supervision of Kurram Tangi Dam – USAID funded Year: 2019 Position held: Senior Sociologist Client: WAODA Location: North Waziristan Activities Performed:</p> <ul style="list-style-type: none"> Conducted health, safety and social audit to the labor camps and construction activities for safe and healthy social environment. Consultation with communities for resettlement issues. <p>Name of Assignment: Master Planning for Gilgit and Naltar 2040 Year: June 2019 to August, 2020 Position held: Senior Sociologist Client: Gilgit Development Authority Location: Gilgit Activities Performed:</p> <ul style="list-style-type: none"> Serve as sociologist on assessments of different sectors conducted by the program as required. May design/conduct baseline studies to establish initial status on program performance indicators. <p>Name of Assignment: Karachi Red Line Bus Rapid Transit Project (KBRT) – ADB Funded Year: March, 2018 to December, 2018 Position held: National Resettlement Specialist Client: The Transport and Mass Transit Department (TMD), Govt. of Sindh Location: Karachi Activities Performed:</p>





Detailed Tasks Assigned on Consultant's Team of Experts:	Reference to Prior Work/Assignments that Best Illustrates Capability to Handle the Assigned Tasks
	<p>Coordinated the international expert to review and understand all laws and regulations pertaining to land acquisition, resettlement, and assistance to disadvantaged citizens, and ensure that local governments and affected communities understand the requirements of ADB policy and LARP requirements.</p> <p>Name of Assignment: Construction of Rajanpur – D.G Khan Section as 4-Lane Highway and Dualization and Rehabilitation of D.G Khan – D.I Khan Section of N-55 (237 Km). Project of (Central Asia Regional Economic Cooperation (CAREC)</p> <p>Year: January, 2018 to January, 2019</p> <p>Position held: Social/Resettlement Specialist</p> <p>Client: National Highway Authority (NHA)</p> <p>Location: D.I Khan- D.G Khan and Rajanpur</p> <p>Activities Performed:</p> <ul style="list-style-type: none"> Identified and addressed barriers to successful resettlement as necessary. Conducted socio-economic, baseline, impact assessment survey for ESIA and LARP. <ul style="list-style-type: none"> Identification of project affectees and beneficiaries and community orientation, advice and assistance in addressing basic needs. Conducting information closure session with affectees, institutions, and communities. Identification of vulnerable and indigenous people. Process of need assessment. Preparation of affectees profile and analysis. Review of legal framework and policy issues. Preparation of compensation packages. <p>Name of Assignment: PAK-Enabling Economic Corridors through Sustainable Transport Sector Development, Pakistan Transport Policy and Management Firm</p> <p>Year: September, 2018 to December, 2018</p> <p>Position held: National Social Expert</p> <p>Client: Ministry of Planning, Development and Reform</p> <p>Location: Islamabad</p> <p>Activities Performed:</p> <ul style="list-style-type: none"> Serve as national social expert on assessments of different transport sectors conducted by the program as required. Prepared socioeconomic profile of transport sector and transport sector problems in Pakistan. <p>Name of Assignment: Punjab Irrigated-Agriculture Productivity Improvement Project (PIPIP) – WB funded</p> <p>Year: Sep 2016 to Dec 2016</p> <p>Position held: Sociologist / Resettlement Expert</p> <p>Client: Agriculture Department, Govt. of the Punjab</p> <p>Location: Lahore</p> <p>Activities Performed:</p> <ul style="list-style-type: none"> Serve as evaluation team members on specific evaluations and assessments conducted by the program as required. Help technical teams develop/articulate the theory of change or development hypotheses and critical assumptions on which program/project success depends. Identifying appropriate performance indicators for tracking results and monitoring critical assumptions and/or preparing comprehensive performance monitoring plans. Work with technical teams to define the quality of outcome/impact evidence that will be needed from their programs. May design/conduct baseline studies to establish initial status on program performance indicators including institutional assessments, large scale surveys that gather information on continuous and/or categorical variables, etc. Conducting data quality assessments to determine the validity, reliability and integrity of performance data.

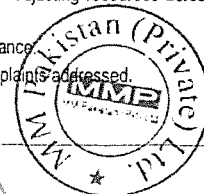
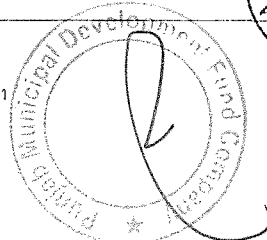




Detailed Tasks Assigned on Consultant's Team of Experts:	Reference to Prior Work/Assignments that Best Illustrates Capability to Handle the Assigned Tasks
	<p>gathered to monitor program performance.</p> <ul style="list-style-type: none"> Assisted and supervised in conducting detailed measurement survey of impacted assets, updating of the impact inventory, and census of DPs and prepared updated Land Acquisition and Resettlement Plans for Client's review. Assisted in organizing and conducting meaningful consultations with affected/displaced people to ensure the concerns raised are adequately addressed during design review, the Land Acquisition Resettlement Plans have been fully disclosed and the DPs informed on the eligibility criteria, entitlements, compensation payment mechanism and project based grievance redress system. <p>Name of Assignment: Karot Hydropower Project Year: May 2017 to December 2017 Position held: Sociologist/Resettlement Specialist Client: KPLC Location: Islamabad and Azad Kashmir Activities Performed:</p> <ul style="list-style-type: none"> Conducted social baseline, socio-economic and impact assessment survey for LARP studies. Prepared Need Assessment Report, LARP, Community Action Plan and GAP report. <p>Name of Assignment: Feasibility Studies of Plant and Construction Supervision of 50 MW Imported Thermal Power Projects on EPC Basis at Industrial Estates (i) Sunder Lahore (ii) M-3 Industrial City Faisalabad Year: March 2016 to December 2016 Position held: Senior Sociologist Client: Punjab Power Development Company Limited (PPDCL) Location: Lahore and Faisalabad Activities Performed: Conducted socio-economic baseline and impact assessment survey for ESIA studies.</p> <p>Name of Assignment: Feasibility Study & detailed design of new 4-lane express way starting from Korai on Indus highway N-55 (Km 930+00) traversing through different towns crossing Indus river at Kala Bagh (Mianwali) connecting Pindigeb Fatehjang and terminating at Bahar Barahma interchange on M1 Year: Project of (China Pakistan Economic Corridor CPEC) January, 2016 to September, 2016 Position held: Social/Resettlement Specialist Client: National Highway Authority (NHA) Location: Islamabad, Mianwali and Dera Ismail Khan Activities Performed:</p> <ul style="list-style-type: none"> Preparation of Environmental and Social Impact Assessment (ESIA) report, Consultation, Participation and Information disclosure process, Assessment and Impacts Reports and Preparation of Socio-Economic Baseline and Social Action Plan. Track and monitor day to day LAR implementation progress and make adjustments in implementation schedule to achieve the targeted timelines and provide safeguards related input in project implementation monthly progress reports. Monitor implementation of Resettlement Plans, consolidate LARP implementation progress and prepare quality social monitoring reports periodically <p>Name of Assignment: Tarbela 5th Extension Hydropower Project – WB funded Year: 2015 to 2016 Position held: Social Development Expert Client: WAPDA Location: Ghazi Activities Performed:</p> <ul style="list-style-type: none"> Preparation of methodology and tools for primary data collection for socio-economic baseline and overall



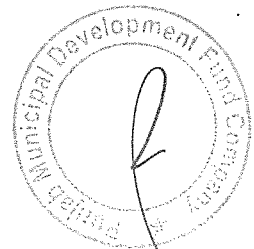
Detailed Tasks Assigned on Consultant's Team of Experts:	Reference to Prior Work/Assignments that Best Illustrates Capability to Handle the Assigned Tasks
	<p>project impact assessment in project area. Acquisition of relevant secondary data for Social Action Plan (SAP).</p> <ul style="list-style-type: none"> Processing and analyses of data and preparation of baseline, socio-economic analysis and overall project impacts reports. <p>Name of Assignment: 50 MGD Water Treatment Plant Project Year: 2017 Position held: Sociologist/Resettlement Specialist Client: WASA Location: Lahore Activities Performed:</p> <ul style="list-style-type: none"> Processing and analyses of data and preparation of baseline, socio-economic and overall project impacts reports. Conducted socio-economic, baseline, impact assessment survey for ESIA and LARP. <p>Name of Assignment: Rehabilitation and Modernization of Jinnah Barrage Project Phase II – WB funded Year: 2011 to 2015 Position held: Field Sociologist Client: Irrigation Department Location: Punjab Activities Performed:</p> <ul style="list-style-type: none"> Monitoring and evaluation of Punjab Irrigation and reform process with reference to farmer's organizations, Area Water Boards and PIDA level Developing scientific monitoring and evaluation system for social development assistance action program for small farmers Monitoring of farmers organizations (FOs) and water course associations (WCAs) in project area. Preparation of methodology and tools for primary data collection for socio-economic baseline and overall project impact assessment in project area. Acquisition of relevant secondary data for M&E of Social Development Action Plan (SDAP) and Institutional Reforms in Punjab. Field data collection and Supervision of field teams for primary data collection. Processing and analyses of data and preparation of baseline, monitoring and overall project impacts reports. To maintain updated LAR database and In implementation of Resettlement Plans in the subproject areas before physical or economical displacement and subsequent commencement of works. To review of LAR issues that may emerge during execution of civil works, prepare and implement corrective actions/measure consistent with project safeguards requirements as outlined in the LARF and LARPs. <p>Name of Assignment: Irrigation Reforms Project Year: 2009 to 2011 Position held: Manager (Social Mobilization Cell) Client: Punjab Irrigation & Drainage Authority (PIDA) Govt. of the Punjab Location: Punjab Activities Performed:</p> <ul style="list-style-type: none"> Leading, motivating and managing a team in all aspects of estimating, planning and resource evaluation. Social mobilization activities regarding participatory irrigation management. Maintaining proper documentation (general project plans, action items, timelines, call notes, etc.). Managing project funding and resources, negotiating project changes, and adjusting resources across multiple projects. Developing and managing tasks to drive improvements and deliver performance. Responsible for providing technical assistance to DPs in the areas and complaints addressed. Establish an effective grievance mechanism. Maintain and update the complaints record.

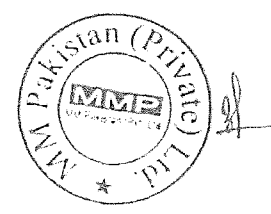


Detailed Tasks Assigned on Consultant's Team of Experts:	Reference to Prior Work/Assignments that Best Illustrates Capability to Handle the Assigned Tasks
	<p>Name of Assignment: Lower Bari Canal improvement project – <i>ADB funded</i></p> <p>Year: 2008-20019</p> <p>Position held: Resettlement Expert</p> <p>Client: Punjab Irrigation & Drainage Authority (PIDA) Govt. of the Punjab</p> <p>Location: Lahore</p> <p>Activities Performed:</p> <ul style="list-style-type: none"> • To analyze the potential impacts of the proposed strategic approaches on participation of farmers, taking into consideration ethnicity, class, and other key variables; • To assess key Government of the Punjab irrigation reform-related policies and programs, and identify opportunities for collaboration and mutual strengthening of approaches between community and government. • To prepare public consultation plan. • Review and finalization of land acquisition and resettlement plan. • Monitoring of social impact assessment. <p>Name of Assignment: Participatory irrigation Management</p> <p>Year: 2002-2007</p> <p>Position held: Field Officer</p> <p>Client: Punjab Irrigation & Drainage Authority (PIDA) Govt. of the Punjab</p> <p>Location: Punjab</p> <p>Activities Performed:</p> <ul style="list-style-type: none"> • I am integral member of the project team responsible for delivering development projects of varying size and complexity and responsible for directing, organizing and controlling project Manager (PM) & Project Director. • Social mobilization activities regarding participatory irrigation management <p>Name of Assignment: Community Development Initiative 2020</p> <p>Year: 1998 to 2001</p> <p>Position held: Worked as Research Associate (Cultural Wing)</p> <p>Client: "LIFE" (Live in Flawless Environment) NGO</p> <p>Location: Punjab</p> <p>Activities Performed:</p> <ul style="list-style-type: none"> • Integral member of the project team responsible for delivering development projects of varying size and complexity and responsible for directing, organizing and controlling project activities, under the direction of a Project Manager (PM) & Project Director. • Identify and arrange introductory meetings with the contact persons for the program expansion. • Hold first dialogues meetings with the communities. • Introduce the program concept and develop a long-term vision of the program in the organized communities


 Imran-ul-Haq Farooqi



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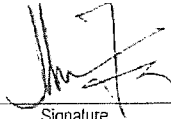
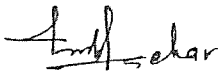


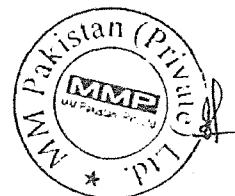
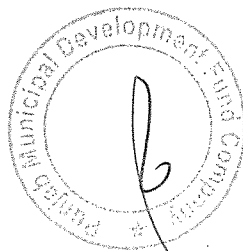


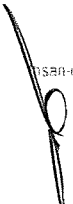
Expert's contact information: (e-mail: bdur@mmpakistan.com phone: 0423-6292525-26-27)

Certification:

I, the undersigned, certify that to the best of my knowledge and belief, this CV correctly describes myself, my qualifications, and my experience, and I am available, as and when necessary, to undertake the assignment in case of an award. I understand that any misstatement or misrepresentation described herein may lead to my disqualification or dismissal by the Client, and/or sanctions by the Bank.

Ihsan-ul-Haq Farooqi Name of Expert	 Signature	Date: 29 September 2021 Day/Month/Year
Muhammad Irfan Gohar Name of authorized Representative of the Consultant	 Signature	Date: 29 September 2021 Day/Month/Year




Ihsan-ul-Haq Farooqi

29 September 2021



Curriculum Vitae (CV)

Position Title and No.	:	K-6, Environmental Specialist
Name of Expert	:	Omer Rasheed Khan
Date of Birth	:	30-10-1983
Country of Citizenship / Residence	:	Pakistani

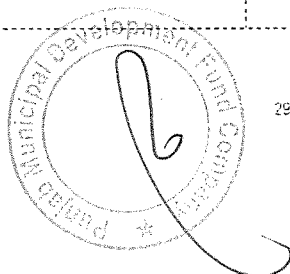
Education:

- MSc. Energy & Environmental Management Glasgow Caledonian University, UK 2006 to 2008
- BSc (Hons) Environmental Sciences; University of the Punjab, Lahore 2001 to 2004
- NEBOSH National Level-III (Occupational Health and Safety) Reid Kerr College, Paisley, UK 2009

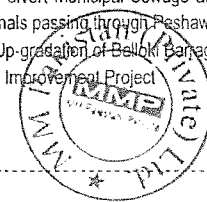
Employment Record relevant to the assignment:

Period	Employing organization and your title / position. Contact information for references	Country	Summary of activities performed relevant to the Assignment
Sep 2017 to date	Employer: Engineering General Consultants (Pvt.) Ltd Position: Environmental Specialist Ref Contact: Muhammad Nasir Manager Business Development T +92 423 5754751 E Muhammad.Nasir@smec.com	Pakistan	Worked as Environmental Specialist on Central Asian Regional Economic Cooperation, Regional Improving Boarder Services Project (CAREC-RIBS)
January 2010 to August 2017	Employer: MM Pakistan (Pvt.) Ltd. Position: Sr. Environmentalist / Asst. Environmentalist / Jr. Environmentalist / Health, Safety & Environmental Coordinator Ref Contact: M. Irfan Gohar Manager (Business Development) 042-36363234, 36292525-8 bdu@mmpakistan.com	Pakistan	Worked on following projects; <ul style="list-style-type: none"> • Peshawar Sustainable Bus Rapid Transit Corridor Project • Feasibility Study of New Four Lane Motorway Starting from Yarak on Indus Highway N-55 to Hakla on M-1 (Total length: 285 km) • Feasibility Study for Extension of Water Resources for Faisalabad City Phase-II • Tarbela 5th Extension Hydropower Project (1410MW) along 500 KV (110 Km) Power Evacuation line from Tarbela to Rawat (WB Funded Project) • Consultancy Services for 2x50 MW (net) Coal Fired Power at M-3 Industrial Estate, Faisalabad • Consultancy Services for 2x50 MW Coal Fired Power Plant at Sunder, Lahore • Satpara Development Project in Satpara Dam Command Area, Skardu • Small Dams in District Dadu, Larkana and Jamshoro • Monitoring and Evaluation of Jinnah Barrage Rehabilitation & Modernization Project Phase-II • Tarbela 4th Extension Hydropower Project (1410MW) • Feasibility Study to divert municipal Sewage and solid waste entering into the canals passing through Peshawar valley • Rehabilitation and Up-gradation of Belloki Barrage • Sindh Water Sector Improvement Project

Omer Rasheed Khan



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Membership in Professional Associations and Publications:

- Member of Energy Institute, UK

Language Skills (indicate only languages in which you can work): English, Urdu & Punjabi

Adequacy for the Assignment:

Detailed Tasks Assigned on Consultant's Team of Experts:	Reference to Prior Work/Assignments that Best Illustrates Capability to Handle the Assigned Tasks	
<ul style="list-style-type: none"> • To identify/ investigate and preparing a comprehensive profile of the likely project impacts on the physical (water, soil, air, noise etc.), and biological (flora and fauna) features and suggest solutions and prepare framework to ensure that such damage is to the minimum. • To describe the physical Environment, base line climate condition for the site, topography, geology, soil and productivity. • To provide information on the consideration of alternatives/options for site locations and layouts of the Project to avoid and minimize potential environmental impacts to environmentally sensitive areas and other sensitive uses; to compare the environmental benefits and dis-benefits of each of the different options; to provide reasons for selecting the preferred options. • Proposing the provision of infrastructure or mitigation measures so as to minimize pollution, environmental disturbance and nuisance during construction and operation of the project. 	<p>Name of Assignment: Central Asian Regional Economic Cooperation, Regional Improving Boarder Services Project (CAREC-RIBS)- <i>ADB funded</i></p> <p>Year: Sep 2017 to Date</p> <p>Position held: Environmental Specialist</p> <p>Client: FBR and Asian Development Bank</p> <p>Location: Islamabad</p> <p>Activities Performed:</p> <ul style="list-style-type: none"> • Preparing Semi-SSEMP Monitoring Report for ADB (Approved by ADB). • Day-to-day monitoring of SSEMP relevant to national and provincial Laws/facts/regulations i.e., environmental Protection Act 1997, KP and Balochistan Factories Act, Labor laws, Punjab Occupational Health and Safety Act etc. by contractors., • Ensure environmental monitoring of Air Quality, Noise, Drinking Water Quality and Waste Water are carried by the EPC contractors regularly using services of EPA certified Labs. • Review of Project/s Site-Specific Environmental Management Plan/s (SSEMPs) prepared by EPC Contractors and obtaining its approval from client and relevant EPAs. • Highlighting any non-compliance with respect to environment, social, health and safety arrangement regarding the bank's requirement; and • Perform site surveys and assessments to support studies relating to control discharges, emissions and wastes. • Promote environmental awareness to enhance compliance with Project's environmental requirements. • Supervise environmental inspectors and EPC Contractors' personnel to ensure environmental monitoring activities are timely completed. • Review environmental, social, health and safety related deliverables for Early Site Works and EPC Contractors and participates in technical clarification process during bid review period. 	
	<p>Name of Assignment: Peshawar Sustainable Bus Rapid Transit Corridor Project – <i>ADB funded</i></p> <p>Year: Jan 2017 to August 2017</p> <p>Position held: Senior Environmentalist</p> <p>Client: Transport and Mass-Transit Department, Govt of KPK</p> <p>Location: Peshawar</p> <p>Activities Performed:</p> <ul style="list-style-type: none"> • Prepared Environmental Impact Assessment (EIA) that includes Environmental Management Plan and Health and Safety Plan as per ADB Environmental and Social Safeguards (Approved by ADB). • Stakeholders' consultations as per ADB Environmental and Social Safeguards. • Documentation for NOC from KP-EPA and organized public hearing. 	
	<p>Name of Assignment: Feasibility Study of New Four Lane Motorway Starting from Yarak on Indus Highway N-55 to Hakla on M-1 (Total length: 285 km)</p> <p>Year: Feb 2016 To Dec 2016</p> <p>Position held: Senior Environmentalist</p> <p>Client: NHA</p> <p>Location: Pakistan</p> <p>Activities Performed:</p> <ul style="list-style-type: none"> • Prepared Environmental Impact Assessment (EIA) that includes Environmental Management Plan and Health and Safety Plan as per Punjab (Pb) and KP Environmental Protection act • Stakeholders consultations 	



Omer Rasheed Khan



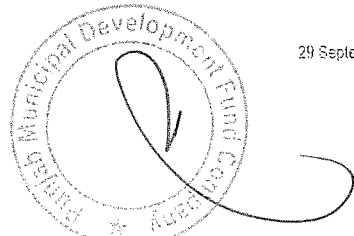
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Detailed Tasks Assigned on Consultant's Team of Experts:	Reference to Prior Work/Assignments that Best Illustrates Capability to Handle the Assigned Tasks
	<ul style="list-style-type: none"> Documentation for NOC from KP-EPA and Punjab EPAs and organized public hearings. <p>Name of Assignment: Feasibility Study for Extension of Water Resources for Faisalabad City Phase-II</p> <p>Year: Nov 2015 To Jan 2016</p> <p>Position held: Sr. Environmentalist</p> <p>Client: Govt. of Punjab</p> <p>Location: Faisalabad</p> <p>Activities Performed:</p> <ul style="list-style-type: none"> Prepared Initial Environmental Examination (IEE) that includes Environmental Management Plan and Health and Safety Plan as per Pb Environmental protection Act. Prepared Health, Safety and Environment Plan (HSE Plan) <p>Name of Assignment: Tarbela 5th Extension Hydropower Project (1410MW) along 500 KV (110 Km) Power Evacuation line from Tarbela to Rawat (WB Funded Project)</p> <p>Year: Dec 2014 To Oct 2015</p> <p>Position held: Senior Environmentalist</p> <p>Client: World Bank (WB) and WAPDA</p> <p>Location: Tarbela</p> <p>Activities Performed:</p> <ul style="list-style-type: none"> Prepared Environmental and Social Assessment (ESA) that includes Environmental Management Plan and Health and Safety Plan for Powerhouse and associated infrastructure and another ESA that includes Environmental Management Plan and Health and Safety Plan for 500 KV power evacuation transmission line from Tarbela to Rawat (103Km) as per WB Environmental and Social Policies/ guidelines. (Both Reports Approved by World Bank) Prepared Scoping Document for powerhouse ESA as per WB Environmental and Social Policies/ guidelines; Prepared environmental chapter in project feasibility report; Public consultation and institutional stakeholder's engagements; Prepared Term of Reference (TOR) for flora, fauna (terrestrial birds, mammals and reptiles) and fisheries surveys; and Documentation for NOC from KP-EPA and organized public hearing. <p>Name of Assignment: Consultancy Services for 2x50 MW (net) Coal Fired Power at M-3 Industrial Estate, Faisalabad</p> <p>Year: Feb-2014 to Mar-2014</p> <p>Position held: Senior Environmentalist</p> <p>Client: Punjab Power Development Company Limited</p> <p>Location: Faisalabad</p> <p>Activities Performed:</p> <ul style="list-style-type: none"> Prepared Environmental and Social Impact Assessment (ESIA) that includes Environmental Management Plan and Health and Safety Plan. Documentation for NOC from Pb-EPA and organized public hearing. <p>Name of Assignment: Consultancy Services for 2x50 MW Coal Fired Power Plant at Sunder, Lahore</p> <p>Year: Dec-2013 to Jan-2014</p> <p>Position held: Senior Environmentalist</p> <p>Client: Punjab Power Development Company Limited</p> <p>Location: Lahore</p> <p>Activities Performed:</p> <ul style="list-style-type: none"> Prepared Environmental and Social Impact Assessment (ESIA) that includes Environmental Management Plan and Health and Safety Plan. Documentation for NOC from Pb-EPA and organized public hearing.



Omer Rasheed Khan



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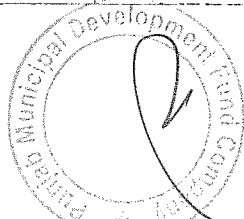


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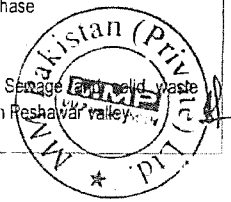
Detailed Tasks Assigned on Consultant's Team of Experts	Reference to Prior Work/Assignments that Best Illustrates Capability to Handle the Assigned Tasks
	<p>Name of Assignment: Satpara Development Project in Satpara Dam Command Area, Skardu</p> <p>Year: Dec 2013 To Jan 2014</p> <p>Position held: Senior Environmentalist</p> <p>Client: USAID and Aga Khan Foundation Pakistan</p> <p>Location: Satpara</p> <p>Activities Performed:</p> <ul style="list-style-type: none"> Prepared Programmatic Environmental Determination Form (PEDF) for USAID as per 22CFR216 (Approved by USAID). Prepared IEE that includes Environmental Management Plan and Health and Safety Plan for GB-EPA. <p>Name of Assignment: Small Dams in District Dadu, Larkana and Jamshoro</p> <p>Year: Jan 2013 To Mar 2013</p> <p>Position held: Asst. Environmentalist</p> <p>Client: SIDA, Govt. of Sindh</p> <p>Location: Sindh</p> <p>Activities Performed:</p> <ul style="list-style-type: none"> Prepared Environmental Assessment (EA) of all sites. Prepared Kirthar National Park Management Plan. Environmental Baseline studies Field-testing of water sample for drinking water quality testing using combined pH, EC, TDS and Temperature meter. <p>Name of Assignment: Monitoring and Evaluation of Jinnah Barrage Rehabilitation & Modernization Project Phase-II – WB funded</p> <p>Year: Sep 2011 To Nov 2014</p> <p>Position held: Sr. Environmentalist</p> <p>Client: WAPDA</p> <p>Location: Punjab</p> <p>Activities Performed:</p> <ul style="list-style-type: none"> Monitoring the effective implementation of Environmental Management and Health and Safety Plan (EMP) both Cause and Effect Monitoring as per WB Environmental and Social Policies/ guidelines; Preparation of Quarterly Monitoring report of EMP, H&S and SDAP submitted to World Bank (Approved by World Bank). Prepared chapters in Baseline report, Detailed Methodology and Strategy Report. <p>Name of Assignment: Tarbela 4th Extension Hydropower Project (1410MW) – WB funded</p> <p>Year: Nov 2010 To Aug 2011</p> <p>Position held: Asst. Environmentalist</p> <p>Client: WB and WAPDA</p> <p>Location: Tarbela</p> <p>Activities Performed:</p> <ul style="list-style-type: none"> Prepared Environmental and Social Assessment (ESA) that includes Environmental Management Plan and Health and Safety Plan as per WB Environmental and Social Policies/ guidelines. Environmental Awareness Programs through workshops, seminars and public consultations in Topi, Ghazi, Islamabad and Peshawar. Traffic count survey to predict the future influence of the construction phase Preparation of baseline Maps using Arc GIS. <p>Name of Assignment: Feasibility Study to divert municipal Sewage and solid waste entering into the canals passing through Reshwar valley.</p> <p>Year: Sep 2010 To Nov 2010</p>



Omer Rasheed Khan



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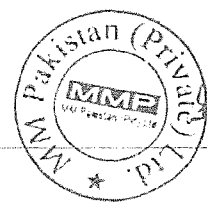
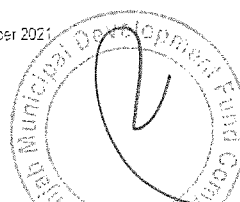


Detailed Tasks Assigned on Consultant's Team of Experts:	Reference to Prior Work/Assignments that Best Illustrates Capability to Handle the Assigned Tasks
	<p>Position held: Solid Waste Management Expert Client: Irrigation Department KP, Gov. of KP. Location: Peshawar Activities Performed:</p> <ul style="list-style-type: none"> • Prepared report "Determination of quantity and quality of solid waste entering into the canals"; • Per capita waste determination study. • Determination of routes for collection of solid waste; • Determination of the future needs of solid waste management practice. <p>Name of Assignment: Rehabilitation and Up-gradation of Balloki Barrage – <i>ADB funded</i> Year: Jun 2010 To Jul 2010 Position held: Jr. Environmentalist Client: Punjab Irrigation and Power Department Location: ADB and WAPDA Activities Performed:</p> <ul style="list-style-type: none"> • Assisted in preparation of EMP that includes Environmental Management Plan and Health and Safety Plan of Balloki Barrage; and • Environmental Baseline studies <p>Name of Assignment: Sindh Water Sector Improvement Project – <i>WB funded</i> Year: Feb 2010 To Aug 2011 Position held: Asst. Environmentalist Client: World Bank / Govt. of Pakistan Location: Sindh Activities Performed:</p> <ul style="list-style-type: none"> • Prepared Environmental Assessment and Management Plans (EAMP) for main/ branch canals (Nara, Khipro and Mithrao) as per WB Environmental and Social Policies/ guidelines. • Prepared Environmental Management Plans (EMP) for minors and distributaries (First 16 of total 114 reports) as per WB Environmental and Social Policies/ guidelines. • Prepared monitoring reports on implementation of EMP. • Prepared Game Reserve Management plan (Nara canal game reserve). • Environmental awareness programs. <p>Name of Assignment: Various Projects Year: Jan 2010 To August 2017 Position held: Health and Safety Coordinator Client: Various Location: Pakistan Activities Performed:</p> <ul style="list-style-type: none"> • Manage health and Safety arrangements of the company to comply with ISO-9001:2008. • Assist the organization with the strategic planning of the risk management; • Provide advice and support to the relevant senior managers who have a designated lead responsibility for ensuring the organization meets required risk management standards; • Monthly H&S report preparation and submission to regional office in UAE. • Participation in Quarterly H&S meeting of all Safety advisor of units within Middle East and South Asia Region (MESA). • Health & Safety Yearly Review; • Record Maintenance; • Health & Safety arrangements of the office • Conduct all in-house Health and Safety training. • Health & Safety internal Audit of the Offices around Pakistan; • Monthly reports preparation of all the accidents and near misses; • Quarterly fire drill practice of the office; • Arrange quarterly meeting with fire wardens and First Aiders;

Omair Rashid Khan

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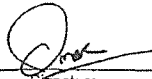
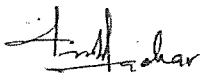


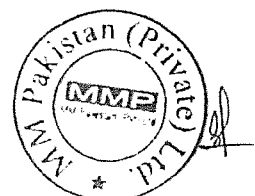
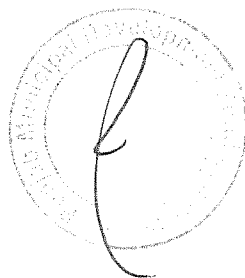
Detailed Tasks Assigned on Consultant's Team of Experts:	Reference to Prior Work/Assignments that Best Illustrates Capability to Handle the Assigned Tasks
	<ul style="list-style-type: none"> • Risk assessment of the newly built projects offices. • Observe the current safety systems installed within the organization and identify the smooth functioning and inefficient areas of security.

Expert's contact information: (e-mail: bdu@mmpakistan.com phone: 0423-6292525-26-27)

Certification:

I, the undersigned, certify that to the best of my knowledge and belief, this CV correctly describes myself, my qualifications, and my experience, and I am available, as and when necessary, to undertake the assignment in case of an award. I understand that any misstatement or misrepresentation described herein may lead to my disqualification or dismissal by the Client, and/or sanctions by the Bank.

<p>_____</p> <p>Omer Rasheed Khan Name of Expert</p>	<p>_____</p>  Signature	<p>Date: _____</p> <p>29 September 2021 Day/Month/Year</p>
<p>_____</p> <p>Muhammad Ifan Gohar Name of authorized Representative of the Consultant</p>	<p>_____</p>  Signature	<p>Date: _____</p> <p>29 September 2021 Day/Month/Year</p>





Curriculum Vitae (CV)

Position Title and No.	:	K-7, Water Supply Specialist (Design)
Name of Expert	:	Wahaj Ahmad Farooqui
Date of Birth	:	16 th September 1977
Country of Citizenship / Residence	:	Pakistani

Education:

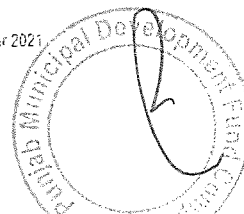
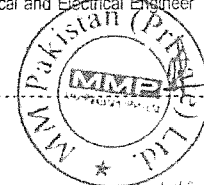
- M.Engg. (Environmental) from N.E.D University in 2004
- B.E. (Civil Engineering) from N.E.D University in 2001

Employment Record relevant to the assignment:

Period	Employing organization and your title / position. Contact information for references	Country	Summary of activities performed relevant to the Assignment
March 2015 - to date	Employer: InfraPlan (Pvt.) Ltd Karachi Position: Principal Engineer/Team Leader (Wet Utilities) Ref Contact: Muhammed Ahsan Siddique +92345 603 1356	Pakistan	<ul style="list-style-type: none"> • Design lead from concept stage to construction stage of infrastructure development works including potable water source identification, Sewage discharge methodology, water supply distribution, water transmission line, tube well installation, sewerage network, water and sewage pump stations, storm water network. (with detailed study of hydrological and topographical aspects of the project area) with various disposal techniques, concept plan of water & sewage treatment plants, preparation of respective layouts and detail drawings. • Preparation of specifications, BOQ, Preliminary and detailed design reports etc. • Coordination with different departments (Electrical, Architecture, Urban Planning, Roads and Highways, Quantity Survey etc.) within company. • Coordination meetings with client and site staff, project site visits, response to site queries etc. • Technical support to the client for submissions in government Departments
April 2012 - February 2015	Employer: EA Consulting (Pvt.) Ltd Karachi Position: Principal Engineer (Public Health Engg. Dept.) Ref Contact: Sohail Ahmed Shaikh +92 345 3922222	Pakistan	Supervising detailed design of water supply, sewerage network, storm water network, and Water and sewage treatment plants. Preparation PC-1 for government projects. Preparation of Tender documents including specifications, condition of contracts, BOQ, rate analysis and drawings. Preparation of Contract agreements, Feasibility Reports, Inception Reports, preliminary and detailed Design Reports. Coordination with different departments (Electrical, Mechanical, Roads and Highways, Quantity Survey etc.) within company. Coordination meetings with clients and site visits etc.
October 2010 - April 2012	Employer: NEC Consultants (Pvt.) Ltd Karachi Position: Manager (Engineering Design) Ref Contact: Muhammed Ali +92 321376 2581	Pakistan	Designing and supervising Environmental Hydraulic design, Process design and functional detailing. Supervising diversified team of Environmental, Civil, Mechanical and Electrical Engineer along with draftsmen.

Wahaj Ahmad Farooqui

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Period	Employing organization and your title / position. Contact information for references	Country	Summary of activities performed relevant to the Assignment
July 2010 - September 2010	Employer: SYSTECH (MASCO) Riyadh, KSA Position: Design /Environmental Engineer Ref Contact: Manager Tel: +966 11 4031888	KSA	Hydraulic Design and preparation of civil director drawings, PFD and P&ID of sewage treatment Plant at Wadi Al Araj, Taif.
November 2001 – July 2002	Employer: Engineering Associates Karachi Position: Jr. Structural Designer Ref Contact: Senior Engineer Email: info@eaworld.com Tel: +92 21 111 111 584	Pakistan	Structural design of Green Community Dubai Investment Park Hotel Building, Laboratory Building Extension for PARCO Punjab, Green Community Dubai Investment Park Garden and apartments & pool houses and various Bungalows.
June 2001– October 2001	Employer: Aji and Amir Associates Karachi Position: Assistant Engineer Ref Contact: Senior Engineer Phone number: +92-21-35834004	Pakistan	<ul style="list-style-type: none"> Worked as a Design Engineer for designing water supply. Sewerage system design for both National and International Project.

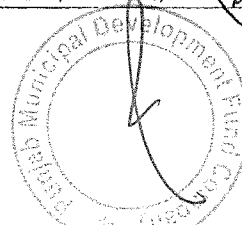
Membership in Professional Associations and Publications:

- Pakistan Engineering Council (CIVIL/24682)

Language Skills (indicate only languages in which you can work): English, Urdu & Punjabi

Adequacy for the Assignment:

Detailed Tasks Assigned on Consultant's Team of Experts:	Reference to Prior Work/Assignments that Best Illustrates Capability to Handle the Assigned Tasks
<ul style="list-style-type: none"> Identification of most suitable and efficient fresh water sources Working out current situation Preparation of design criteria for water supply system Rehabilitation of existing water supply Infrastructure Preparation of design reports 	<p>Name of Assignment:</p> <ul style="list-style-type: none"> EMAAR Crescent Bay Karachi (75 Acre, High End residential and commercial development) DHA Multan (9000 Acre, residential and commercial development) DHA Bahawalpur (5200 Acre, residential and commercial development) Naval Anchorage Gwadar (1482 Acre, residential and commercial development) Dream Gardens Multan (200 Acre residential development, Multan.) Mangla View Resort (324 Acre first fresh water lake gated community development in Mangla.) <p>Year: March 2015 - to date Position held: Principal Engineer/Team Leader (Wet Utilities) Client: various Location: Sindh</p> <p>Activities Performed:</p> <ul style="list-style-type: none"> Design lead from concept stage to construction stage of infrastructure development works including potable water source identification, Sewage discharge methodology, water supply distribution, water transmission line, tube well installation, sewerage network, water and sewage pump stations, storm water network (with detailed study of hydrological and topographical aspects of the project area) with various disposal techniques, concept plan of water & sewage treatment plants, preparation of respective layouts and detail drawings. Preparation of specifications, BOQ, Preliminary and detailed design reports etc. Coordination with different departments (Electrical, Architecture, Urban Planning, Roads and

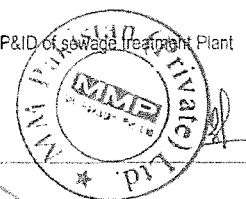
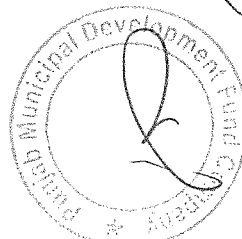




Detailed Tasks Assigned on Consultant's Team of Experts:	Reference to Prior Work/Assignments that Best Illustrates Capability to Handle the Assigned Tasks
	<p>Highways, Quantity Survey etc.) within company.</p> <ul style="list-style-type: none"> • Coordination meetings with client and site staff, project site visits, response to site queries etc. • Technical support to the client for submissions in government Departments <p>Name of Assignment:</p> <ul style="list-style-type: none"> • Al Dammam Housing Project • Nawabshah town, Storm water Drainage • Water Supply and sewerage network of Shaheed Mohtarma BenazirBhutto Town ship. • Abbas Steel Mills Karachi • Khairpur Special Industrial Zone • Oversees Pakistani Foundation Housing scheme, Islamabad • Bin Qasim Industrial Park Karachi • Sehwan Shareef water Filter plant • Thar Coal 50 cusecs effluent disposal Line from Thar Coal Block-II <p>Year: April 2012 - February 2015 Position held: Principal Engineer (Public Health Engg. Dept.) Client: various Location: Karachi, Islamabad</p> <p>Activities Performed: Supervising detailed design of water supply, sewerage network, storm water network, and Water and sewage treatment plants. Preparation PC-1 for government projects. Preparation of Tender documents including specifications, condition of contracts, BOQ, rate analysis and drawings. Preparation of Contract agreements, Feasibility Reports, Inception Reports, preliminary and detailed Design Reports. Coordination with different departments (Electrical, Mechanical, Roads and Highways, Quantity Survey etc.) within company. Coordination meetings with clients and site visits etc.</p> <p>Name of Assignment: KW&SB's project S-III Year: October 2010 - April 2012 Position held: Manager (Engineering Design) Client: KW&SB Location: Pakistan</p> <p>Activities Performed:</p> <ul style="list-style-type: none"> • Designing and supervising Environmental Hydraulic design, Process design and functional detailing. Supervising diversified team of Environmental, Civil, Mechanical and Electrical Engineer along with draftsmen. • Hydraulic design (pumping station design, pumping station piping, selection of pumps, head loss calculation, pipe material selection, yard piping, storm water drainage system etc), layout, functional drawings and structural design of KW&SB's project S-III. Project includes upgradation of Sewage treatment plant (TP 1 and TP 3) and design of another treatment plant TP 4. (Capacities 100, 180, 160 MGD respectively). Design and design reports wetted by ATKINS UK. • Sludge management, including, sludge thickeners, sludge pumping station, sludge conditioning, drying through mechanical means and disposal for above mentioned project. <p>Name of Assignment: Sewage Treatment Plant at Wadi Al Araj, Taif. Year: July 2010 - September 2010 Position held: Design/Environmental Engineer Client: - Location: Riyadh, KSA</p> <p>Activities Performed: Hydraulic Design and preparation of civil director drawings, PFD and P&ID of sewage treatment Plant at Wadi Al Araj, Taif.</p> <p>Name of Assignment: Various Assignments Year: December 2004 - June 2010</p>

Wahaj Ahmad Farooqi

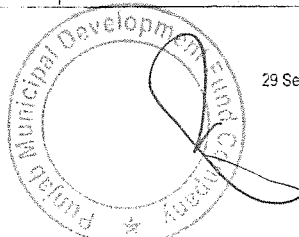
29 September 2021



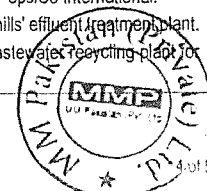
Detailed Tasks Assigned on Consultant's Team of Experts:	Reference to Prior Work/Assignments that Best Illustrates Capability to Handle the Assigned Tasks
	<p>Position held: Deputy Manager (Engineering Division)</p> <p>Client: PepsiCo. International Lahore, Lucky Textile Mills, Al-Karam Textile mills (Pvt) Ltd Karachi, Lucky Tex, Korangi Creek Industrial Park (Project of National Industrial Parks, Management and Development Company, Akhtar Textile Industry Lahore, Karachi)</p> <p>Location:</p> <p>Activities Performed:</p> <p>Process & hydraulic design and Tender Documents:</p> <ul style="list-style-type: none"> • Preparation of Process and hydraulic Design report including detailed process design of wastewater treatment units. A combination of Preliminary treatment (coarse screen, Grit removal and fine screens), physical treatment (coagulation/flocculation, primary settling, and final settling) biological (aerobic and anaerobic i.e. activated sludge, trickling filters, anaerobic digesters, UASB etc.) and chemical treatment units (chemical oxidation, chlorination, UV disinfection). • Sludge management, including, sludge thickeners, sludge pumping station, sludge conditioning, drying through mechanical means and disposal. • Hydraulic design of overall wastewater treatment plant including pumping station design, pumping station piping, selection of pumps, head loss calculation, pipe material selection, yard piping, storm water drainage system etc), • Alternative evaluation, preliminary capital and O&M cost estimation), Tender documents including: BOQ, Specifications, conditions of contract, engineers estimate and detailed functional drawings (include process flow diagram PFD and P&IDs, hydraulic profile, piping layout and functional drawings). • Worked for the wastewater treatment plants of the following clients: • PepsiCo. International Lahore (capacity 680 m3/d) • Lucky Textile Mills-4 (capacity 3,400 m3/d) • Al-Karam Textile mills (Pvt) Ltd Karachi (capacity 4,000 m3/d) • Lucky Tex(capacity 2,700 m3/d) • Korangi Creek Industrial Park (Project of National Industrial Parks, Management and Development Company. (capacity 13,600 m3/d) • Akhtar Textile Industry (capacity 2000 m3/day) • Team member for the Preparation of hydraulic and process design report including design of overall treatment plant units, detailed hydraulic design, treatment alternative evaluation, preliminary capital and O&M cost estimation, plan layout and evaluation of treated water recycling potential for combined effluent treatment plant of Pakistan Textile city (PTC), project of Pakistan Textile City Limited. Overall Process and hydraulic design and Report reviewed, commented and certified by Royal Haskoning (consultants and architects), The Nederland. (capacity 84,000 m3/d) <p>Structural Design:</p> <ul style="list-style-type: none"> • Structural design and preparation of construction drawings of wastewater treatment plants of the following industries: • PepsiCo. International Lahore • Al Karam Textile Mills (Pvt) Ltd, • Luckytex. • Structure Design and preparation of construction drawings of Combined Effluent Treatment Plant for Korangi Creek Industrial Park (Project of National Industrial Parks, Management and Development Company Karachi) • Structure design and preparation of design report and construction drawings of various units of Sewerage treatment plant in North Jeddah. • Codes of practice for structural design: • ACI 318, ACI 350, BS 8110, BS 8007, BS 5400, BD 31/01 <p>Reports and Manuals:</p> <ul style="list-style-type: none"> • Operation and maintenance manual for wastewater treatment plant for PepsiCo International. • Performance evaluation and Assessment report for Gul Ahmed Textile mills' effluent treatment plant. • Evaluation of performance and recommendation for improvement of wastewater recycling plant for Afroz Textile Mills.



Wahaj Ahmad Farooqui



29 September 2021





Detailed Tasks Assigned on Consultant's Team of Experts	Reference to Prior Work/Assignments that Best Illustrates Capability to Handle the Assigned Tasks
	<ul style="list-style-type: none"> • Evaluation of performance and recommendation for improvement (or further treatment) of wastewater treatment plant at sugar mill at Matiari, Sindh (Malot (Pvt.) Ltd). Treatment plant is mainly comprising of anaerobic digesters. • Feasibility report of combined effluent treatment plant for Faisalabad M3 Industrial City. A project of Faisalabad Industrial Estate development and Management Company (FIEDMC) • Assessment Report of wastewater treatment plant at Al-Karam <p>Construction Supervision:</p> <ul style="list-style-type: none"> • Top supervision of "Combined Effluent Treatment Plant" for Korangi Tanneries (CETP-KT) project. (Joint venture of the "Royal Haskoning" consultants and architects, The Nederland and NEC consultants. Responsibilities include civil construction and installation of mechanical equipments. <p>Audits:</p> <ul style="list-style-type: none"> • Environmental Audits of various Tanneries at Korangi under "Cleaner Technology Programme for Korangi Tanneries" Project. <p>Name of Assignment:</p> <ul style="list-style-type: none"> • Green Community Dubai Investment Park Hotel Building, • Laboratory Building Extension for PARCO Punjab, • Green Community Dubai Investment Park Garden <p>Year: November 2001 – July 2002</p> <p>Position held: Jr. Structural Designer</p> <p>Client: Local government</p> <p>Location: Punjab</p> <p>Activities Performed: Structural design of Green Community Dubai Investment Park Hotel Building, Laboratory Building Extension for PARCO Punjab, Green Community Dubai Investment Park Garden and apartments & pool houses and various Bungalows</p> <p>Name of Assignment: Design of water supply and sewerage systems</p> <p>Year: June 2001–October 2001</p> <p>Position held: Assistant Engineer</p> <p>Client: Local</p> <p>Location: Punjab</p> <p>Activities Performed:</p> <ul style="list-style-type: none"> • Worked as a Design Engineer for designing water supply. • Sewerage system design for both National and International Project.

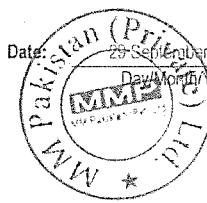
Expert's contact information: (e-mail: bdu@mmpakistan.com phone: 0423-6292525-26-27)

Certification:

I, the undersigned, certify that to the best of my knowledge and belief, this CV correctly describes myself, my qualifications, and my experience, and I am available, as and when necessary, to undertake the assignment in case of an award. I understand that any misstatement or misrepresentation described herein may lead to my disqualification or dismissal by the Client, and/or sanctions by the Bank.

Wahaj Ahmad Farooqui _____ Date: 29 September 2021
Name of Expert Signature Day/Month/Year

Muhammad Irfan Gohar _____ Date: 29 September 2021
Name of authorized Representative of the Consultant Signature Day/Month/Year



Wahaj Ahmad Farooqui

29 September 2021

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Curriculum Vitae (CV)

Position Title and No.	:	K-8, Sewerage Specialist (Design)
Name of Expert	:	Muhammad Alam Shahzad
Date of Birth	:	16-01-1978
Country of Citizenship/Residence	:	Pakistani
Education	:	

- M.Sc. Environmental Engineering University of Engr. & Technology Lahore, Pakistan 2001-2003
- B.Sc. Civil Engineering University of Engr. & Technology Lahore, Pakistan 1997-2001

Employment Record:

Period	Employing organization and your title / position. Contact information for references	Country	Summary of activities performed relevant to the Assignment
July 07, 2009 to date.	<p>Employer: Saudi Consulting Services (SAUDCONSULT)</p> <p>Position: Lead Hydraulic Engineer (Water & Wastewater)</p> <p>Ref Contact: (+966) 11 283 7800 rayan@saudconsultant.com Engr. Rayan Al Khalteet Deputy Vice President Projects Development and Training</p>	Riyadh, KSA	<p>As Lead Hydraulics Design and Lead Design Engineer was responsible for the completion of the following Sewerage Design Networks in various cities of Saudi Arabia:</p> <ul style="list-style-type: none"> • Design of Sewer Trunk Line from T-9 Road till IWTP3 (15.0 KM) • Diversion of Three Existing Sewage Lift Stations (IW-21, IW10 and IW15) TO Newly Constructed Sewage Treatment plant (IWTP-3) • Design of Sewer Trunk Line from Existing Tama Road Till IWTP3 (5.5KM) • Design of Sewer Network, Storm Water Network, Potable Water Network and Reclaimed Water Network in Desalination Community Area • Design of Storm Drainage Network for Site 2E ports AREA (800 HA), 2F Minerals Hub area (435 HA), 2B Plaschem area (1700 HA) YANBU • Master Planning and Detailed Infrastructure development of Jazan Industrial City, Jazan, Saudi Arabia • Infrastructure Development of Ras Al Khair City (RIC) Jubail, Saudi Arabia • Development of Infrastructure for King Abdullah Economic City, Saudi Arabia • Waterfront Areas Development Project at Yanbu, Saudi Arabia • Planning Review and Engineering for Waterfront Areas in North Corniche and Faisal bin Fahad Street at Jeddah, Saudi Arabia
May 2005 to June 2009	<p>Employer: National Engineering Services Pakistan (Pvt.) Ltd. (NESPAK)</p> <p>Position: Senior Engineer</p> <p>Ref Contact: +92-42-99090000 info@nespak.com.pk md@nespak.com.pk</p>	Lahore – Pakistan	<p>As Senior Engineer, was responsible for the design completion of the following projects in Oman:</p> <ul style="list-style-type: none"> • Design of Foul Sewerage Network and Sewage Treatment Plant at Khasab, Sultanate of Oman. • Design of Foul Sewerage Network and Sewage Treatment Plant at Nizwa, Sultanate of Oman. • Design of Foul Sewerage Network and Sewage Treatment Plant at Al Buraimi, Sultanate of Oman. • Design of Foul Sewerage Network and Sewage Treatment Plant at Sur, Sultanate of Oman.
January 2004 to May 2005	<p>Employer: National Environmental Consulting (Pvt.) Limited (NEC)</p> <p>Position: Environmental/Civil Engineer</p> <p>Ref Contact: +92 (0)42-35273741-46 necnorth@nec.com.pk</p>	Lahore – Pakistan	<ul style="list-style-type: none"> • Design of Wastewater Treatment Plant for HMB Tanneries, Muridke, Lahore. • Responsible for Process and Hydraulic design of Sewage Treatment Plant (Activated Sludge process) of average design flow 2,000 cu.m per day. The scope of work involved the Process and Hydraulic design, Preparation of Tender Documents (BOQ, Specifications, Drawings) • Design of Primary and Secondary Wastewater Treatment Plant of Leather Gloving Pakistan, Ferozepure Road Lahore. • Responsible for Process and Hydraulic design of Sewage Treatment Plant (Activated Sludge process) of average design flow





Period	Employing organization and your title / position. Contact information for references	Country	Summary of activities performed relevant to the Assignment
			<p>1,500 cu.m per day. The scope of work involved the Process and Hydraulic design, Preparation of Tender Documents (BOQ, Specifications, Drawings)</p> <ul style="list-style-type: none"> • Design of Secondary Wastewater Treatment Plant for Prime Tanning Industries, Muridke, Lahore. • Responsible for Process and Hydraulic design of Sewage Treatment Plant (Activated Sludge process) of average design flow 3,000 cu.m per day. The scope of work involved the Process and Hydraulic design, Preparation of Tender Documents (BOQ, Specifications, Drawings)
July 2001 to December 2003	<p>Employer: M. Saleem Brothers (Pvt.) Limited Position: Junior Civil Engineer</p>	Lahore, Pakistan	<p>As junior Engineer worked on various Drainage, Water Supply and Sewerage Projects of Commercial and Industrial buildings. Some of them are listed below;</p> <ul style="list-style-type: none"> • Design of water supply and sewerage network of Rafiq Anwar Memorial Trust Hospital, Gujranwala, Pak. • Design of water supply and sewerage network of Bachelors Hostel at Pakistan Tobacco Company, Pak. • Design of Storm drainage system of Big Bird Poultry Feed Factory at Raiwind Road Lahore. • Design of Storm drainage system of Kashmir Hatchery Factory at Pattoki, Multan Road Lahore. • Design of water supply, sewerage network and drainage system of office building of Mobilink Communications (Pvt) Ltd. at Faisalabad • Design of water supply, sewerage network and drainage system of office building of Innovative Automation (Pvt) Ltd. at Lahore.

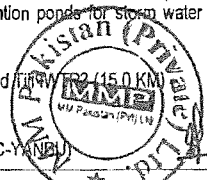
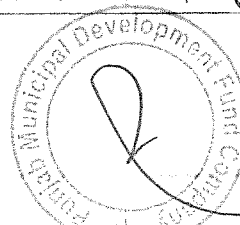
Membership in Professional Associations and Publications:

- Member, Pakistan Engineering Council
- Member, Saudi Council of Engineers

Language Skills (Indicate only languages in which you can work): English, Urdu, and Punjabi.

Adequacy for the Assignment:

Detailed Tasks Assigned on Consultant's Team of Experts:	Reference to Prior Work/Assignments that Best Illustrates Capability to Handle the Assigned Tasks	
<ul style="list-style-type: none"> • To assess the existing situation of sewerage system and identification of loopholes and major issues • Preparation of the design criteria for sewerage system • Proposing rehabilitation / improvement of existing sewerage • Propose cleaning and desilting of choked or semi choked sewers wherever possible • Proposing repair of the existing pumping machinery and its replacement if it is not repairable • Suggesting replacement of existing sewers (damaged or which cannot be desilted) or under capacity sewers. • Propose the construction of possible link sewers in the 	<p>Name of Assignment: Infrastructure Development of Yanbu Expansion City Year: 2017-2020 Position held: Lead Hydraulic Design Engineer Client: Royal Commission for Jubail & Yanbu (RC-YANBU) Location: Yanbu, Saudi Arabia Activities Performed: As Lead Hydraulic Design Engineer Responsible for Design of Foul Sanitary Network, Design of Storm Water Drainage System, Design of Potable Water distribution system and Master Plan validation of Yanbu Community and Industrial city of about 400 km² area including Preparation of Design Analysis Report and Tender Documents (Tender Drawings, Specifications, BOQ, RFP Document). Preparation of utility coordination drawings, Service Reservation Plans and Utilities Clash Detection. Reply to Reviewer (Parsons SA on behalf of RC) comments on design submittals. The whole Project site is being developed under various Task orders so far we have completed design of about 15 Tasks. The major components of the completed Tasks are 20 km Gravity Trunk Line of Dia ranging from 1500mm to 2500mm. 45 km lateral Sewer lines, 6 No. Sewage Lift Stations of capacity 125m³/hr to 2500m³/hr. Diversion of 3 existing Sewage Lift Stations 60km of Storm Pipe Network ranging dia from 300mm to 1000mm. one Flood Protection rapozidal open earthen drainage channel of about 50km length. 3 earthen open channels out filled to Red Sea. About 80 Ha temporary detention ponds for storm water storage. Potable water distribution network includes about 30 Km Pipes lines.</p>	
	<p>Name of Assignment: Design of Sewer Trunk Line from T-9 Road to T-10 Road Year: 2017-2020 Position held: Lead Hydraulic Design Engineer Client: Royal Commission for Jubail & Yanbu (RC-YANBU)</p>	

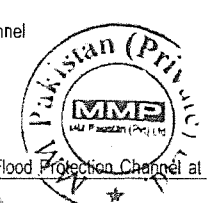
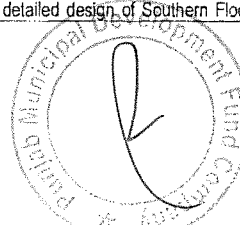




Detailed Tasks Assigned on Consultant's Team of Experts:	Reference to Prior Work/Assignments that Best Illustrates Capability to Handle the Assigned Tasks
<p>present system which can improve the existing system or reduce the O&M charges</p> <ul style="list-style-type: none"> To propose extension of the sewerage system to unserved areas of the city with projected growth of next 10 years including all required components like sewers, disposal stations, siltage carriers or force mains and intermediate pumping stations (if required). 	<p>Location: Jubail & Yanbu</p> <p>Activities Performed: As Lead Hydraulic Design Engineer Responsible for the Detailed design of Foul Sanitary Trunk line FROM T-9 ROAD TILL IWTP3 in Yanbu city (Deep Sewer line), its length is about 15km and dias are ranging from 1000mm to 2500mm including Preparation of Hydraulic Modeling on Sewer GEM, Design Analysis Report and Tender Documents (Tender Drawings, Specifications, BOQ, RFP Document). Preparation of utility coordination drawings, Service Reservation Plans and Utilities Clash Detection. Reply to Reviewer (Parsons SA on behalf of RC) comments on design submittals.</p> <p>Name of Assignment: Diversion of Three Existing Sewage Lift Stations (IW-21, IW10 AND IW15) to Newly Constructed Sewage Treatment Plant (IWTP-3)</p> <p>Year: 2017-2020</p> <p>Position held: Lead Hydraulic Design Engineer</p> <p>Client: Royal Commission for Jubail & Yanbu (RC-YANBU)</p> <p>Location: Jubail & Yanbu</p> <p>Activities Performed: As Lead Hydraulic Design Engineer Responsible for the study and detailed design of Diversion of Three Existing Sewage Lift Stations (IW-21, IW10 AND IW15) to newly constructed sewage treatment plant (IWTP-3) which included evaluation of existing Force mains and sewage pumps, design of new force mains with dias ranging from 315mm to 800mm. upgradation of pumps if needed, design of wastewater receiving chamber. it was a challenging project as accuracy of the available data needed lot of efforts to verify on site. I have completed this project successfully and now this project is under execution.</p> <p>Name of Assignment: Design of Sewer Trunk Line from Existing Tama Road Till IWTP3 (5.5KM)</p> <p>Year: 2017-2020</p> <p>Position held: Lead Hydraulic Design Engineer</p> <p>Client: Royal Commission for Jubail & Yanbu (RC-YANBU)</p> <p>Location: 2017-2020</p> <p>Activities Performed: As Lead Hydraulic Design Engineer Responsible for the Detailed design of Foul Sanitary Trunk line from Existing Tama Road Till IWTP3 in Yanbu city (Deep Sewer line), its length is about 5.5 km and dias are ranging from 1200mm to 1500mm including Preparation of Hydraulic Modeling on Sewer GEM, Design Analysis Report and Tender Documents (Tender Drawings, Specifications, BOQ, RFP Document). Preparation of utility coordination drawings, Service Reservation Plans and Utilities Clash Detection. Reply to Reviewer (Parsons SA on behalf of RC) comments on design submittals. I have completed this project successfully and now this project is in bidding.</p> <p>Name of Assignment: Design of sewer Network, Storm Water Network, Potable Water Network and Reclaimed Water Network in Desalination Community Area</p> <p>Year: 2017-2020</p> <p>Position held: Lead Hydraulic Design Engineer</p> <p>Client: Royal Commission for Jubail & Yanbu (RC-YANBU)</p> <p>Location: 2017-2020</p> <p>Activities Performed: As Lead Hydraulic Design Engineer Responsible for Detailed design of Sewer Network, Storm Water Network, Potable Water Network and Reclaimed Water Network in Desalination Community Area in Yanbu Expansion city, Sewer Network lateral lengths are 8.0 km with dia ranging from 200mm to 500mm, Potable network's length is about 10 km and dias are ranging from 160mm to 315mm while Reclaimed network's length is about 10 km and dias are ranging from 200mm to 315mm including Preparation of Hydraulic Modelling on Sewer GEM and Water GEM, Design Analysis Report and Tender Documents (Tender Drawings, Specifications, BOQ, RFP Document). Preparation of utility coordination drawings, Service Reservation Plans and Utilities Clash Detection. Reply to Reviewer (Parsons SA on behalf of RC) comments on design submittals. I have completed this project successfully and now this project is in bidding.</p> <p>Name of Assignment: Design of Southern Flood Protection Channel</p> <p>Year: 2017-2020</p> <p>Position held: Lead Design Engineer</p> <p>Client: 2017-2020</p> <p>Location: Yanbu</p> <p>Activities Performed: As Lead Design Engineer Responsible for the detailed design of Southern Flood Protection Channel at</p>

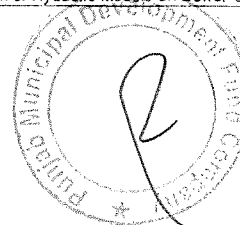
Muhammad Alam Shahzad

29 September 2021



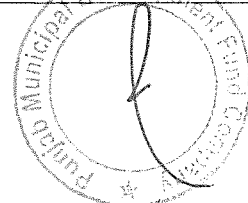


Detailed Tasks Assigned on Consultant's Team of Experts:	Reference to Prior World Assignments that Best Illustrates Capability to Handle the Assigned Tasks
	<p>Yanbu city to protect the newly on going city developments. the northern side of the Yanbu city comprises of mountains and had caused flooding in the areas during high rain seasons. To protect the new city, A Trapezoidal open earthen drainage channels of about 36km length along northern periphery of city till red sea on southern side is being under design. My duties are to estimate Runoff quantities for return period 5, 10, 25, 50 and 100 years. sizing of channel cross-section to have optimum cut and fill earthen quantities. Preparation of design Reports and Tender Drawings, BOQ and Technical Specifications.</p> <p>Name of Assignment: Design of Storm Drainage Network for Site 2E Ports Area (800 HA), 2F Minerals Hub area (435 HA), 2B Plaschem area (1700 HA) Year: 2017-2020 Position held: Lead Design Engineer Client: 2017-2020 Location: YANBU Activities Performed: As Lead Design Engineer Responsible for the detailed design of Site Storm drainage network of Site 2E, 2F and 2B at Yanbu city. Storm Pipe Network and Trapezoidal open earthen drainage channels were designed under this Task order. My duties were to estimate Runoff quantities for return period 10 and 25years. Storm Pipe network is designed on 10 years return period while primary channels are design on 25 years return period. sizing of channel cross-section to have optimum cut and fill earthen quantities. Preparation of design Reports and Tender Drawings, BOQ and Technical Specifications.</p> <p>Name of Assignment: Design of Storm Drainage Network for Site 2D Automotive Area (1200 HA) and 3E MMLH Area (3700 HA) Year: 2017-2020 Position held: Lead Design Engineer Client: 2017-2020 Location: YANBU Activities Performed: As Lead Design Engineer Responsible for the detailed design of Site Storm drainage network of Site 2D and 3E at Yanbu city. Storm Pipe Network and Trapezoidal open earthen drainage channels were designed under this Task order. My duties were to estimate Runoff quantities for return period 10 and 25years. Storm Pipe network is designed on 10 years return period while primary channels are design on 25 years return period. sizing of channel cross-section to have optimum cut and fill earthen quantities. Preparation of design Reports and Tender Drawings, BOQ and Technical Specifications.</p> <p>Name of Assignment: Design of Water Transmission Line from Existing Tama Road Till PS6 (6.5KM) Year: 2017-2020 Position held: Lead Hydraulic Design Engineer Client: Royal Commission for Jubail & Yanbu (RC-YANBU) Location: 2017-2020 Activities Performed: As Lead Hydraulic Design Engineer Responsible for the Detailed design of Water Transmission Line from Existing Tama Road Till PS6 in Yanbu city , its length is about 6.5 km and dias are ranging from 800mm to 1000mm including Preparation of Hydraulic Modeling on Water GEM, Design Analysis Report and Tender Documents (Tender Drawings, Specifications, BOQ, RFP Document). Preparation of utility coordination drawings, Service Reservation Plans and Utilities Clash Detection. Reply to Reviewer (Parsons SA on behalf of RC) comments on design submittals. I have completed this project successfully and now this project is in bidding.</p> <p>Name of Assignment: Master Planing and Detailed Infrastrutre Development of Jazan Industrial City Year: 2015-2020 Position held: Lead Hydraulic Design Engineer Client: Royal Commission for JAZAN (RC-JAZAN) Location: Jazan, Saudi Arabia Activities Performed: As Lead Hydraulic Design Engineer Responsible for the Master Planing and detailed design of Jazan Residential Community Area. Project area is about 108 km². Work included Detail design of Foul Sanitary Network Conventional Sewer System, Storm Water Drainage System, Potable Water distribution system, and Reclaimed Water Network including Preparation of Hydaulic Models on Sewer GEM and Water GEM.</p>





Detailed Tasks Assigned on Consultant's Team of Experts:	Reference to Prior Work/Assignments that Best Illustrates Capability to Handle the Assigned Tasks
	<p>Design Analysis Report and Tender Documents (Tender Drawings, CSI Specifications, BOQ, and RFP Documents). Preparation of utility coordination drawings, Service Reservation Plans and Utilities Clash Detection. Reply to Reviewer (Parsons SA on behalf of RC) comments on design submittals.</p> <p>The whole Project site is being developed under various Task orders so far we have completed detail design of about 4 Tasks. The major components of the completed Tasks are 12.0 km Trunk Line of Dia ranging from 900mm to 1500mm, 30 km lateral Sewer lines ranging from 200mm to 500mm, Potable water distribution network includes about 30Km Pipe lines. Storm Drainage Network of about 40km length.</p> <p>Name of Assignment: Infrastrutre Development of Ras al Khair City (RIC) Jubail Year: 2010-2015 Position held: Lead Design Engineer Client: Royal Commision for Jubail & Yanbu (RC-JUBAIL) Location: Saudi Arabia Activities Performed: As Lead Design Engineer Responsible for the Detailed design of Foul Sanitary Network, Storm Drainage Network and Potable Water distribution system including Preparation of Design Basis Report and Tender Documents (Tender Drawings, Specifications, BOQ). Preparation of utility coordination drawings, Service Reservation Plans and Utilities Clash Detection. Reply to Reviewer (Bectel on behalf of RC) comments on design submittals.</p> <p>The whole RIC city is being developed in various phases so far we have completed design of 2 phases of total area 1054 hectares. Phase 3 is under design of total area 785 hectares. The major components of the completed phases are 5 km Sewer Main and 12 km lateral Sewer lines, 6 pump stations, 5 lift station, 2.5 km pump force mains and 15 km Storm Main Lines. Potable water distribution network includes 4 ground reservoirs (circular tanks) each of capacity 1500 cu.m, 5 Pump Stations, and 20 km distribution network.</p> <p>Name of Assignment: Technical Study to Target Key Accounts for Smart Distribution of Water Year: 2016 Position held: Lead Water Engineer Client: National Water Company (NWC) Location: Jeddah, Saudi Arabia Activities Performed: The scope of project was to design 50 new KACs (Key Account Customers) Potable Water Connections. The hydraulic analysis on water Gem was carried out to perceive the impact on main network. Tender Documents (Tender Drawings, Specifications, BOQ) were prepared for execution. Besides, utility coordination drawings and Service Reservation Plans were prepared for Utilities Clash Detection with the existing utilities. I worked on this project as Lead Water Engineer.</p> <p>Name of Assignment: Development of Infrastrure for King Abdullah Economic City Year: 2012 Position held: Lead Design Engineer Client: EMAAR Location: Saudi Arabia Activities Performed:</p> <ul style="list-style-type: none"> As Lead Design Engineer Responsible for the Detailed design of Foul Sanitary Network and Storm Drainage system, Potable Water and Fire water Distribution Network. My responsibilities included Hydraulic Design and Preparation of Tender Documents (Tender Drawings, Specifications, BOQ). Preparation of utility coordination drawings, Service Reservation Plans and Clash Detection. <p>Name of Assignment: Waterfront Areas Development Project Year: 2009-2015 Position held: Design Engineer Client: Royal Commision for Jubail & Yanbu (RC) Location: Yanbu, Saudi Arabia Activities Performed:</p> <ul style="list-style-type: none"> Detailed design of Foul Sanitary Network, Irrigation system and Potable water distribution system including Preparation of Tender Documents (Tender Drawings, Specifications, BOQ). Preparation of utility coordination drawings, Service Reservation Plans and Clash Detection. Reply of Contractor queries arising during execution which are related to utilities issues. Review of Manufacturer Catalogues and Brochures for the Selection of irrigation equipments like Sprinklers, Drippers (Emitters), Remote Control Valves, and Field Control Valves etc. <p>Name of Assignment: Planning Review and Engineering for Waterfront Areas in North Corniche and Faisal Bin Fahad Street at Jeddah</p>

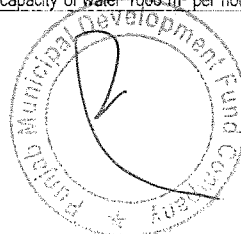




Detailed Tasks Assigned on Consultant's Team of Experts:	Reference to Prior Work/Assignments that Best Illustrates Capability to Handle the Assigned Tasks
	<p>Year: 2012-2015</p> <p>Position held: Design Engineer</p> <p>Client: Jeddah Municipality (JM)</p> <p>Location: SAUDI ARABIA</p> <p>Activities Performed:</p> <ul style="list-style-type: none"> Detailed design of Foul Sanitary Network and Irrigation system including Preparation of Tender Documents (Tender Drawings, Specifications, BOQ). Preparation of utility coordination drawings, Service Reservation Plans and Clash Detection. Review of Manufacturer Catalogues and Brochures for the Selection of irrigation Equipments like Sprinklers, Drippers (Emitters), Remote Control Valves, and Field Control Valves. <p>Name of Assignment: Design of Foul Sewerage Network and Sewage Treatment Plant at Khasab, Nizwa, Al-Buraimi, Sur, Sinaw; Sultanate of Oman</p> <p>Year: May 2005 to June 2009</p> <p>Position held: Senior Engineer</p> <p>Client: Sultanate of Oman</p> <p>Location: Lahore – Pakistan</p> <p>Activities Performed:</p> <p>As Senior Engineer, responsible for detailed design of Foul Sewerage Network system, Pump Stations, Lift Stations, Water Supply Networks, Transmission Main and Sewage Treatment Plants, preparation of Design Reports, Bill of Quantities, Engineer's Cost Estimates and Tender Contract Documents for the following 5 projects in Sultanate of Oman.</p> <ul style="list-style-type: none"> Design of Foul Sewerage Network and Sewage Treatment Plant at Khasab, Sultanate of Oman. The major components of the project are 7 km main and 30 km lateral sewer, two pump stations, one lift station, 5.5 km pump force main and comprehensive Process and Hydraulic design of sewage treatment plant (oxidation ditch) of average capacity 1700 cu.m per day. Design of Foul Sewerage Network and Sewage Treatment Plant at Nizwa, Sultanate of Oman. The major components of the project are 12 km main and 40 km lateral sewer, four lift/pump stations, 4 km pump force main and sewage treatment plant (oxidation ditch) of capacity 2300 cu.m per day. Design of Foul Sewerage Network and Sewage Treatment Plant at Al Buraimi, Sultanate of Oman. The major components of the project are 10 km main and 35 km lateral sewer, two lift/pump stations, 3 km pump force main and design of sewage treatment plant (oxidation ditch) of capacity 1400 cu.m per day. Design of Foul Sewerage Network and Sewage Treatment Plant at Sur, Sultanate of Oman. The major components of the project are 4 km main and 25 km lateral sewer, two lift/pump stations, 8 km pump force main and design of sewage treatment plant (oxidation ditch) of capacity 1300 cu.m per day. Sinaw Water Supply Project at Sinaw, Sultanate of Oman. The major components are 2 ground reservoir of each capacity 4,000 cu.m, 2 elevated service reservoirs of capacities 700 cu.m & 900 cu.m, 1 booster pump station, 1 pump station, 25 km pumping main, 175 km distribution network. Preparation of Master Plan for Storm Drainage System for Allama Iqbal Town and Adjoining Areas, Lahore. As Senior Engineer, responsible for the preparation of Feasibility and detail Design Report including Tender Documents of the above titled project. The project area was 4,800 acres. Separate sewerage network and drainage system were proposed. It also included a huge pump disposal station of capacity 540 cusecs. The scope of work involved the Hydraulic design, Preparation of Tender Documents (BOQ, Specifications, Drawings), Preparation of Engineer's Cost Estimate, Coordination with other divisions which were involved in the project. Design of Water Supply System of Fatima Fertilizer Residential Colony at Rahim Yar Khan, Pakistan. As Senior Engineer, responsible for the design of water distribution network of the above said project. The scope of work involved the following: <ul style="list-style-type: none"> Hydraulic design Preparation of Tender Documents (BOQ, Specifications, Drawings) Preparation of Engineer's Cost Estimate Design of Water Supply Network, Foul Sewerage and Storm Drainage system of Multan Industrial Estate Phase-II, Pakistan. As Senior Engineer, responsible for the design of Water Supply Network and Foul Sewerage network and Storm Drainage System. cost of the project was rupees 800 millions. During the execution of this project I was also responsible for office support to resolve any technical queries arisen at the site. The scope of work involved the Hydraulic design, Preparation of Tender Documents (BOQ, Specifications, Drawings), Preparation of Engineer's Cost Estimate, Coordination with other divisions which were involved in the project and office support. Design of Water Transmission Main of FDA Housing Society, Faisalabad, Pakistan. As Senior Engineer, responsible for the design of more than 20 Km long water Transmission Main to supply water to eight sectors of FDA society with a capacity of water 1000.m³ per hour and eight Ground

Muhammad Alam Shahzad

29 September 2021

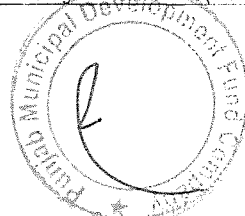


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Detailed Tasks Assigned on Consultant's Team of Experts:	Reference to Prior Work/Assignments that Best Illustrates Capability to Handle the Assigned Tasks
	<p>reservoirs through six No. (5+1) pumps each of capacity 200 m³ per hour. The scope of work involved the following:</p> <ul style="list-style-type: none"> Hydraulic Analysis/Design Water Hammer Analysis Preparation of Tender Documents (BOQ, Specifications, Drawings) Coordination with other Divisions which were involved in the project <p>• Design of Sewage Disposal Pump Station of Sunder Industrial Estate, Lahore, Pakistan. The scope of work was to prepare Conditions of Contract Documents (RFP) of the above mentioned project.</p> <p>• Water supply study for 1000 MW Thar Coal Power Project, Sindh, Pakistan. Prepared Feasibility study Report of water supply (144,000 m³/day). The major components of the project were 105 km of transmission main from intake structure to the Power Plant site and 110 km of wastewater force main from power plant to the disposal point, 10 Booster Pump stations, and RO plant of capacity 6000 cum/hr.</p> <p>• Infrastructure development for Passenger and Trade Facilitation Center at Wahgha Border Lahore, Pakistan The Scope of project was to design the Internal and External water supply and sewerage systems, Septic Tanks and soakage Pits for the safe disposal of wastewater for Railway Station and Custom Clearance Offices at Wahgha Border (India- Pakistan international Border).</p> <p>• Mathematical Model study for Helsi Nullah, Gujrat, Pakistan I have carried out a study by preparing a Mathematical Model to evaluate the effect of natural aeration on sewage quality characteristics at Helsi Nullah located in Gujrat, Pakistan.</p> <p>• Design of Sewage treatment plant at Sabzal Road Quetta, Pakistan Responsible for Process and Hydraulic design of Sewage Treatment Plant (oxidation ditch) of average design flow of 6,000 cu.m per day. The scope of work involved the Process and Hydraulic design, Preparation of Tender Documents (BOQ, Specifications, Drawings)</p> <p>• Design of Sewage treatment plant (Waste stabilization pond system) at Suraj Miani Multan, Pakistan Responsible for Process and Hydraulic design of Sewage Treatment Plant (Waste Stabilization Ponds) of average design flow 268,000 cu.m per day. The scope of work involved the Process and Hydraulic design, Preparation of Tender Documents (BOQ, Specifications, Drawings)</p> <p>BID EVALUATIONS/ PRE QUALIFICATION OF CONTRACTORS I have been involved in the bid evaluation of the following projects</p> <ol style="list-style-type: none"> Bid Evaluation of RCC Boundary Wall at Sunder Industrial Estate, Lahore, Pakistan. Bid Evaluation of Dredging of Neha Nullah at Sunder Industrial Estate, Lahore, Pakistan. Pre-Qualification of Contractors for Telecom Engineers Co-operative Housing Society (TECHS) at Faisalabad. <p>CONSTRUCTION SUPERVISION EXPERIENCE:</p> <ul style="list-style-type: none"> Construction Supervision of Foul Sewerage Network and Sewage Treatment Plant at Sur, Sultanate of Oman (12-10- 2006 to 02-11-2006) and (01-01- 2008 to 18-01-2008) As Acting Resident Engineer supervised the construction activities, the activities included checking of layout plans, checking of levels, concreting, material approvals and correspondence with the contractor and Ministry (MRMEWR, Oman). <p>BUSINESS DEVELOPMENT ACTIVITIES (TECHNICAL & FINANCIAL PROPOSALS) I have participated in the Preparation of various winning Technical and Financial proposals related to Water Supply, Foul Sewerage Network, Storm/Surface Drainage projects for Sultanate of Oman, Kingdom of Saudi Arabia, Qatar, Kuwait, Iran and Pakistan .</p> <p>Name of Assignment: Design of Wastewater Treatment Plant for HMB Tanneries Year: January 2004 to May 2005 Position held: Environmental/Civil Engineer Client: HMB Tanneries Location: Lahore – Pakistan</p> <p>Activities Performed:</p> <ul style="list-style-type: none"> Design of Wastewater Treatment Plant for HMB Tanneries, Muridke, Lahore. Responsible for Process and Hydraulic design of Sewage Treatment Plant (Activated Sludge process) of average design flow 2,000 cu.m per day. The scope of work involved the Process and Hydraulic design, Preparation of Tender Documents (BOQ, Specifications, Drawings) Design of Primary and Secondary Wastewater Treatment Plant for Leathertex Gloving Pakistan, Ferozepure Road Lahore. Responsible for Process and Hydraulic design of Sewage Treatment Plant (Activated Sludge process) of average design flow 1,500 cu.m per day. The scope of work involved the Process and Hydraulic design, Preparation of Tender Documents (BOQ, Specifications, Drawings) Design of Secondary Wastewater Treatment Plant for Prime Tanning Industries, Muridke, Lahore Responsible for Process and Hydraulic design of Sewage Treatment Plant (Activated Sludge process) of

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Detailed Tasks Assigned on Consultant's Team of Experts	Reference to Prior Work/Assignments that Best Illustrates Capability to Handle the Assigned Tasks
	<p>average design flow 3,000 cu.m per day. The scope of work involved the Process and Hydraulic design, Preparation of Tender Documents (BOQ, Specifications, Drawings)</p> <p>Name of Assignment: Various Assignments Year: July 2001 to December 2003 Position held: Junior Civil Engineer Client: Different Clients Location: Lahore, Pakistan Activities Performed: As junior Engineer worked on various Drainage, Water Supply and Sewerage Projects of Commercial and Industrial buildings. Some of them are listed below;</p> <ul style="list-style-type: none"> • Design of water supply and sewerage network of Rafiq Anwar Memorial Trust Hospital, Gujranwala, Pak. • Design of water supply and sewerage network of Bachelors Hostel at Pakistan Tobacco Company, Pak. • Design of Storm drainage system of Big Bird Poultry Feed Factory at Raiwind Road Lahore. • Design of Storm drainage system of Kashmir Hatchery Factory at Pattoki, Multan Road Lahore. • Design of water supply, sewerage network and drainage system of office building of Mobilink Communications (Pvt) Ltd, at Faisalabad • Design of water supply, sewerage network and drainage system of office building of Innovative Automation (Pvt) Ltd. at Lahore.

Expert's contact information: (e-mail: bdu@mmpakistan.com phone: 0423-6292525-26-27)

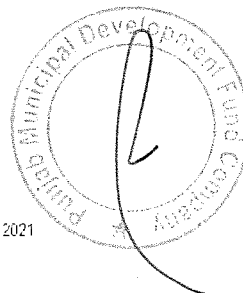
Certification:

I, the undersigned, certify that to the best of my knowledge and belief, this CV correctly describes myself, my qualifications, and my experience, and I am available, as and when necessary, to undertake the assignment in case of an award. I understand that any misstatement or misrepresentation described herein may lead to my disqualification or dismissal by the Client, and/or sanctions by the Bank.

<p>_____ Muhammad Alam Shahzad Name of Expert</p>	<p>_____ Signature</p>	<p>Date: 29 September 2021 Day/Month/Year</p>
<p>_____ Muhammad Irfan Gohar Name of authorized Representative of the Consultant</p>	<p>_____ Signature</p>	<p>Date: 29 September 2021 Day/Month/Year</p>

Muhammad Alam Shahzad

29 September 2021



Curriculum Vitae (CV)

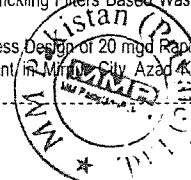
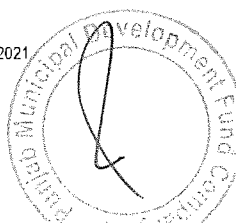
Position Title and No.	:	K-9, Waste Water Treatment Specialist (Design)
Name of Expert	:	Muhammad Zaheer Abbas
Date of Birth	:	13th October 1988
Country of Citizenship / Residence	:	Pakistani

Education:

- M.Sc. Environmental Engineering from National University of Sciences & Technology Islamabad, 2017
- B.Sc. Civil Engineering from University of Engineering & Technology Taxilla, Rawalpindi Pakistan, 2011

Employment Record relevant to the assignment:

Period	Employing organization and your title / position. Contact information for references	Country	Summary of activities performed relevant to the Assignment
April 2019 - To Date	Employer: Saudi Consulting Services - Saud Consult Position: Infrastructure Project Engineer Ref Contact: (+966) 11 283 7800 rayan@saudiconsultant.com Engr. Rayan Al Khalteet Deputy Vice President Projects Development and Training	Saudi Arabia	<ul style="list-style-type: none"> • Detailed Design of Municipal Infrastructure System of JCPDI • Detailed design of Potable Water, Fire Water & Irrigation System for various tasks under JCPDI Umbrella Project and submission of IFC Drawings • Preparation of Utility Coordination and composite Drawings • Process Design of 9,500 m³/d Wastewater MBR Plant • Design of Inlet Chamber & Channel, screens, Aerated grit/oil separation tank, Equalization Tank, MBR Process Calculations, Pumps Flow rate, ANOX Tank Volume, Sludge Holding Tank and Dewatering Belt Press System. • Preparation of PFDs, P&IDs, Layouts & Detailed Process & Equipment Drawings • Equipment selection, technical specifications and data sheets review • EPC Design of Landfill Site with Morrison Hershfield Canada • EPC Design of Process Water Facility with Stantec UK, Dubai Branch • EPC Design of Seawater Cooling System with Royal Haskoning DHV UK • Preparation of MTOs, BOQs, 50 Division Specifications and Calculation Reports • Presenting Technical Presentations for Design Review and approval from Client & third Parties • Conducting Value Engineering Workshops and adding Value in Tasks for economic and quality execution of works • Conducting Workshops for Fast Track Projects • Quality Management Review of Design • Coordinating with Client, third parties (ARAMCO, Marafiq, SEC) and contractor
February 2018 - April 2019	Employer: Descon Engineering Limited Position: Lead Process Design Engineer Ref Contact: +92-42-35990034	Pakistan	<ul style="list-style-type: none"> • Detailed Design of Potable Water Distribution System of residential colony of Guddu Barrage • Preparation of proposal for Water and Wastewater Treatment Plants • Design of process calculations, mass balance, hydraulic profile, head losses, sizing of treatment components of Treatment Plants • Hydraulic and Detailed Process Design of two 95 mgd Rapid Sand Filters and 180 mgd Trickling Filters Based Wastewater Treatment Plants in Karachi • Hydraulic and Detailed Process Design of 20 mgd Rapid Sand Filters Water Treatment Plant in Mirpur City, Azad Kashmir, Pakistan

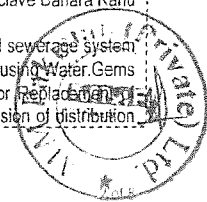
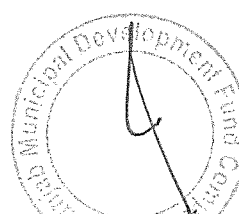




Period	Employing organization and your title / position. Contact information for references	Country	Summary of activities performed relevant to the Assignment
			<ul style="list-style-type: none"> • Preparing drawings for Treatment Plants i.e. Process Flow Diagrams (PFDs), Piping & Instrumentation Diagrams (P&IDs), Layouts and details drawings • Designing of Intake, Primary and Secondary Treatment components, sizing of pumps, equipment and structures • Preparing of Technical Specifications and data sheets of water and wastewater treatment equipment • Responding Vendor technical queries for Treatment Equipment • Evaluation of Vendor quotations of Equipment • Preparation of Technical Clarifications for Bids • Preparing of man-hour estimate, number of drawings and documents for technical input for proposals • Preparation of BOQs and Bids for Treatment Plants • Finalization of Technical requirements of equipment for Treatment Plants • Preparation of proposal for Water and Wastewater Treatment Plants • Preparation of Technical Clarifications for Bids
February 2017 - February 2018	<p>Employer: MM Pakistan PVT. Ltd. Position: Design Engineer (Water & Sanitation) Ref Contact: 042-35363234, 36292525-8 bdu@mmepakistan.com M. Irfan Gohar Manager (Business Development)</p>	Pakistan	<ul style="list-style-type: none"> • Hydraulic Design, technical data sheet preparation for design and installation of tubewells and technical specifications of water supply and sewerage system • Review of draft master plan report for water supply system for Lahore District (1778 Sq.Km) • Preliminary design (Sizing of WTP Components) of 120 MGD Water Treatment Plant as part of Master Plan 2040 • Preparation of Feasibility Study, Design and PC-I of 54 mgd Canal Water Treatment Plant • Design and capacity calculation of all components of 54 mgd Canal Water WTP • Design of Basic Criteria for Canal Water Treatment Plant at Lahore for EPC Bids • Comparative analysis of potable water supply distribution system through water storage tanks vs direct pumping using hydraulic modeling software (Water Gems) • Study the shortcomings of water distribution network through computer aided analysis (Water. Gems) • Preparing proposals for replacement of inadequate water lines, additional linking and looping to improve the system • Zoning of Water & Sanitation Agency Lahore and District Govt. administered areas (1772 sq.Km) into 51 Rezones areas of 300,000 population with isolated service delivery networks instead of comprehensive water supply system for 2040 horizon • Carryout network analysis and development of water supply computer model for proposing implementable, feasible and operational zones (District Management Areas) of Lahore District for 2020 & 2040 horizon • Preparing the detailed water supply design proposal for Garden Town Water Supply Distribution Pilot project in Lahore • Preparing the Rainwater Harvesting Pilot project for Lahore
January 2016 - April 2017	<p>Employer: Custodian of the two Holy Mosques Relief Campaign for Pakistan (CTHMRC Now working as KS Relief) Position: Consultant Ref Contact: ocf-isb@osmani.com +92-51-211-3882</p>	Pakistan	<ul style="list-style-type: none"> • Detailed design of water supply and wastewater schemes of 06 union councils in WASA using modeling software Water.Gems • Preparation of comprehensive water supply & sewerage master plan for RWASA • Survey & utility feasibility study of Green Enclave Bahara Kahu Phase-II Islamabad • Detailed design of potable water supply and sewerage system for leftover areas of G-13 Sector, Islamabad using Water.Gems • Preparation of PC-1 and detailed design for replacement of outlived rusty & leaking pipelines and extension of distribution

Muhammad Zaheer Abbas

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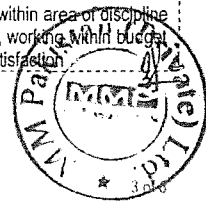
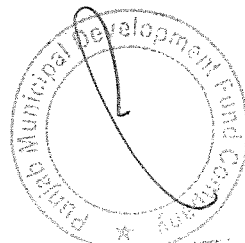




Period	Employing organization and your title / position. Contact information for references	Country	Summary of activities performed relevant to the Assignment
			<p>system (new) in leftover area with allied works in WASA jurisdiction, Rawalpindi. (Gastro Project Phase-II)</p> <ul style="list-style-type: none"> • Preparing of PC-1 for extension of water facilities in extended controlled areas notified by Punjab government in city of Rawalpindi • Discharge measurement of tube-wells by ultrasonic flow meters in sub-divisions of WASA • Data collection, processing and interpretation according to TORs
April 2015 - February 2017	<p>Employer: Osmani & Company Pvt. Ltd Position: Senior Engineer Ref Contact: ocl-isb@osmani.com +92-51-211-3882</p>	Pakistan	<ul style="list-style-type: none"> • Detailed Design of Municipal infrastructure System of Various Tasks under Royal Commission umbrella contract • Detailed design of Potable Water, Fire Water & Irrigation System for various tasks under Umbrella Project and submission of IFC Drawings • Preparation of Utility Coordination Drawings • Compliance of Comments • Preparation of MTOs, BOQs, 16 Division Specifications and Calculation Reports • Presenting Technical Presentations for Design Review and approval from Client & third Parties • Conducting Value Engineering Workshops and adding Value in Tasks for economic and quality execution of works • Conducting Workshops for Fast Track Projects • Quality Management Review of Design • Coordinating with Client, third parties (ARAMCO, Marafiq, SEC) and contractor
July 2013 - April 2015	<p>Employer: Saudi Consulting Services - Saud Consult Position: Infrastructure Project Engineer Ref Contact: (+966) 11 283 7800 rayan@saudconsultant.com Engr. Rayan Al Khalteet Deputy Vice President Projects Development and Training</p>	Saudi Arabia	<ul style="list-style-type: none"> • Hydraulic Modeling of Eight DNIs clusters by EPA.net for northern districts of Sindh as International Competitive Bidding Package (ICB-4) funded by Asian Development Bank • Involve with design review for construct ability, management, costing and tendering work of water and wastewater projects with International Experts • Preparation of Wastewater Master Plans for three cities of about 2 million population • Detailed design of Priority Projects as result of Master Planning • Preparation and design of bulk water supply system for Sukkur District as International Competitive Bidding Package (ICB-5A) • Check engineering designs and drawings for construct ability, errors omissions and consistency and commissioning of water treatment plant • Calculation of domestic and commercial Water Demand of Al Falah Housing Society project • Design of Tubewells for Housing Society • Hydraulic Modeling of Water Supply distribution system through EPA.net • Design of Sewerage System using spreadsheets for Al Falah Housing Society Project • Detailed design of water distribution and sewerage system for housing colony of Guddu Barrage Project • Conduct site visits, socio-economic & condition survey and inspections of existing utility system; attend project meetings (Internal and External) • Making proposals for efficient use of existing water supply and wastewater systems • To design and coordinate project work within area of discipline in accordance with contract conditions, working within budget and time constraints to ensure Client satisfaction

Muhammad Zaheer Abbas

29 September 2021





Period	Employing organization and your title / position. Contact information for references	Country	Summary of activities performed relevant to the Assignment
			<ul style="list-style-type: none"> To monitor & supervise construction work of some components of 3.2 MGD water treatment plant in Sukkur in accordance with design To undertake team briefings and inception activities to ensure all aspects of work are understood by concerned authorities To ensure, safety standards and procedures are implemented and followed in accordance with contract conditions and company guidelines To act as liaison with contractors and clients, managing any work interfaces and enhancements to project scope To assist the Project Manager in preparation of sub-contract agreements Organizing seminars for public awareness of project utilities under ADB guidelines
September 2011 - July 2013	<p>Employer: MM Pakistan Pvt. Ltd. Position: Junior Design Engineer Ref Contact: 042-36363234, 36292525-8 bdm@mmpakistan.com M. Irfan Gohar Manager (Business Development)</p>	Pakistan	<ul style="list-style-type: none"> Preparation of TORs, Inception Report, Feasibility study, and detailed design of rehabilitation of Public Health water supply schemes funded and executed by CTHMRCP in Punjab & Sindh Design capacity and specifications of comprehensive water filtration plants (Reverse Osmosis) and spring based water supply schemes in Pakistan, maintaining permeate standards as per WHO & NEQs Pak. Calculation of required plant capacity, material selection, plant layout design and calculation of capital and operating cost of schemes Data collection, processing and interpretation of Water related projects To monitor and supervising project implementation, progress, and solution of problems To coordinate with concerned govt. departments for inception and execution of water projects and undertaking of project briefings

Membership in Professional Associations and Publications:

- Pakistan Engineering Council Registered Engineer/31862
- Saudi Council of Engineers Membership # 442826

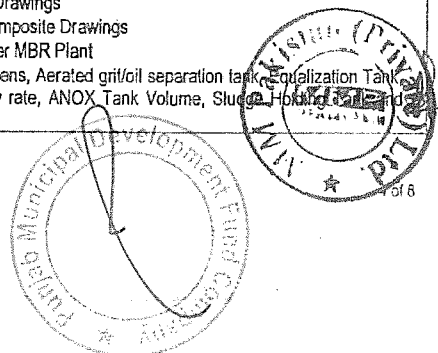
Language Skills (indicate only languages in which you can work): English, Urdu & Punjabi

Adequacy for the Assignment:

Detailed Tasks Assigned on Consultant's Team of Experts:	Reference to Prior Work/Assignments that Best Illustrates Capability to Handle the Assigned Tasks
<ul style="list-style-type: none"> Design of most suitable waste water treatment plants Design of disposal arrangements of treated water To develop plans/drawings for the provision of wastewater treatment facility Preparation of reports 	<p>Name of Assignment: Jazan City for Primary and Downstream Industries (JCPDI) Infrastructure Design Services Project by Royal Commission for Jubail & Yanbu, Kingdom of Saudi Arabia</p> <p>Year: April 2019 – to till date</p> <p>Position held: Infrastructure Project Engineer</p> <p>Client: Royal Commission JCPDI</p> <p>Location: Jazan Saudi Arabia</p> <p>Activities Performed:</p> <ul style="list-style-type: none"> Detailed Design of Municipal Infrastructure System of JCPDI Detailed design of Potable Water, Fire Water & Irrigation System for various tasks under JCPDI Umbrella Project and submission of IFC Drawings Preparation of Utility Coordination and composite Drawings Process Design of 9,500 m3/d Wastewater MBR Plant Design of Inlet Chamber & Channel, screens, Aerated grit/oil separation tank, Equalization Tank, MBR Process Calculations, Pumps Flow rate, ANOX Tank Volume, Sludge Holding Tank and Dewatering Belt Press System.

Muhammad Zaheer Abbas

29 September 2021

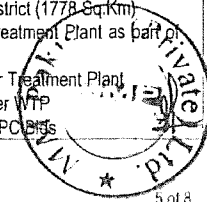
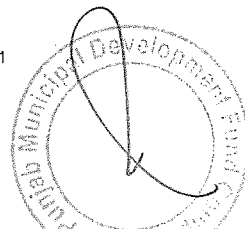


Detailed Tasks Assigned on Consultant's Team of Experts:	Reference to Prior Work/Assignments that Best Illustrates Capability to Handle the Assigned Tasks
	<ul style="list-style-type: none"> • Preparation of PFDs, P&IDs, Layouts & Detailed Process & Equipment Drawings • Equipment selection, technical specifications and data sheets review • EPC Design of Landfill Site with Morrison Hershfield Canada • EPC Design of Process Water Facility with Stantec UK, Dubai Branch • EPC Design of Seawater Cooling System with Royal HaskoningDHV UK • Preparation of MTOs, BOQs, 50 Division Specifications and Calculation Reports • Presenting Technical Presentations for Design Review and approval from Client & third Parties • Conducting Value Engineering Workshops and adding Value in Tasks for economic and quality execution of works • Conducting Workshops for Fast Track Projects • Quality Management Review of Design • Coordinating with Client, third parties (ARAMCO, Marafiq, SEC) and contractor <p>Name of Assignment: Design of two 95 MGD Water Treatment Plant and 180 MGD Wastewater Treatment Plant</p> <p>Year: Feb. 2018 – April 2019</p> <p>Position held: Lead Process Design Engineer</p> <p>Client: Karachi Water & Sewerage Board</p> <p>Location: Karachi</p> <p>Activities Performed:</p> <ul style="list-style-type: none"> • Detailed Design of Potable Water Distribution System of residential colony of Guddu Barrage • Preparation of proposal for Water and Wastewater Treatment Plants • Design of process calculations, mass balance, hydraulic profile, head losses, sizing of treatment components of Treatment Plants • Hydraulic and Detailed Process Design of two 95 mgd Rapid Sand Filters and 180 mgd Trickling Filters Based Technology Wastewater Treatment Plants for bidding in Karachi • Hydraulic and Detailed Process Design of 20 mgd Rapid Sand Filters Water Treatment Plant in Mirpur City Azad Kashmir, Pakistan • Preparing drawings for Treatment Plants i.e. Process Flow Diagrams (PFDs), Piping & Instrumentation Diagrams (P&IDs), Layouts and details drawings • Designing of Intake, Primary and Secondary Treatment components, sizing of pumps, equipment and structures • Preparing of Technical Specifications and data sheets of water and wastewater treatment equipment • Responding Vendor technical queries for Treatment Equipment • Evaluation of Vendor quotations of Equipment • Preparation of Technical Clarifications for Bids • Preparing of man-hour estimate, number of drawings and documents for technical input for proposals • Preparation of BOQs and Bids for Treatment Plants • Finalization of Technical requirements of equipment for Treatment Plants • Preparation of proposal for Water and Wastewater Treatment Plants • Preparation of Technical Clarifications for Bids <p>Name of Assignment:</p> <ul style="list-style-type: none"> • Master Planning of Water Supply, Sewerage and Drainage System for WASA Lahore • Design of 50 mgd Water Treatment Plant, Lahore <p>Year: Feb. 2017 – Feb. 2018</p> <p>Position held: Design Engineer (Water & Sanitation)</p> <p>Client: Waster & Sanitation Agency Lahore</p> <p>Location: Lahore</p> <p>Activities Performed:</p> <ul style="list-style-type: none"> • Hydraulic Design, technical data sheet preparation for design and installation of tubewells and technical specifications of water supply and sewerage system • Review of draft master plan report for water supply system for Lahore District (1778 Sq.Km) • Preliminary design (Sizing of WTP Components) of 120 MGD Water Treatment Plant as part of Master Plan 2040 • Preparation of Feasibility Study, Design and PC-I of 54 mgd Canal Water Treatment Plant • Design and capacity calculation of all components of 54 mgd Canal Water WTP • Design of Basic Criteria for Canal Water Treatment Plant at Lahore for EPC Bids



Muhammad Zaheer Abbas

23 September 2021

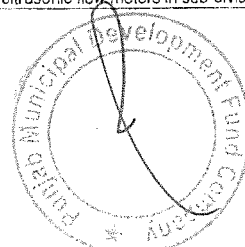




Detailed Tasks Assigned on Consultant's Team of Experts:	Reference to Prior Work/Assignments that Best Illustrates Capability to Handle the Assigned Tasks
	<ul style="list-style-type: none"> Comparative analysis of potable water supply distribution system through water storage tanks vs direct pumping using hydraulic modeling software (Water Gems) Study the shortcomings of water distribution network through computer aided analysis (Water. Gems) Preparing proposals for replacement of inadequate water lines, additional linking and looping to improve the system Zoning of Water & Sanitation Agency Lahore and District Govt. administered areas (1772 sq.Km) into 51. Rezones areas of 300,000 population with isolated service delivery networks instead of comprehensive water supply system for 2040 horizon Carryout network analysis and development of water supply computer model for proposing implementable, feasible and operational zones (District Management Areas) of Lahore District for 2020 & 2040 horizon Preparing the detailed water supply design proposal for Garden Town Water Supply Distribution Pilot project in Lahore Preparing the Rainwater Harvesting Pilot project for Lahore <p>Name of Assignment: Technical Design and specifications of Water Filtration Plants (RO) and clean drinking water Projects in Earthquake & Flood Hit areas of Pakistan</p> <p>Year: Jan. 2016 – April 2017</p> <p>Position held: Consultant</p> <p>Client: CTHMRCP now KS Relief</p> <p>Location: Islamabad</p> <p>Activities Performed:</p> <ul style="list-style-type: none"> Preparation of TORs, Inception Report, Feasibility study, and detailed design of rehabilitation of Public Health water supply schemes funded and executed by CTHMRCP in Punjab & Sindh Design capacity and specifications of comprehensive water filtration plants (Reverse Osmosis) and spring based water supply schemes in Pakistan, maintaining permeate standards as per WHO & NEQs Pak. Calculation of required plant capacity, material selection, plant layout design and calculation of capital and operating cost of schemes Data collection, processing and interpretation of Water related projects To monitor and supervising project implementation, progress, and solution of problems To coordinate with concerned govt. departments for inception and execution of water projects and undertaking of project briefings <p>Name of Assignment:</p> <ul style="list-style-type: none"> Comprehensive Master Planning for Water Supply, Sewerage, Drainage and Wastewater Treatment System in Rawalpindi Detailed design of Sewerage System in 06 UCs in RWASA Design of water supply schemes in PP-06 & Gastro Phase-II Master Planning of Green Enclave Bahara Kahu, & infrastructure rehabilitation and development of G-13 Sector, Islamabad <p>Year: April 2015 – Feb. 2017</p> <p>Position held: Senior Engineer</p> <p>Client: Water & Sanitation Agency Rawalpindi</p> <p>Location: Rawalpindi</p> <p>Activities Performed:</p> <ul style="list-style-type: none"> Detailed design of water supply and wastewater schemes of 06 union councils in WASA using modeling software Water. Gems Preparation of comprehensive water supply & sewerage master plan for RWASA Survey & utility feasibility study of Green Enclave Bahara Kahu Phase-II Islamabad Detailed design of potable water supply and sewerage system for leftover areas of G-13 Sector, Islamabad using Water. Gems Preparation of PC-1 and detailed design for Replacement of outlived rusty & leaking pipelines and extension of distribution system (new) in leftover area with allied works in WASA jurisdiction Rawalpindi. (Gastro Project Phase-II) Preparing of PC-1 for extension of water facilities in extended controlled areas notified by Punjab government in city of Rawalpindi Discharge measurement of tube-wells by ultrasonic flow meters in sub-divisions of WASA

Muhammad Zahedi Abbas

29 September 2021

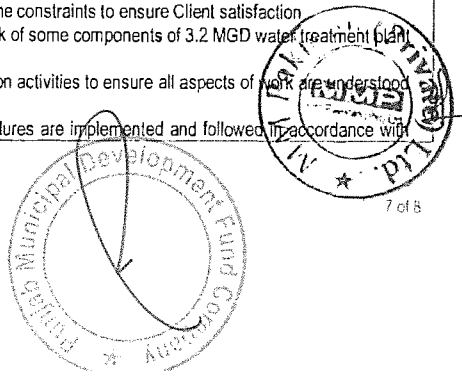




Detailed Tasks Assigned on Consultant's Team of Experts:	Reference to Prior Work/Assignments that Best Illustrates Capability to Handle the Assigned Tasks
	<ul style="list-style-type: none"> Data collection, processing and interpretation according to TORs <p>Name of Assignment: Jubail Industrial City Project by Royal Commission for Jubail & Yanbu, Kingdom of Saudi Arabia</p> <p>Year: July 2013 – April 2015</p> <p>Position held: Infrastructure Project Engineer</p> <p>Client: Royal Commission for Jubail & Yanbu</p> <p>Location: Riyadh, Saudi Arabia</p> <p>Activities Performed:</p> <ul style="list-style-type: none"> Detailed Design of Municipal Infrastructure System of Various Tasks under Royal Commission umbrella contract Detailed design of Potable Water, Fire Water & Irrigation System for various tasks under Umbrella Project and submission of IFC Drawings Preparation of Utility Coordination Drawings Compliance of Comments Preparation of MTOs, BOQs, 16 Division Specifications and Calculation Reports Presenting Technical Presentations for Design Review and approval from Client & third Parties Conducting Value Engineering Workshops and adding Value in Tasks for economic and quality execution of works Conducting Workshops for Fast Track Projects Quality Management Review of Design Coordinating with Client, third parties (ARAMCO, Marafiq, SEC) and contractor <p>Name of Assignment:</p> <ul style="list-style-type: none"> Sindh Cities Improvement Investment Program by Asian Development Bank Design of Water Supply Distribution and Wastewater Collection System in Housing Colony of Guddu Barrage, Sindh Design of water supply and sewerage system in Al Falah Housing Scheme <p>Year: September 2011 – July 2013</p> <p>Position held: Junior Design Engineer</p> <p>Client: North Sindh Urban Services Corporation (NSUSC)</p> <p>Location: Sukkur Sindh</p> <p>Activities Performed:</p> <ul style="list-style-type: none"> Hydraulic Modeling of Eight DNIs clusters by EPA.net for northern districts of Sindh as International Competitive Bidding Package (ICB-4) funded by Asian Development Bank Involve with design review for construct ability, management, costing and tendering work of water and wastewater projects with International Experts Preparation of Wastewater Master Plans for three cities of about 2 million population Detailed design of Priority Projects as result of Master Planning Preparation and design of bulk water supply system for Sukkur District as International Competitive Bidding Package (ICB-5A) Check engineering designs and drawings for construct ability, errors omissions and consistency and commissioning of water treatment plant Calculation of domestic and commercial Water Demand of Al Falah Housing Society project Design of Tube wells for Housing Society Hydraulic Modeling of Water Supply distribution system through EPA.net Design of Sewerage System using spreadsheets for Al Falah Housing Society Project Detailed design of water distribution and sewerage system for housing colony of Guddu Barrage Project Conduct site visits, socio-economic & condition survey and inspections of existing utility system; attend project meetings (Internal and External) Making proposals for efficient use of existing water supply and wastewater systems To design and coordinate project work within area of discipline in accordance with contract conditions, working within budget and time constraints to ensure Client satisfaction To monitor & supervise construction work of some components of 3.2 MGD water treatment plant in Sukkur in accordance with design To undertake team briefings and inception activities to ensure all aspects of work are understood by concerned authorities To ensure, safety standards and procedures are implemented and followed in accordance with

Muhammad Zaheer Abbas

29 September 2021



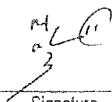
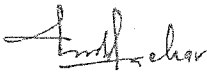


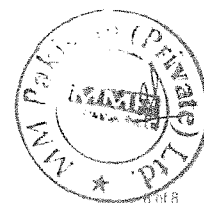
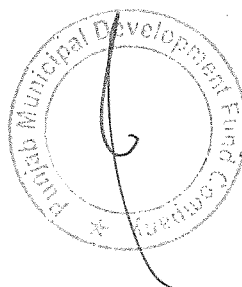
Detailed Tasks Assigned on Consultant's Team of Experts	Reference to Prior Work/Assignments that Best Illustrates Capability to Handle the Assigned Tasks
	contract conditions and company guidelines <ul style="list-style-type: none"> • To act as liaison with contractors and clients, managing any work interfaces and enhancements to project scope • To assist the Project Manager in preparation of sub-contract agreements • Organizing seminars for public awareness of project utilities under ADB guidelines


Expert's contact information: (e-mail: bdu@mmpakistan.com phone: 0423-6292525-26-27)

Certification:

I, the undersigned, certify that to the best of my knowledge and belief, this CV correctly describes myself, my qualifications, and my experience, and I am available, as and when necessary, to undertake the assignment in case of an award. I understand that any misstatement or misrepresentation described herein may lead to my disqualification or dismissal by the Client, and/or sanctions by the Bank.

Muhammad Zaheer Abbas Name of Expert	 Signature	Date: 29 September 2021 Day/Month/Year
Muhammad Irfan Gohar Name of authorized Representative of the Consultant	 Signature	Date: 29 September 2021 Day/Month/Year



Muhammad Zaheer Abbas


29 September 2021

Curriculum Vitae (CV)

Position Title and No.	:	K-10, Solid Waste Management Specialist (Design)
Name of Expert	:	Dr. Kiran Farhan
Date of Birth	:	09-06-1978
Country of Citizenship / Residence	:	Pakistani

Education:

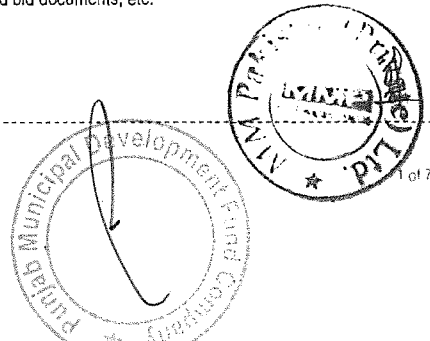
- Doctorate in Solid Waste Management, University of Grenoble I, France, 2010
- Masters by Research in Ocean, Atmosphere and Environmental Sciences from University of Grenoble I, France, 2006
- Masters of Science in Environmental Engineering (course-work) from UET, Lahore, Pakistan, 2005
- Bachelors of Science in Civil Engineering from UET, Lahore, Pakistan, 2000

Employment Record relevant to the assignment:

Period	Employing organization and your title / position. Contact information for references	Country	Summary of activities performed relevant to the Assignment
October 2020 - June 2021	Employer: Project Management Unit (Local Government and Community Development Department, Government of Punjab) Position: Technical Advisor (International-Consultant) Ref Contact: Mr. Akhtar Abassi Project Director (Acting Charge) pd@piccip.gop.pk	Pakistan	<ul style="list-style-type: none"> • As Technical Advisor prime responsibilities include providing technical guidance for development of feasibility studies, detailed engineering designs, bid documents, institutional restructuring and capacity development initiatives etc.
January 2020 - August 2020	Employer: International Consulting Engineers of Pakistan Position: Technical Lead (Consultant) Ref Contact: Ms. Ayela Farooki Chief Executive Officer advisor@wastebusters.com.pk	Pakistan	<ul style="list-style-type: none"> • Analysis of previous contract of Lahore Waste Management Company (LWMC) with international contractors for provision of SWM services in Lahore including primary collection, secondary collection, transport and mechanical sweeping and washing.
October 2020 - February 2021	Employer: Ministry of Climate Change, Government of Pakistan through United Nations Development Program Position: Waste Recycling Expert (Consultant) Ref Contact: Syed Mujtaba Hussain mujtaba.gov@gmail.com	Pakistan	<ul style="list-style-type: none"> • As Waste Recycling Expert, I was assigned to carry out a national level study based on available secondary data of plastic waste generation, import, recycled products' manufacturing and their subsequent export. Primary data collection activity with the industries was also carried out. The aim of the study was to provide the baseline data for the policy and decision-making forum for plastic waste imports and relevant regulations.
March 2020 - Oct 2020	Employer: Asif Ali & Associates Pvt. Ltd. Position: Environmental Expert (Consultant) Ref Contact: Mr. Usman Riaz Usman.aaa@gmail.com	Pakistan	<ul style="list-style-type: none"> • As the environmental expert, responsible for environmental protection as per applicable law while reviewing the submission to EPC Contractor • To attend and implement the environmental issues as reported in the NOC issued by the Pakistan Environmental Protection Agency (PEPA)
September 2019 - To Date	Employer: Project Management Unit (Local Government, Elections and Rural Development Department Government of Khyber Pakhtunkhwa Position: Project Officer Incharge Innovation (Consultant) Ref Contact: Mr. Vasif Shinwari Project Director pdkpcip@gmail.com	Pakistan	<ul style="list-style-type: none"> • As Project Officer in-charge Innovation prime responsibilities include providing technical support for development of feasibility studies, concept plans, detailed engineering designs, and bid documents, etc.

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Period	Employing organization and your title / position. Contact information for references	Country	Summary of activities performed relevant to the Assignment
September 2015 - December 2019	Employer: The Urban Unit, Lahore Position: Principal AI – Jazari Academy Ref Contact: Dr. Nasir Javed Chief Executive Officer dni.nmc106@gmail.com	Pakistan	<ul style="list-style-type: none"> Setting up the AI – Jazari Academy, an institute of national stature, in Lahore for JICA assisted project of "Capacity Development of Water and Sanitation Agencies (WASAs) and Water Sector Organizations".
July 2013 - September 2015	Employer: The Urban Unit, Lahore Position: Sr. Specialist SWM Ref Contact: Dr. Nasir Javed Chief Executive Officer dni.nmc106@gmail.com	Pakistan	<ul style="list-style-type: none"> Data collection and analytical framework preparation for assessment of project objectives and deliverables
July 2010 - June 2013	Employer: The Urban Unit, Lahore Position: Specialist SWM Ref Contact: Dr. Nasir Javed Chief Executive Officer dni.nmc106@gmail.com	Pakistan	<ul style="list-style-type: none"> Lead the team for conceptualization of the project and preparation of relevant documents necessary for feasibility analysis
May 2011 - Sep 2011 (intermittent)	Employer: CDM (USAID Project) under Community Rehabilitation Infrastructure Support Program Position: Environment Consultant Ref Contact: Dr. Muhammad Tufail Project Lead Tufail1@msn.com	Pakistan	<ul style="list-style-type: none"> Data Collection and preparation of analytical reports for designing SWM system for Peshawar and Jacobabad
Nov 2007 - Dec 2007 & March 2010 - June 2010	Employer: French National Scientific Research Centre (CNRS) Position: Research Analyst Ref Contact: Jean-Pierre Gourc Incharge-Research Lab jean-pierre.gourc@ujf-grenoble.fr	France	<ul style="list-style-type: none"> Worked with the CNRS for research project development. Determination of various Hydro-Mechanical characteristics of Biodegradable waste for MSW research project. Analysis and characterization of the Hydro-Mechanical properties of Municipal Solid Waste.
June-2008- Sep 2008 & June 2009- Dec 2009	Employer: ECOGEOS (France) Position: Research Analyst Ref Contact: Mr. Franck Olivier Chief Executive Officer franck.olivier@ecogeos.fr	France	<ul style="list-style-type: none"> Analysis and characterization of the Mechanical properties of Municipal Solid Waste. Development of possible model for hydrological and mechanical characteristics of solid waste and its application to the landfill site studies while taking into consideration factors like permeability behavior, biochemical changes and compression related phenomena.
2002-2005	Employer: National highway Authority Position: Trainee Engineer Ref Contact: Mr. Pervaiz Gul Project Director 0334-9152600	Pakistan	<ul style="list-style-type: none"> Checking of Interim Payment Certificates and Escalation Claims. Technical evaluation of tender documents and recognition of potential contractors. Preparation of BOQs and measurement books. Managing relationship with employer and contractors. Study of FIDIC contract laws and their practical application. Collaborating with the technical team of the contractors at site while staying at employer's office and coordination with Japanese International Cooperation Agency Missions. Reaching out to potential clients and devising attractive commercial offers in accordance with their needs. Negotiating with the clients and finalizing contracts.

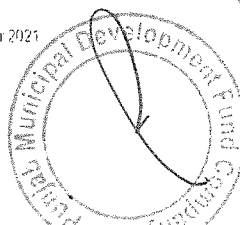
Membership in Professional Associations and Publications:

- Professional Engineer – Pakistan Engineering Council (Lifetime Member)
- Member Engineer - Institution of Engineers of Pakistan

Language Skills (indicate only languages in which you can work): English, Urdu & Punjabi, French

Kiran Farhan

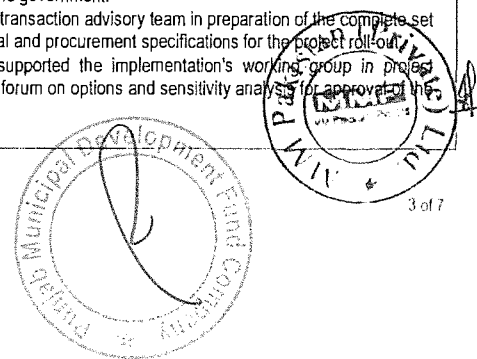
29 September 2021

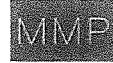


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Adequacy for the Assignment:

Detailed Tasks Assigned on Consultant's Team of Experts:	Reference to Prior Work/Assignments that Best Illustrates Capability to Handle the Assigned Tasks	
<ul style="list-style-type: none"> Assessment of existing system & infrastructure Carry out all essential investigations required in line with best engineering practices Design of landfill sites subject to identification of sites by the client Preparation of reports 	<p>Name of Assignment: Project Readiness Financing (PRF) for Punjab Urban Development Projects and Punjab Liveable Intermediate Cities Project</p> <p>Year: Oct 2020-to date</p> <p>Position held: Technical Advisor</p> <p>Client: PMU-PICIP (Local Government and Community Development Department)</p> <p>Location: Punjab</p> <p>Activities Performed:</p>	<ul style="list-style-type: none"> As the technical advisor, responsible for ensuring that the project team carry out assessment of capacity of infrastructure i.e., water supply, wastewater, solid waste management and their leveraging synergies and encompassing environmental impacts. Provide support to the consulting teams in designing for technology driven management of the current expansion of municipal services and their operations and any future plans of infrastructure initiatives for expansion of operations in close proximity to city boundaries. As the focal lead from PMU side, conduct regular monitoring of project activities which is designed to evaluate the effectiveness of Project Readiness Financing implementation through (i) Readiness Audits: before specific activities commence to ensure that procedures, personnel, equipment, materials and facilities were appropriate and in accordance with the project Quality Assurance Plan and ii) System Audits: Auditing to the degree to which the agreed processes in the project administration manual were implemented, and they were in accordance with the technical specifications and contract documents. Providing support to the engineering design team to devise the mechanism for city utilities for selection of medium and long term projects with the assurance that these projects steer the utilities towards sustainable management of urban services in order to drive transformations change through better asset utilization, redevelopment, rejuvenation, and restructuring.
	<p>Name of Assignment: Transaction Advisor (Consultant) to outsource SWM services in District Lahore</p> <p>Year: Jan 2020-to date</p> <p>Position held: Technical Lead</p> <p>Client: Lahore Waste Management Company</p> <p>Location: Lahore</p> <p>Activities Performed:</p>	<ul style="list-style-type: none"> As the Technical Lead for the project, successfully completed the field surveys, situation analysis and feasibility study for the outsourcing of waste management services. Responsible for detailing out each component of waste management services including the assets' assessment. Monitored the development of the conceptual designs and multi-year plans of solid waste management systems. Formulated the procedures and proposed technically and financially appropriate options of waste management activities for the consideration of the service provider entities. Coordinated with the Client's team on identification, selection and detail designing of Solid Waste Management collection, transportation and sweeping fleet, route optimization studies and optimal use of ultimate disposal site for the city of Lahore. Developed the resource estimation model for machinery, vehicles and workers which in turn was used to determine the financial estimates of the proposed project. Completed the design of new model with the help of technical team covering all details of project implementation requirement including the technical specifications of the equipment and machinery required. Worked with the core team to prepare statistics for project processing documentations, covering the aspects of technical due diligence and sector assessment with the focus on environmental and solid waste management policies of the government. Provided the technical support to the transaction advisory team in preparation of the complete set of documents including technical, legal and procurement specifications for the project roll-out. During the course of the project, supported the implementation's working group in project presentations to the decision-making forum on options and sensitivity analysis for approval of the project.

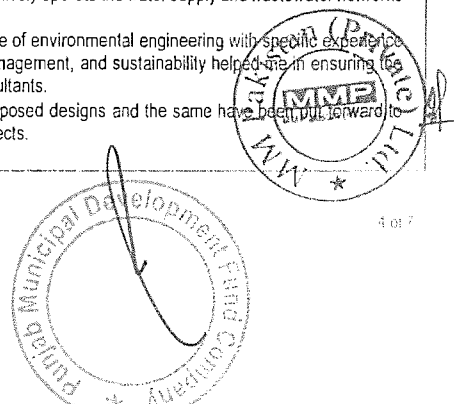


Detailed Tasks Assigned on Consultant's Team of Experts:	Reference to Prior Work/Assignments that Best Illustrates Capability to Handle the Assigned Tasks
	<p>Name of Assignment: Plastic Waste Management in Pakistan Year: Oct 2020 – February 2021 Position held: Waste Recycling Expert Client: Ministry of Climate Change, Government of Pakistan Location: Islamabad Activities Performed:</p> <ul style="list-style-type: none"> • Successfully achieved the objectives of providing the authorities and stakeholders with a strategic orientation with regards to plastic waste management in Pakistan. • Effectively compiled a baseline report for plastic waste management in Pakistan which was the first of its kind to have been produced on a national level. • Regularly provided the client with a mass balance information on different plastic waste streams in order for them to make policy decision regarding import and recycling of various plastic waste types. • Efficiently used the analytical tools to derive conclusions and lessons learnt with a view to consolidate and institutionalize major results of this research-based study in the domain of plastic waste for the whole country. • Drafted guidelines on environmental and waste management policy formulation and followed up on approval process to ensure continuation of best practices. • thorough compilation of analytical report led to formulation of a policy paper for the ministry of climate change and a country level roadmap on plastic waste management <p>Name of Assignment: Jāglot-Skardu (S-1) Road Project on EPC/Turnkey Mode Year: Feb 2020-to date Position held: Environmental Expert Client: National Highway Authority Location: Gilgit Baltistan Activities Performed:</p> <ul style="list-style-type: none"> • To ensure environmental compliance at project camps, for disposal of sewage, operation of plants, monitoring of quarry sites. <p>Name of Assignment: Khyber Pakhtunkhwa Cities Improvement Project – ADB funded Year: Sep 2019-to date Position held: Project Officer Client: Local Government, Elections and Rural Development Department's Project Management Unit for Khyber Pakhtunkhwa Cities Improvement Project Location: Peshawar Activities Performed:</p> <ul style="list-style-type: none"> • Work in close coordination with the Design Engineers' Team on identification, selection and detail designing of subprojects for Water, Sanitation and Solid Waste Management for 5 cities in Khyber Pakhtunkhwa. • Support Design Engineers in conducting necessary land surveys and site investigations including geo-technical investigations. • To develop conceptual designs, feasibility studies and multi-year plans of water, wastewater and solid waste management systems for five cities of Khyber Pakhtunkhwa. • To formulate and evaluate procedures of water supply and wastewater management and propose technically and financially appropriate options for the consideration of the service provider entities. • To guide / lead the project team in assessment of capacity of infrastructure i.e., water supply, wastewater, solid waste management and their leveraging synergies and encompassing environmental impacts. • To prepare analysis of the respective city's urban water supply and wastewater networks and design and implement programs to cost effectively optimize network performance to minimize technical and non-technical losses to effectively operate the water supply and wastewater networks at the agreed level of services. • As Project Officer the thorough knowledge of environmental engineering with specific experience in water, wastewater and solid waste management, and sustainability helped me in ensuring the quality of work as carried out by the consultants. • Successfully completed review of the proposed designs and the same have been put forward to the approving authorities for ensuing projects.

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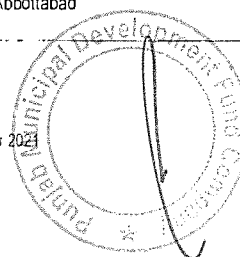




Detailed Tasks Assigned on Consultant's Team of Experts:	Reference to Prior Work/Assignments that Best Illustrates Capability to Handle the Assigned Tasks
	<p>Name of Assignment: Capacity Building of WASAs in Punjab Year: 2015-2019 Position held: Founding Principal Client: Housing, Urban Development, and Public health Engineering Department Location: Punjab Activities Performed:</p> <ul style="list-style-type: none"> As a founding principal, I set-up the AI – Jazari Academy, an institute of national stature, in Lahore for JICA assisted project of "Capacity Development of Water and Sanitation Agencies (WASAs) and Water Sector Organizations". Initiated the training programs for various municipal services including Water Resource Management, Water Supply and Wastewater Systems, and Solid Waste Management. Maintained the coordination and liaison role with JICA Project Team to carry out capacity need assessment surveys and designed the training programs for WASAs and Water Sector Organizations. The designed courses were then implemented after the analysis of the respective city's urban water supply and wastewater networks and were aimed to achieve the outcome in the form of effective and innovative optimization of network performance, to minimize technical and non-technical losses (water supply networks), inflow and infiltration (wastewater networks) and to minimize the energy required to effectively operate the water supply and wastewater networks at the agreed level of service. Was responsible for coordination with international funding agencies and government departments for policy formulation on water, sanitation and solid waste management. Regularly monitored the Project Team who was responsible to implement the trainings and documented their performance as appraisal reports. <p>Name of Assignment: Project support for outsourcing of SWM in 5 major cities in Punjab Year: 2015-2017 Position held: Sr. Specialist SWM Client: Local government and Community Development Department, Government of Punjab Location: Punjab Activities Performed:</p> <ul style="list-style-type: none"> Timely completed 'Master Planning Study of Solid Waste Management in Gujranwala', a JICA funded project including Environmental Impact Assessment of Landfill. Conducted the Performance Assessment of Water and Sanitation Services Company Peshawar (WSSP) since its inception in 2031. This analytical work fed into the preparation of the 5-year Business Plan and 1- year Operational Plan for the company targeting at improvement of its service delivery and operational sustainability. Effectively led the project on Development of Revenue Enhancement Strategy through Door-to-Door Survey of Water and Wastewater Services for the city of Peshawar. Successfully developed the Documentation, and Implementation Plan for Certification, Inspection, Renewal of Public /Private Environmental Laboratories for 'Environment Protection Department, Government of Punjab. Meticulously compiled the 'Karachi Heatwave Management Plan' with the objective to improve the environmental risk management. Successfully designed and executed several Waste Characterization studies for different cities in Punjab and Khyber Pakhtunkhwa. These activities under various projects allowed me to develop a catalog of waste estimation of cities based on its size, socio-economic conditions and similar with other cities in the region. Regularly conducted numerous trainings for the Water and Sanitation Services Peshawar on the subjects of Water, Sanitation and Solid Waste Management, in 2013, and then 2017 to 2018. The project also required preparation, dissemination and training on operational procedures city's water supply, sewerage networks and solid waste management. I professionally designed and implemented three months training course with a team of technical resource persons on 'Water Supply and Sanitation System Design, Leakage Detection, Health Safety and Environment Asset Management and Business Planning, and Solid Waste Management for Water and Sanitation Services Company, Abbottabad

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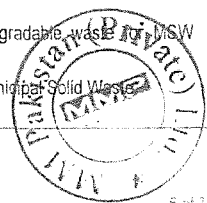
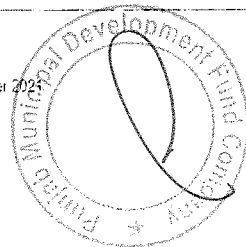




Detailed Tasks Assigned on Consultant's Team of Experts:	Reference to Prior Work/Assignments that Best Illustrates Capability to Handle the Assigned Tasks
	<p>Name of Assignment: Climate and Development Knowledge Network (CDKN) funded project</p> <p>Year: 2010-2013</p> <p>Position held: Specialist SWM</p> <p>Client: Government of Punjab, KP and other Clients</p> <p>Location: Pakistan</p> <p>Activities Performed:</p> <ul style="list-style-type: none"> For a Climate and Development Knowledge Network (CDKN) funded project, prepared an environmental action plan, guidance materials and instructions for 'Karachi Heatwave' incident in order to improve the environmental risk management. Successfully designed and executed several Waste Characterization studies for different cities in Punjab and Khyber Pakhtunkhwa. These activities under various projects allowed me to develop a catalog of waste estimation of cities based on its size, socio-economic conditions and similar with other cities in the region. Achieved the task of development of Integrated Solid Waste Management Plans for several cities of Punjab, which were required by the municipal organisations for revamping their old system of service delivery. Designed and executed the project of 'Enabling Environment Assessment of Rural Sanitation across Pakistan' in collaboration with the Water and Sanitation Program (WSP -- SA) of the World Bank. Successfully conducted a study of basic services in slums of Islamabad Capital Territory and Kohat in collaboration with UN- HABITAT. conducted the Environmental Screening and prepared the Project Document on Integrated Landfill Site for Lahore city. Designed a detailed training program for induction training of Town Planners of the Local Government and Community Development Department of the Government of Punjab. Supported in the development of training activities for environmental engineering and sciences cadre as a continuous professional development (CPD) activity and trained throughout my engagement as sector head. conducted training for Pakistan Civil Services officers on Environment, Water Supply, Wastewater and Solid Waste Management. Designed and implemented three months 'Training on Solid Waste Management' in collaboration with the Institute of Environmental Engineering UET, Lahore. <p>Name of Assignment: Waste Characterization study and SWM Plan for Peshawar Town- I.' and 'Waste Characterization study and SWM Plan for Jacobabad.'</p> <p>Year: 2007-2010</p> <p>Position held: Environment/Solid Waste Consultant</p> <p>Client: CDM</p> <p>Location: Peshawar and Jacobabad</p> <p>Activities Performed:</p> <ul style="list-style-type: none"> Sampling methodology preparation Reports of Laboratory Analysis SWM plan report Presentation to the Client <p>Name of Assignment: Analysis of hydro- biomechanical properties of MSW in landfills</p> <p>Year: Nov 2007-Dec 2007 & March 2010 - June 2010</p> <p>Position held: Research Analyst</p> <p>Client: French National Scientific Research Centre (CNRS)</p> <p>Location: France</p> <p>Activities Performed:</p> <ul style="list-style-type: none"> Worked with the CNRS for research project development. Determination of various Hydro-Mechanical characteristics of Biodegradable waste in MSW research project. Analysis and characterization of the Hydro-Mechanical properties of Municipal Solid Waste.

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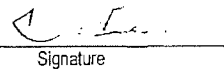
Detailed Tasks Assigned on Consultant's Team of Experts:	Reference to Prior Work/Assignments that Best Illustrates Capability to Handle the Assigned Tasks
	<p>Name of Assignment: Analysis of hydro-mechanical properties of MSW in landfills for future expansion.</p> <p>Year: 2008-2009 (intermittent)</p> <p>Position held: Research Analyst</p> <p>Client: ECOGEOS (France)</p> <p>Location: France</p> <p>Activities Performed:</p> <ul style="list-style-type: none"> • Analysis and characterization of the Mechanical properties of Municipal Solid Waste. • Development of possible model for hydrological and mechanical characteristics of solid waste and its application to the landfill site studies while taking into consideration factors like permeability behavior, biochemical changes and compression related phenomena. <p>Name of Assignment: Analysis of hydro-mechanical properties of MSW in landfills for future expansion</p> <p>Year: 2003-2005</p> <p>Position held: Trainee Engineer</p> <p>Client: National highway Authority</p> <p>Location: Islamabad & Lahore</p> <p>Activities Performed:</p> <ul style="list-style-type: none"> • Checking of Interim Payment Certificates and Escalation Claims. • Technical evaluation of tender documents and recognition of potential contractors. • Preparation of BOQs and measurement books. Managing relationship with employer and contractors. • Study of FIDIC contract laws and their practical application.

Expert's contact information: (e-mail: bdu@mmpakistan.com phone: 0423-6292525-26-27)

Certification:

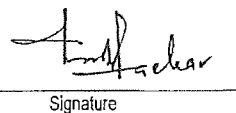
I, the undersigned, certify that to the best of my knowledge and belief, this CV correctly describes myself, my qualifications, and my experience, and I am available, as and when necessary, to undertake the assignment in case of an award. I understand that any misstatement or misrepresentation described herein may lead to my disqualification or dismissal by the Client, and/or sanctions by the Bank.

Dr. Kiran Farhan
Name of Expert

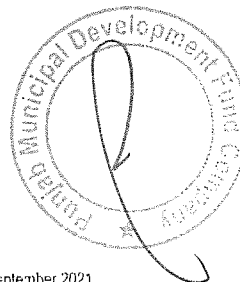

Signature

Date: 29 September 2021
Day/Month/Year

Muhammad Irfan Gohar
Name of authorized
Representative of the Consultant


Signature

Date: 29 September 2021
Day/Month/Year





Curriculum Vitae (CV)

Position Title and No.	:	K-11, Road Specialist (Design)
Name of Expert	:	Syeda Sadia Sharafat
Date of Birth	:	03-07-1980
Country of Citizenship / Residence	:	Pakistani

Education:

- Master of Engineering (Transportation) from NED University of Engineering & Technology, Karachi, Pakistan in 2006
- Bachelor of Engineering (Civil) from NED University of Engineering & Technology, Karachi, Pakistan in 2003

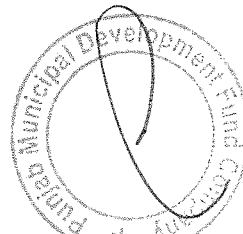
Employment Record:

Period	Employing organization and your title / position. Contact information for references	Country	Summary of activities performed relevant to the Assignment
Sep 2017 to Date	Employer: MM Pakistan (Pvt.) Ltd. Position: BRT Design Engineer Ref Contact: 042-36363234, 36292525-8 bdu@mmepakistan.com M. Irfan Gohar Manager (Business Development)	Pakistan	Coordination with client and other consultant, involved in analyzing topographic survey, condition of existing features including existing roads, existing structures, preparation of digital terrain model and base map, design of horizontal alignment for new roads and vertical alignment for all roads, preparation of road layout, swept path analysis for design vehicle, pavement design, roads marking and signs using MUTCD, and approval from authorities.
February 2016 to June 2017	Employer: Jouzy Axianta International, UAE Position: Team leader/Senior Engineer – Road & Highways. Ref Contact: +971 4 501 7777 Email: a.sadoon@jouzy.com Anas Sadoon	UAE	City of Arabia: Infrastructure development of 10,000 acres area including analysis of topographic survey, generation of digital terrain model, design of horizontal and vertical alignments, preparation of traffic management plan and road layout, swept path analysis for design vehicle, setting out details, roundabout grading, storm water design, generation of model surface for proposed design levels, intersection design. Preparation of bill of quantities, plan and profile drawings and coordination with client including approval from authorities etc. Fruits & Vegetable Market: Analyzing topographic survey, condition of existing features including existing roads, preparation of digital terrain model, design of horizontal alignment for new roads and vertical alignment for all roads, preparation of road layout, swept path analysis for design vehicle, pavement design, roads marking and signs using MUTCD, and approval from authorities.
August 2012 to January 2016	Employer: WSP PARSONS BRINCKERHOFF, UAE Position: Engineer – Road & Highways Ref Contact: +971 6 598 1777 Email: reema.rodrigues@wsp.com Reema Rodrigue	UAE	Dubai Crystal Analyzing the topographic survey, preparation of digital terrain model of 1,000 acres (approx.) area. Infrastructure development using Geometric Design Manual for Dubai which includes plot grading, design horizontal alignment and vertical alignment, preparation of road layout, setting out details, geometric design of Junctions and roundabouts with grading, design of internal ramps, storm water design, generation of proposed design model surface, plan and profile drawings & earthwork grading bill of quantities. Atlantis Phase 2 Analysis of topographic survey, preparation of digital terrain model, geometric design, and pavement design, roads marking and signs, as per MUTCD, ramp design, swept path analysis for design vehicle. Roads and Ind. Development of Al Thakhira Residential Area Qatar Rehabilitation of 692 acres (approx.) of existing road network including management of the topographic survey, condition of existing features and roads within road corridor, preparation of digital terrain model, designing of horizontal and vertical alignments for roads in covenant with existing gate levels, roundabout grading, preparation of road layouts and setting out plans, swept path

Syeda Sadia Sharafat

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Period	Employing organization and your title / position. Contact information for references	Country	Summary of activities performed relevant to the Assignment
			analysis for design vehicle, departures, detailed design of roads. Roads and Infrastructural Development of Al Khor Ind. Area, Qatar infrastructure design of 1,174 acres (approx.) area including topographic analysis, preparation of digital terrain model, horizontal and vertical alignments of at grade roads along with grade separated ramps and under passes, traffic management plan and road layout, storm water design, detailed design of interchanges using Autodesk civil 3D, gate levels for plots, roundabout grading, settling out plans for Interchanges.
September 2010 to July 2012	Employer: Osmani & Company (Pvt.) Ltd. Pakistan Position: Highway Design Engineer Ref Contact: +92-21-3454-6541/2 Email: s.noman@osmani.com hr@osmani.com Noman Sheikh	Pakistan	DHA CITY, Karachi (26 km on Superhighway from Karachi) Analysis of topographic survey of 16,000 acres area, preparation of digital terrain model, designing of horizontal and vertical alignment including traffic management plan, preparation of road layout with settling out plan in coordination with the town planners, drainage and sewerage & storm water design engineers, Intersection/Interchanges layouts, typical cross sections, preparation of preliminary cost estimates, preparation of presentations, site inspections, technical reports writing.
June 2008 to September 2010	Employer: Meinhardt, Pakistan Position: Highway Engineer Ref Contact: +92 21 34541771 Email: info@meinhardt.com.pk Abdul Moiz	Pakistan	Lake City Development, Raiwind Road, Lahore Designing of horizontal and vertical alignments of 1,700 acres (approx.) area, Junctions designing, rough cost estimates, pavement markings & road signage. Karachi Golf City Conceptual and detailed designing of horizontal and vertical alignments for roads of about 400 acres area. rough grading, preparation of road layouts and settling out plans in coordination with architects and town planners, swept path analysis for design vehicles, estimation of earthworks.
February 2005 to June 2008	Employer: Osmani & Company (Pvt.) Ltd. Pakistan Position: Design Engineer Ref Contact: +92-21-3454-6541/2 Email: s.noman@osmani.com hr@osmani.com Noman Sheikh	Pakistan	Development of new GHQ complex, sector E-10 Islamabad horizontal and vertical road design with typical cross section, traffic management plan, storm water design and estimates for earthworks. Faisalabad Industrial Estate Development & Management Company (FIEDMC) Geometric design including settling out horizontal plan, estimation of earthworks, typical Cross section.

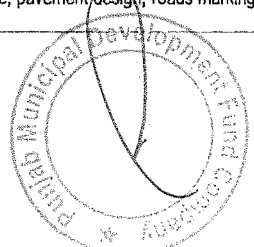
Membership in Professional Associations and Publications:

- Pakistan Engineering Council (PEC) as Professional Engineer (Civil 23886)
- Member Institution of Engineers Pakistan
- Member Society of Engineers UAE

Language Skills (indicate only languages in which you can work): English, Urdu

Adequacy for the Assignment:

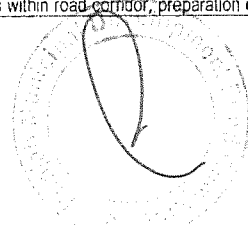
Detailed Tasks Assigned on Consultant's Team of Experts:	Reference to Prior Work/Assignments that Best Illustrates Capability to Handle the Assigned Tasks
<ul style="list-style-type: none"> • Review of existing data and documents • Design criteria of roads • Preparation of detailed road design including geometric design, road structures design. • Design of quality monitoring system of road networks 	<p>Name of Assignment: Karachi Bus Rapid Transit (BRT) Red Line Corridor Project – ADB Funded</p> <p>Year: Sep 2017 to Date</p> <p>Position held: BRT Design Engineer</p> <p>Client: Sindh Mass Transit Authority, Government of Sindh SM</p> <p>Location: Karachi</p> <p>Activities Performed: Coordination with client and other consultant, involved in analyzing topographic survey, collection of existing features including existing roads, existing structures, preparation of digital terrain model and base map, design of horizontal alignment for new roads and vertical alignment for all roads, preparation of road layout, swept path analysis for design vehicle, pavement design, roads marking and signs using MUTCD, and approval from authorities.</p>





	<p>Name of Assignment:</p> <ol style="list-style-type: none"> 1. City of Arabia 2. Fruits & Vegetable Market 3. Oud Mateena and Hatta 4. Hassyan Clean Coal Power Plant <p>Year: February 2016 - June 2017</p> <p>Position held: Team Leader/Senior Engineer (Roads & Highways)</p> <p>Client: various clients</p> <p>Location: Dubai, UAE</p> <p>Activities Performed:</p> <p>1. City of Arabia Worked as team leader for Infrastructure development of 10,000 acres area including analysis of topographic survey, generation of digital terrain model, design of horizontal and vertical alignments, preparation of traffic management plan and road layout, swept path analysis for design vehicle, setting out details, roundabout grading, storm water design, generation of model surface for proposed design levels, intersection design, earthwork quantities, preparation of bill of quantities, plan and profile drawings and coordination with client including approval from authorities etc.</p> <p>2. Fruits & Vegetable Market Involved in analyzing topographic survey, condition of existing features including existing roads, preparation of digital terrain model, design of horizontal alignment for new roads and vertical alignment for all roads, preparation of road layout, swept path analysis for design vehicle, pavement design, roads marking and signs using MUTCD, and approval from authorities.</p> <p>3. Oud Mateena and Hatta Involved in infrastructure design including horizontal alignment, vertical alignment, storm water design, round about grading, roads markings and sign using MUTCD, swept path analysis for design vehicle, and approval from authorities.</p> <p>4. Hassyan Clean Coal Power Plant Leading design team, review geometric design, roads markings and signs, as per Dubai Design Standards, and Involved in coordination with client and authorities.</p> <p>Name of Assignment:</p> <ol style="list-style-type: none"> 1. Dubai Crystal 2. Atlantis Phase 2 3. United Arab Bank 4. 10 Areas Sharjah 5. Sumaysimah the Base 6. Roads and Ind. Development of Al Thakhira Residential Area, Qatar 7. Roads and Infrastructural Development of Al Khor Ind. Area, Qatar <p>Year: August 2012 - January 2016</p> <p>Position held: Engineer – Road & Highways</p> <p>Client: Various clients</p> <p>Location: Sharjah, UAE</p> <p>Activities Performed:</p> <p>Dubai Crystal: Analyzing the topographic survey, preparation of digital terrain model of 1,000 acres (approx.) area. Infrastructure development using Geometric Design Manual for Dubai which includes plot grading, design horizontal alignment and vertical alignment, preparation of road layout, setting out details, geometric design of Junctions and roundabouts with grading, design of internal ramps, storm water design, generation of proposed design model surface, plan and profile drawings & earthwork grading bill of quantities.</p> <p>Atlantis Phase 2: Analysis of topographic survey, preparation of digital terrain model, geometric design, and pavement design, roads marking and signs, as per MUTCD, ramp design, swept path analysis for design vehicle.</p> <p>United Arab Bank: Infrastructure design with horizontal alignment, vertical alignment, pavement design, roads marking and signs, as per MUTCD, concept design report, swept path analysis for design vehicles.</p> <p>10 Areas Sharjah: Infrastructure design including horizontal and vertical alignment, storm water design, surface grading, proposed gate levels for plots with respect to vertical alignment, roundabout grading, plot grading.</p> <p>Sumaysimah the Base: Designing of horizontal and vertical alignments for roads, roundabouts and Junctions, grading and design, graded level at plot corners, preparation of road layouts and setting out plan, traffic management plan including traffic layouts and road marking drawings, rough Grading.</p> <p>Roads and Ind. Development of Al Thakhira Residential Area, Qatar: Rehabilitation of 692 acres (approx.) of existing road network including management of the topographic survey, condition of existing features and roads within road corridor, preparation of digital terrain model.</p>
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Syeda Sadia Shamraf

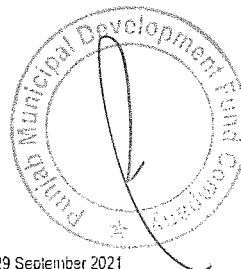


	<p>designing of horizontal and vertical alignments for roads in covenant with existing gate levels, roundabout grading, preparation of road layouts and setting out plans, swept path analysis for design vehicle, departures, detailed design of roads.</p> <p>Roads and Infrastructural Development of Al Khor Ind. Area, Qatar: infrastructure design of 1,174 acres (approx.) area including topographic analysis, preparation of digital terrain model, horizontal and vertical alignments of at grade roads along with grade separated ramps and under passes, traffic management plan and road layout, storm water design, detailed design of interchanges using civil 3D, gate levels for plots, roundabout grading, setting out plans for interchanges.</p> <p>Name of Assignment: DHA CITY, Karachi (26 km on Superhighway from Karachi) Year: December 2010 - June 2012 Position held: Highway Design Engineer Client: DHA, Karachi Location: Karachi Activities Performed: Analysis of topographic survey, preparation of digital terrain model, designing of horizontal and vertical alignment of 16,000 acres area including traffic management plan, preparation of road layout with setting out plan in coordination with the town planners, drainage and sewerage & storm water design engineers, Intersection/Interchanges layouts, typical cross sections, preparation of preliminary cost estimates, preparation of presentations, site inspections, technical reports writing.</p> <p>Name of Assignment: 1. Lake City Development, Raiwind Road, Lahore 2. Karachi Golf City Year: December 2008 - June 2010 Position held: Highway Design Engineer Client: LDA & Karachi Golf City Location: Lahore & Karachi Activities Performed: Lake City Development, Raiwind Road, Lahore: Designing of horizontal and vertical alignments of 17000 (approx.) acres area, Junctions designing, rough cost estimates, pavement markings & road signage. Karachi Golf City: Conceptual and detailed designing of horizontal and vertical alignments for roads of about 400 acres area, rough grading, preparation of road layouts and setting out plans in coordination with architects and town planners, swept path analysis for design vehicles, estimation of earthworks.</p> <p>Name of Assignment: 1. Development of new GHQ complex, sector E-10 2. Hyderabad Development Project 3. Faisalabad Industrial Estate Development & Management Company (FIEDMC) Year: December 2005 - June 2008 Position held: Design Engineer Client: Various Clients Location: Islamabad, Hyderabad & Faisalabad Activities Performed:</p> <ul style="list-style-type: none"> • Development of new GHQ complex, sector E-10 Involved in horizontal and vertical road design with typical cross section, traffic management plan, storm water design and estimates for earthworks. • Hyderabad Development Project Conceptual layout with flyovers and interchanges, Geometric design of new and existing roads, and pavement design of roads using Road note 31. • Faisalabad Industrial Estate Development & Management Company (FIEDMC) Geometric design including setting out horizontal plan, estimation of earthworks, typical Cross section.
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Expert's contact information: (e-mail: bdu@mmpakistan.com phone: 0423-6292525-26-27)



Syeda Sadiya Sharafat




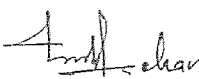
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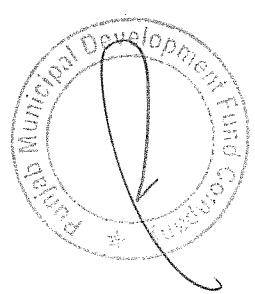


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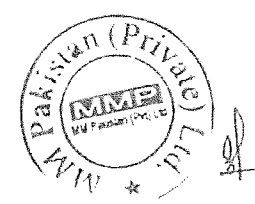
I, the undersigned, certify that to the best of my knowledge and belief, this CV correctly describes myself, my qualifications, and my experience, and I am available, as and when necessary, to undertake the assignment in case of an award. I understand that any misstatement or misrepresentation described herein may lead to my disqualification or dismissal by the Client, and/or sanctions by the Bank.

Syeda Sadia Sharafat Name of Expert	 Signature	Date: 29 September 2021 Day/Month/Year
Muhammad Irfan Gohar Name of authorized Representative of the Consultant	 Signature	Date: 29 September 2021 Day/Month/Year


Syeda Sadia Sharafat



29 September 2021



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Curriculum Vitae (CV)

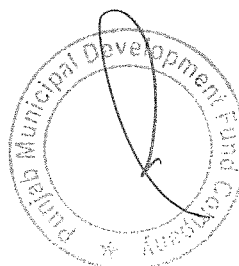
Position Title and No.	:	K-12 Procurement & Contract Management Specialist
Name of Expert	:	Rashid Ahmad
Date of Birth	:	20.11.1955
Country of Citizenship / Residence	:	Pakistani

Education:

- BSc Civil Engineering University of Engineering & Technology Lahore. 1979 to 1983

Employment Record relevant to the assignment:

Period	Employing organization and your title / position. Contact information for references	Country	Summary of activities performed relevant to the Assignment
2015 to date	Employer: MM Pakistan Pvt. Limited Position: Sr Engineer Contracts/Procurement/RE/ARE Ref contact: M.Irfan Gohar (Manager BD) 42-36300440	Pakistan	<ul style="list-style-type: none"> Scrutiny, verification and Certification of IPCs (Interim Payment Certificates), FPCs (Final Payment Certificates, Variation Orders and Contractor Claims of numerous contracts as per FIDIC contract clauses. Review of TOCs (Taking over Certificates), DLC (Defect Liability Claims) and EOT (Extension of Time) Claims i.e. Price Adjustment and Foreign Currency Fluctuations Rates. Supervised work of construction of bridges, fall structures, outlets & concrete lining of channels. Supervised Construction work of concrete lining, Bridges, Pile foundations, Head regulators, Fall structures, Meter flumes & Outlets
2013 to 2015	Employer: WAPDA Lahore. Position: Chief Engineer 042-99202211	Pakistan	<ul style="list-style-type: none"> Overall Incharge of Central Material Testing Laboratory, CMTL, WAPDA, Lahore. Administrative & Financial Control of CMTL Management / marketing capabilities and standard of testing work performed in various sections of Laboratory and also SSI work carried out in the field, especially Mega Projects throughout the country. Scrutiny and checking of estimates for deposit work and procurement.
2012 to 2013	Employer: WAPDA Mangla Position: Superintending Engineer	Pakistan	Surveillance of Mangla Dam Project, Hydrographic Survey of Lake, Monitoring of seepage from boiling points at Main Dam, Sukhian Dam & Jarry Dam Treatment of boiling points, Measurement of seepage in inspection galleries and from boiling points
2010 to 2012	Employer: FESCO, Faisalabad. Position: Executive Engineer Civil (Contracts)	Pakistan	Preparation of estimates, Bill of quantities and tender documents for different 132 kv grid stations along with construction supervision.
2004 to 2010	Employer: WAPDA. Position: Executive Engineer 042-99202211	Pakistan	<ul style="list-style-type: none"> Preparation of estimates, Bill of quantities and tender documents Verifying of contract documents along with specification of contracts Scrutiny checking and verification of interim payment certificates and final payment certificate of contract Evaluation of miscellaneous claims and price adjustment claims of contractors. Checking, evaluation and processing of Interim Payment certificates & Final Payment Certificates of contractors Supervision of construction works Main Canal earth work & concrete lining along with allied structures i.e. Head regulators of distributaries, escape structure, out fall structures, pile foundations, Distributaries off taking from Main Canal (earth work and concrete lining), Mankera branch canal (RD 90+00 to 211+00) earth work, concrete lining, bridges, pile foundations Head regulators of distributaries, Fall Structures & culverts etc.
2001 to 2004	Employer: Wapda Mangla	Pakistan	<ul style="list-style-type: none"> Preparation of estimates for various works



Detailed Design of Infrastructure Sub-Projects Sectoral Planning & Resident Supervision
in 16 Cities of Punjab (Package 03)



Period	Employing organization and your title / position. Contact information for references	Country	Summary of activities performed relevant to the Assignment
	Position: Technical Officer/Contract Engineer		<ul style="list-style-type: none"> Arranging monthly meetings and preparation of minutes of meeting & follow up. O&M of Turbine Hall for 10 units capacity 100 MW each (Total 1000 MW), Civil structures in Switchyard & Spillway etc
1995 to 2001	Employer: WAPDA, Muzaffargarh. Position: Senior Engr.Civil/Contracts	Pakistan	<ul style="list-style-type: none"> Preparation of estimates, Bill of quantities and tender documents for Turbine Hall foundation cooling towers, processed evaluated interim payment certificate of contractors and final payment certificates and price adjustment claims of contractors. Worked as Engineer's representative, prepared IFBs, evaluated Bids, awarded contracts and evaluated claims of contractors.
1984 to 1995	Employer: Irrigation Department Punjab Position: Junior Engr. (Civil)/Asst Engr Contracts/Procurement	Pakistan	<ul style="list-style-type: none"> Preparation of estimates and bill of quantities for various contracts of CRBC Bid evaluation of various contracts, Evaluation & scrutiny of IPC's & final payment certificates of contractors. Evaluation of claims of contractors. Survey of main CRBC canal distributaries and cross drainage structures

Membership in Professional Associations and Publications:

- Member, Pakistan Council of Architect and Town Planner (PCATP P-0662)

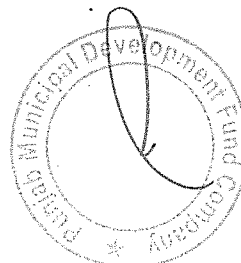
Language Skills (indicate only languages in which you can work): English, Urdu and Punjabi

Adequacy for the Assignment:

Detailed Tasks Assigned on Consultant's Team of Experts	Reference to Prior Work/Assignments that Best Illustrates Capability to Handle the Assigned Tasks
<ul style="list-style-type: none"> Entirely responsible to assist the Team Leader in the meetings with client and contractor (on contractual matters) To evaluate and verify the variation orders and clauses as per the contract submitted by the contractor. To judge and evaluate the grant of time extension of project completion as per demands of the contractor. To prepare concession agreement Provide intermittent inputs as contracts / claims / disputes expert in order to support the team for Technical audit Regular monitoring Specialist Technical Support Preparation of bidding documents Assistance in Bid evaluation Relevant reports preparation 	<p>Name of Assignment: Project Supervision & Implementation Assistance (PSIA) of Tarbela Dam 5th Extension Hydropower Project.</p> <p>Year: June 2020 to date</p> <p>Position held: Senior Engineer Contracts/Procurement</p> <p>Client: WAPDA</p> <p>Location: Tarbela</p> <p>Activities Performed:</p> <ul style="list-style-type: none"> Prequalification of Contractors for E&M Works and 500 KV Transmission Line of T-5 Project. Bids Evaluation for Civil and E&M Works of T-5 Project. Preparation of Bidding Documents for 500 KV Transmission Line of T-5 Project. Bids Evaluation for Transmission Line Works of T-5 Project. Preparation of Contract Documents of T-5, Civil works. Preparation of Contract Documents of T-5, E&M Works. Preparation of Contract Documents for 500KV Transmission line of T-5 Project. Clarification of Employer's and World Bank's queries on prequalification reports and Bid Evaluation reports of Civil works, E&M Works and Transmission Line works. Preparation of Agreements for Civil Works, E&M Works and Transmission Line Works of T-5. Prepared DAAB agreement for Civil Work according to FIDIC 2017 and DB Agreement for E&M Works on ENAA Basis. Day to Day contractual correspondence with Civil and E&M contractor. <p>Name of Assignment: Project Supervision & Implementation Assistance (PSIA) of Tarbela Dam 4th Extension Hydropower Project (Assignment-B)</p> <p>Year: October 2017 - April 2019</p> <p>Position held: Senior Engineer Contracts</p> <p>Client: WAPDA</p> <p>Location: Tabela</p> <p>Activities Performed:</p> <ul style="list-style-type: none"> Responding Contractor's correspondence in accordance with Contract Clauses and FIDIC.

Rashid Ahmad

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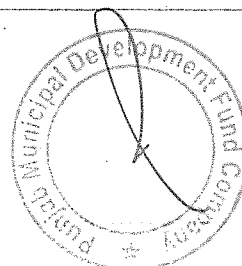
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Detailed Tasks Assigned on Consultant's Team of Experts:	Reference to Prior Work/Assignments that Best Illustrates Capability to Handle the Assigned Tasks
	<ul style="list-style-type: none"> • Evaluating Contractor's Variation claims in accordance with variation and adjustment clause as per variation procedure. • Evaluation and scrutiny of contractor's claim under "Value Engineering" clause. • Interpretation of contract clauses on different issues. • Review of taking over certificates (TOCs) of different parts of works of Civil Contract. <p>Name of Assignment: Detail Design and Construction Supervision of Rehabilitation and Upgradation of Balloki And Lower Bari Doab Canal System.</p> <p>Year: December 2016 - October 2017</p> <p>Position held: Resident Engineer</p> <p>Client: Punjab Irrigation and Power Department</p> <p>Location: Okara</p> <p>Activities Performed:</p> <ul style="list-style-type: none"> • Worked as an in-charge of contract ICB-04 amounting Rs.4.2 billion and ICB-02 amounting to Rs. 3.33 billion observed Contractual obligations. • ICB-04 consists of Rehabilitation and up gradation of 81 channels off taking from LBDC. • ICB-02 consists of Rehabilitation and up gradation of LBDC main Canal from RD 227+454 to RD 526+000. • Administrative and Financial control of Contract ICB-04 & ICB-02. • Supervised Construction work of concrete lining, Bridges, Head regulators, Fall structures, Meter flumes, Outlets, & about 200 km long Farm to Market Roads. • Verified & certified interim payment certificates (IPCs), scrutinized & verified variation orders and contractor claims. • Periodical review of Contractor's Project control systems and procedures to make sure that they are effective and ensure timely completion of Project. <p>Name of Assignment: Detail Design and Construction Supervision of Rehabilitation and Upgradation of Balloki and Lower Bari Doab Canal System.</p> <p>Year: October 2016 - December 2016</p> <p>Position held: Assistant Resident Engineer</p> <p>Client: Punjab Irrigation and Power Department</p> <p>Location: Okara</p> <p>Activities Performed:</p> <ul style="list-style-type: none"> • Worked as an in-charge of Okara section of contract ICB-04. It is an irrigation project containing 81 channels which are lined/upgraded. • Supervised work of construction of Farm to Market roads, bridges, fall structures, outlets & concrete lining of channels. • Verification & certification of IPC (Interim Payment Certificates) of ICB-04 as per Contract. • Checking of shop drawings submitted by the contractor. <p>Name of Assignment: Project Management Consultancy Services for Balance Work of "Islamabad International Airport Project"</p> <p>Year: December 2015 - August 2016</p> <p>Position held: Islamabad Pakistan.</p> <p>Client: Civil Aviation Authority (CAA)</p> <p>Location: Cost Control & Management Engineer</p> <p>Activities Performed:</p> <ul style="list-style-type: none"> • Scrutiny, verification and Certification of IPCs (Interim Payment Certificates), FPCs (Final Payment Certificates), Variation Orders and Contractor Claims of all the packages, Review of tender documents of different packages ranging from Rs.4.00 billion to Rs.5.00 billion as per FIDIC contract clauses. Evaluation of technical bid of different contracts. • Review of TOCs (Taking Over Certificates), DLC (Defect Liability Certificates) and EOT (Extension of Time) Claims & Price Adjustment and Foreign Currency Fluctuations Claims.

Rashid Ahmad

11 January 2022



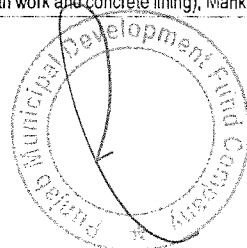
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Detailed Tasks Assigned on Consultant's Team of Experts:	Reference to Prior Work/Assignments that Best Illustrates Capability to Handle the Assigned Tasks
	<p>Name of Assignment: Central Material Testing Laboratory, CMTL, WAPDA, Lahore Year: February 2013 November 2015 Position held: Add. Chief Engineer (Civil)/Project Director Client: WAPDA Location: Lahore Activities Performed:</p> <ul style="list-style-type: none"> • Overall In-charge of Central Material Testing Laboratory, CMTL, WAPDA, Lahore. • Administrative & Financial Control of CMTL • Management/marketing capabilities and standard of testing work performed in various sections of Laboratory and also SS/ work carried out in the field, especially Mega Projects throughout the country after observing contractual obligations. • Scrutiny and checking of estimates for deposit work and procurement. • Preparation of tender documents. Procurement of RCC (Roller Compacted Concrete) equipment's for CMTL under contract No.WCAP-B3 CMTL C2A & C2. In this regard visited Germany & Italy for pre-shipment inspection of equipment, opened L.C.S on behalf of WAPDA <p>Name of Assignment: Mangla Dam Project Year: June 2012 February 2013 Position held: Superintending Engineer (Surveillance) Client: Mangla Dam Organization, WAPDA Location: Mangla Activities Performed:</p> <ul style="list-style-type: none"> • Surveillance of Mangla Dam Project, Hydrographic Survey of Lake, Monitoring of seepage from boiling points at Main Dam, Sukhian Dam & Jarry Dam, Treatment of boiling points, Measurement of seepage in inspection galleries and from boiling points • Readings of vibrating Wire electrical piezo meters etc. • Prepared estimate & tender documents for the work of rehabilitation of damaged road & protection of left side embankment of road at Mangla Power House. <p>Name of Assignment: Various Construction works of Power Distribution Company Year: February 2010 June 2012 Position held: Executive Engineer Civil (Contracts) Client: Faisalabad Electric Supply Company (FESCO) Location: Faisalabad Activities Performed:</p> <ul style="list-style-type: none"> • Worked as an Engineer's representative for various construction works of Power Distribution Company • Supervision of construction works of 132 KV Grid Stations and Deputy Managers offices, multistory flats, Cat-A & Cat-B residences & internal metal roads in Colonies & Grid stations. • Preparation of contract documents, Bill of quantities, tender documents and processing of interim payment certificates and final payment certificates of Contractor and price adjustment claim of several Contractors. • Prepared IFBs, evaluated Bids, awarded contracts and completed execution and evaluated numerous claims of the contractors. <p>Name of Assignment: Greater Thal Canal Project Year: August 2004 January 2010 Position held: Executive Engineer Civil Client: WAPDA Location: Khushab Activities Performed:</p> <ul style="list-style-type: none"> • Supervision of Construction of Main Canal earth work & concrete lining along with allied structures i.e. Head regulators of distributaries, escape structure, out fall structures, pile foundations, Distributaries off taking from Main Canal (earth work and concrete lining), Mankera branch canal (RD

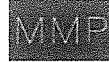


Rashid Ahmad

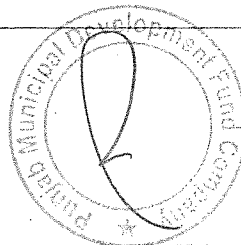
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Detailed Tasks Assigned on Consultant's Team of Experts:	Reference to Prior Work/Assignments that Best Illustrates Capability to Handle the Assigned Tasks
	<p>90+00 to 211+00) earth work, concrete lining, bridges, pile foundations Head regulators of distributaries, Fall Structures, Roads crossings Culverts, roads ramps and approach metaled Roads etc.</p> <ul style="list-style-type: none"> Preparation of contract documents, Bill of quantities for tender documents of contract No.GTC-03 for Rs.1800 million, GTC-04 Rs.450 million, GTC-05 Rs.2800 million, GTC-06 Rs.3750 million GTC-07 Rs.4200 million and GTC-08 Rs.3950 million. Vetting of contract documents along with specification of contracts GTC-03, GTC-04, GTC-05 and GTC-06 according to FIDIC clauses. Scrutiny checking and verification of interim payment certificates and final payment certificate of contract GTC-03 amounting to Rs.1800 million (interim payment certificate vary from Rs.50 million to Rs.100 million). Evaluation of bids for contract GTC-04 & GTC-05. Evaluation of miscellaneous claims and price adjustment claims of contractors. Checking, evaluation and processing of Interim Payment certificates & Final Payment Certificates of contractors for contract No. GTC-03 amounting to Rs.1800 million, GTC-04 amounting to Rs.450 million and GTC-05 amounting to Rs.2800 million rupees (Interim payment certificates vary from Rs.100 to Rs.250 million). <p>Name of Assignment: Mangla Dam Hydro Power Project Year: September 2001 August 2004 Position held: Technical Officer/Contract Engineer Client: WAPDA Location: Mangla Activities Performed:</p> <ul style="list-style-type: none"> Preparation of contract documents for various works amounting to Rs.300 million to 400 million each. Arranging monthly meetings and preparation of minutes of meeting & follow up. O&M of Turbine Hall for 10 units capacity 100 MW each (Total 1000 MW), Civil structures in Switchyard & Spillway & maintenance of Service Roads etc. <p>Name of Assignment: Thermal Power, Station Year: September 1995 September 2001 Position held: Senior Engr. Civil / Contracts Client: WAPDA Location: Muzaffargarh Activities Performed:</p> <ul style="list-style-type: none"> Preparation of contract documents, Bill of quantities and tender documents for Turbine Hall foundations and cooling towers, processed and scrutinized interim payment certificate, final payment certificates and price adjustment claims of contractors. Worked as Engineer's representative, prepared IFBs, evaluated Bids, awarded contracts and evaluated claims of contractors. Supervised construction work of Turbine Hall, Foundations, Cooling Towers and related structure of Unit No.4, 5 & 6 Capacity 320 & 210 MW each respectively. Multi-story office building, Laying of 30" dia Water supply pipelines Store Building, Concrete Roads, Metal Roads, Pavements, Residential Buildings & Simulator Building. Maintenance of 1360 MW Thermal Power Complex powerhouse building, Residential Colony Consisting of 1500 houses, High Schools, Rest House, Officer Club, Two Bachelor Hostels, Training Center, Admin Block & Auxiliary Building Turbine Halls, Cooling Towers, Water Supply System & Sewerage System etc. <p>Name of Assignment: Chashma Right Bank Canal (CRBC) Irrigation Project Year: January 1984 September 1995 Position held: Junior Engr. (Civil) / Assistant Engineer Contracts/Procurement Client: WAPDA Location: D.I. Khan</p>



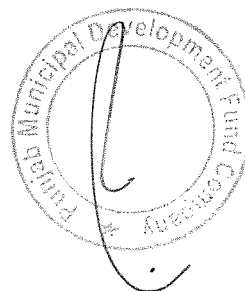
Detailed Tasks Assigned on Consultant's Team of Experts	Reference to Prior Work/Assignments that Best Illustrates Capability to Handle the Assigned Tasks
	<p>Activities Performed:</p> <ul style="list-style-type: none"> • Preparation of contract documents and bill of quantities for various contracts of CRBC 1st, 2nd and 3rd stage varying from Rs.30 million to Rs.200 million each. • Preparation of tender documents & specification of various contracts of CRBC 1st& 2nd stage. • Bid evaluation of various contracts. Evaluation & scrutiny of IPC's & final payment certificates of contractors. • Review of tender documents according to FIDIC clauses. • Evaluation of claims of contractors. • Survey of main CRBC canal, distributaries and cross drainage structures • Supervision of Construction work of 1st & 2nd Stage of Chashma Right Bank Canal Project, Demarcation of ROW, Supervision of construction works i.e Earth work, Concrete/ Tile Lining, bridges, Well Foundations & Pile Foundations. • Supervision of Construction of drainage structures i.e. super passages, siphons & culverts etc. • Supervision of construction of two Super Passages with discharge capacity 25000 cusecs & 50000 cusecs. Containing more than 400 concrete pile foundations. Supervision of construction work of approach roads Ramps.

Expert's contact information: (e-mail: bdu@mmpakistan.com phone: 0423-6292525-26-27)

Certification:

I, the undersigned, certify that to the best of my knowledge and belief, this CV correctly describes myself, my qualifications, and my experience, and I am available, as and when necessary, to undertake the assignment in case of an award. I understand that any misstatement or misrepresentation described herein may lead to my disqualification or dismissal by the Client, and/or sanctions by the Bank.

<p>_____ Rashid Ahmad Name of Expert</p>	<p>_____ <i>Rashid Ahmad</i> Signature</p>	<p>Date: 29 September 2021 Day/Month/Year</p>
<p>_____ Muhammad Irfan Gohar Name of authorized Representative of the Consultant</p>	<p>_____ <i>Muhammad Irfan Gohar</i> Signature</p>	<p>Date: 29 September 2021 Day/Month/Year</p>



Rashid Ahmad
Rashid Ahmad

Curriculum Vitae (CV)

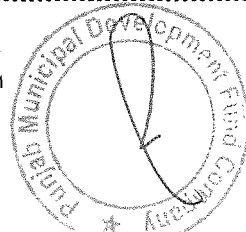
Position Title and No.	:	K-13, Architect
Name of Expert	:	Syed Ali Zeeshan Rizvi
Date of Birth	:	20-11-1987
Country of Citizenship / Residence	:	Pakistani

Education:

- Bachelor in Architecture, Architecture Department of Architecture, College of Art & Design, Punjab University, Allama Iqbal campus, Lahore, July 2011.
- D.A.E Architecture Government College of Technology, Railway Road, Lahore 2006

Employment Record relevant to the assignment:

Period	Employing organization and your title / position. Contact information for references	Country	Summary of activities performed relevant to the Assignment
2018 To Present	Employer: MM Pakistan (Pvt.) Ltd Position: Design Architect Ref Contact: 042-3630040	Pakistan	<ul style="list-style-type: none"> • To prepare, and develop drawings, images and other documents relating to the design. • To identify client requirements and attending meetings. • To develop, presentations of design options for further discussion by the design team. • To take responsibility, by the project leader, for specific areas of the design and project development.
2017 - 2018	Employer: Insight Architecture and Interior Design Position: Architect Ref Contact: 042-35201397-8	Pakistan	<ul style="list-style-type: none"> • To prepare, and develop drawings, images and other documents relating to the design. • To identify client requirements and attending meetings. • To develop, presentations of design options for further discussion by the design team. • To take responsibility, by the project leader, for specific areas of the design and project development.
2017 - 2017	Employer: Insight Architecture and Interior Design Position: Architect Ref Contact: 042-35201397-8	Pakistan	<ul style="list-style-type: none"> • To prepare, and develop drawings, images and other documents relating to the design. • To identify client requirements and attending meetings. • To develop, presentations of design options for further discussion by the design team. • To take responsibility, by the project leader, for specific areas of the design and project development.
2015 - 2016	Employer: Insight Architecture and Interior Design Position: Architect Ref Contact: 042-35201397-8	Pakistan	<ul style="list-style-type: none"> • To prepare, and develop drawings, images and other documents relating to the design. • To identify client requirements and attending meetings. • To develop, presentations of design options for further discussion by the design team. • To take responsibility, by the project leader, for specific areas of the design and project development.
2013 -2014	Employer: Techscon Group Position: Assistant Architect Ref Contact: 042-35723497	Pakistan	<ul style="list-style-type: none"> • To prepare, and develop drawings, images and other documents relating to the design. • To identify client requirements and attending meetings. • To develop, presentations of design options for further discussion by the design team. • Producing drawings and specifications for construction teams. • To take responsibility, by the project leader, for specific areas of the design and project development.





Period	Employing organization and your title / position. Contact information for references	Country	Summary of activities performed relevant to the Assignment
			<ul style="list-style-type: none"> To manage professionals like Civil Engineers and Interior Designer. Responsible for specifying the nature and quality of material required.
2011 - 2013	Employer: Shadab Associates Position: Assistant Architect Ref Contact: 03009490100	Pakistan	<ul style="list-style-type: none"> To prepare, and develop drawings, models, images and other documents relating to the design. To identify client requirements and attending meetings. To develop, presentations of design options for further discussion by the design team. Producing drawings and specifications for constructions teams. To take responsibility, by the project leader, for specific areas of the design and project development. Responsible for specifying the nature and quality of material required.

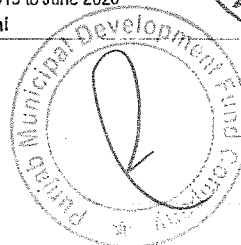
Membership In Professional Associations and Publications:

- Pakistan Council of Architects and Town Planners. (PCATP # A-04754)

Language Skills (indicate only languages in which you can work): English, Urdu & Punjabi

Adequacy for the Assignment:

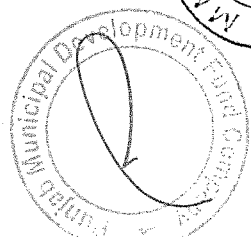
Detailed Tasks Assigned on Consultant's Team of Experts	Reference to Prior Work/Assignments that Best Illustrates Capability to Handle the Assigned Tasks
Deal with all architectural planning and designing and landscaping services relating to the assignment	<p>Name of Assignment or Project: Tarbela 5th Extension Hydropower Project – <i>WB funded</i></p> <p>Company Name: MM Pakistan (Pvt) Ltd.</p> <p>Year: June 2021 to Present</p> <p>Location: Tarbela, Khyber Pakhtunkhwa Pakistan.</p> <p>Client: WAPDA</p> <p>Position held: Architect</p> <p>Activates Performed: As Architect working on Architectural Design of Buildings part of the project.</p> <ul style="list-style-type: none"> Guest House and 5 Houses for Consultant's Expatriate staff. . . Refurbishment of Engineer's & Employer's Field Offices. Bachelor's Hostel. 12 Houses at TDP. <p>Name of Assignment or Project: Design Review of Building's Architecture part under ML-1 project.</p> <p>Company Name: MM Pakistan (Pvt) Ltd.</p> <p>Year: Dec 2018 to June 2021</p> <p>Location: Peshawar to Karachi</p> <p>Client: Pakistan Railways</p> <p>Main Project Features: Architectural Design Review.</p> <p>Position held: Design Architect</p> <p>Activates Performed: As Design Architect assisted Chief Architect in reviewing design of Walton Academy and Station & Allied buildings at all stations of all sections (to be renews constructed)</p> <p>Name of Assignment or Project: Karachi Bus Rapid Transit Red Line Corridor Project (RRT Karachi), – Project Design Advance</p> <p>Company Name: MM Pakistan (Pvt) Ltd.</p> <p>Year: May 2019 to June 2020</p> <p>Location: Karachi</p>





Detailed Tasks Assigned on Consultant's Team of Experts:	Reference to Prior Work/Assignments that Best Illustrates Capability to Handle the Assigned Tasks	
	<p>Client</p> <p>Main Project Features:</p> <p>Position held:</p> <p>Activates Performed:</p> <p>Name of Assignment or Project:</p> <p>Company Name:</p> <p>Year:</p> <p>Location:</p> <p>Client</p> <p>Position held:</p> <p>Activates Performed:</p> <p>Name of Assignment or Project:</p> <p>Company Name:</p> <p>Year:</p> <p>Location:</p> <p>Client</p> <p>Main Project Features:</p> <p>Position held:</p> <p>Activates Performed:</p> <p>Name of Assignment:</p>	<p>Transport and Mass Transit Department, Government of Sindh</p> <p>Engineering Design.</p> <p>Design Architect</p> <p>As Design Architect working on Karachi Bus Rapid Transit Red Line Corridor Project.</p> <ul style="list-style-type: none"> ▪ Assists Design Chief Architect in reviewing Design issues of Stations & Depots ▪ Preparation of Bidding drawings of Stations ▪ Review of Technical Specifications <p>Peshawar Sustainable Bus Rapid Transit Corridor Project – Project Design Advance</p> <p>Detailed Engineering Design, Procurement and Construction Management – ADB funded</p> <p>MM Pakistan (Pvt) Ltd.</p> <p>Feb 2018 May 2020</p> <p>Peshawar</p> <p>Transport and Mass Transit Department, Government of Khyber Pakhtunkhwa</p> <p>Design Architect</p> <p>As Design Architect worked on Peshawar Sustainable Bus Rapid Transit Corridor Project. (BRT Peshawar), Funding Agency (Asian Development Bank (ADB).</p> <p>Assists Chief Architect in Design issues of Building Package (Covered Area of around 1.25 Million sqft) and also coordination with all other consultants:</p> <ul style="list-style-type: none"> ▪ Design BRT Bus Depot Terminal Chamkani & Hayatabad. ▪ Design, BRT Bus Staging Facility with commercial Area and Park & Ride Area. ▪ Parks & Ride Building for 450-cars. ▪ BRT-KPUMA, Trance Peshawar office Building and control center. <p>Topographic Survey, ..Geotechnical Investigation, Detailed Layout Planning and Infrastructure Designing of Alfalah Cooperative Housing Society Lahore.</p> <p>MM Pakistan (Pvt) Ltd.</p> <p>Oct 2019 to July 2020</p> <p>Lahore</p> <p>Alfalah Cooperative Housing Society Ltd. Lahore.</p> <p>Detail Designing of Parks, Society office, Main Gate and Grand Mosque</p> <p>Design Architect</p> <p>As Design Architect working on buildings at Alfalah Cooperative Housing Society Lahore, Pakistan.</p> <ul style="list-style-type: none"> ▪ Architectural design of Jamia Mosque (35,000 sqft) ▪ Architectural design of Society Office Building. ▪ Architectural design of Main Entry Gate of Society. <p>Various Projects:</p> <ul style="list-style-type: none"> ▪ Interior Design for Punjab Assembly's New Building. ▪ Architectural Design of Sector Shops & Apartment Building (Balcony 6) in Dream Gardens, Lahore. ▪ Architectural Design of Main Entry Building, (The Arches) in Dream Gardens, Lahore.

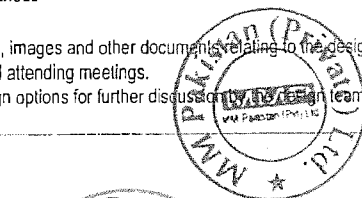
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Detailed Tasks Assigned on Consultant's Team of Experts:	Reference to Prior Work/Assignments that Best Illustrates Capability to Handle the Assigned Tasks
	<ul style="list-style-type: none"> • Architectural Design of Pak Turk School in Dream Gardens, Lahore. • Interior Design for Army Strategy Office, Lahore. • 3 Parks Design in Eden Residencia Lahore. • Design Proposal for Entrance Gate Monument of Dream Gardens, Lahore. • Architectural & Interior Design of 2 Kanal Residence for Mrs. Bajwa in Lahore. • Architectural & Interior Design of 2 Kanal Residence for Mrs. Shakeel in DHA-PH 8 Lahore. • Architectural Design of 3 Kanal Residence for Mr. Saani Sajjad in Dera Ghazi Khan.roject: • Architectural Design of Mr. Shahid Residence in Gulberg, Lahore. • Design Proposal of Mixed Use Building in Lahore for Sheranwala Group. • Exterior Design of City Mall, Wapda Town, Lahore. • Interior Design of Head office for Sheranwala Estate and Builders. • Architectural Design of 2 Kanal Residence for Mr. Sarfaraz in Bandial, Khushab. • Architectural Design of 1 Kanal Residence for Mr. M. Ali in NFC Society, Lahore. • Design Proposal of 5 Marla Commercial Building in Dream Gardens, Lahore. <p>Company Name: Insight Architecture and Interior Design Year: January 2015 - January 2018 Position held: Architect Client: Various Location: Lahore</p> <p>Activities Performed:</p> <ul style="list-style-type: none"> • To prepare, and develop drawings, images and other documents relating to the design. • To identify client requirements and attending meetings. • To develop, presentations of design options for further discussion by the design team. • To take responsibility, by the project leader, for specific areas of the design and project development. <p>Name of Assignment: Various Projects:</p> <ul style="list-style-type: none"> • Third Part Validation for PC1 of Children Hospital, Multan. • Medical Services Design (including Medical Gasses, Nurse Call System, Fire Alarm, CCTV) for Life Care Hospital, Peshawar. • Medical Gasses Design for Mutch International Hospital, Multan. • Bunker for Cancer Treatment Facility at INOR Hospital, Abbotabad. • Bunker for Cancer Treatment Facility at INMOL Hospital, Lahore. • Renovation of Kanaan Clinic, Lahore. • Medical Gasses Design and Architectural Assistance to the main designers for Lahore Gate Hospita, Wapda Town, Lahore. • Farm House design for Mr. Shehzad Leghari at Midland Farms, Lahore <p>Company Name: Pro-Health Year: January 2017 - July 2017 Position held: Architect Client: Various Location: Various</p> <p>Activities Performed:</p> <ul style="list-style-type: none"> • To prepare, and develop drawings, images and other documents relating to the design. • To identify client requirements and attending meetings. • To develop, presentations of design options for further discussion by the design team

Ali Zeeshan





Detailed Tasks Assigned on Consultant's Team of Experts:	Reference to Prior Work/Assignments that Best Illustrates Capability to Handle the Assigned Tasks	
	<p>Name of Assignment:</p> <p>Company Name:</p> <p>Year:</p> <p>Position held:</p> <p>Client:</p> <p>Location:</p> <p>Activities Performed:</p> <ul style="list-style-type: none"> To prepare, and develop drawings, images and other documents relating to the design. To identify client requirements and attending meetings. To develop, presentations of design options for further discussion by the design team. Producing drawings and specifications for constructions teams. To take responsibility, by the project leader, for specific areas of the design and project development. To manage professionals like Civil Engineers and Interior Designer. Responsible for specifying the nature and quality of material required. 	<p>Various Projects:</p> <ul style="list-style-type: none"> Options Restaurant at Barkat Market Lahore. Options Coffee Shop at Barkat Market Lahore. Tea Bar and Waiting Hall for NLC Headquarters, Thokar NiazBeg, Lahore. Cafeteria for workers, Identical Design at NLC HQs, Thokar NiazBeg, and Wahgah Border, Lahore. Interior Renovation of office Building of NLC Headquarters, Thokar NiazBeg, Lahore. Residential Lodges for NLC Guest House Complex at Chavindah Lane, Lahore Cantt. Lahore. 7.3 Kanal Farm House for Mr. Saad Mirza at Bedian Road, Lahore. 1.5 Kanal Residence for Mr. Usman Aslam in Canal Bank Housing Society, Lahore, Pakistan. Kanal Residence for Mr. Ali Inran in Kheyaban-e-Amin, Lahore, Pakistan. 1 Kanal Residence for Mr. Riaz in Lahore, Pakistan. <p>Techscon Group (Pvt) Ltd. March 2013 - December 2014 Assistant Architect Various Lahore</p>

Expert's contact information: (e-mail: bdu@mmpakistan.com phone: 0423-6292525-26-27)

Certification:

I, the undersigned, certify that to the best of my knowledge and belief, this CV correctly describes myself, my qualifications, and my experience, and I am available, as and when necessary, to undertake the assignment in case of an award. I understand that any misstatement or misrepresentation described herein may lead to my disqualification or dismissal by the Client, and/or sanctions by the Bank.

Syed Ali Zeeshan Rizvi
Name of Expert

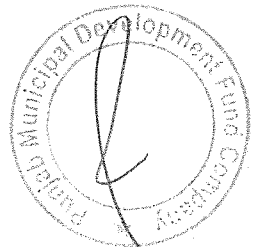
Signature

Date: 29 September 2021
Day/Month/Year

Muhammad Irfan Gohar
Name of authorized Representative of the Consultant

Signature

Date: 29 September 2021
Day/Month/Year



Ali Zeeshan

29 September 2021



Curriculum Vitae (CV)

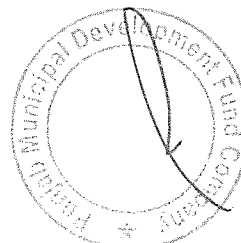
Position Title and No.	:	K-14, Resident Engineer
Name of Expert	:	Malik Shahid Farid
Date of Birth	:	20-04-1970
Country of Citizenship / Residence	:	Pakistani

Education:

- B.Sc. Civil Engineering (1998), University of Engineering & Technology (UET) Lahore.

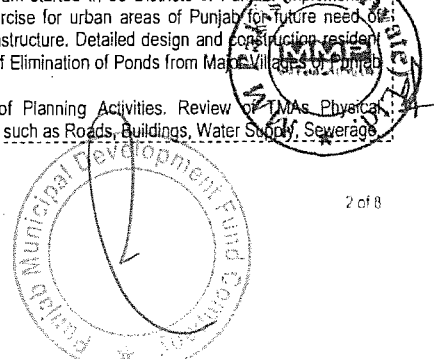
Employment Record relevant to the assignment:

Period	Employing organization and your title / position. Contact information for references	Country	Summary of activities performed relevant to the Assignment
1st. June 2021 To: Date	Employer: Akaramaz Associates Position: Technical Consultant (Visiting) Ref Contact: Muhammad Bin Khalid 03369694444	Pakistan	Review the project plans, specifications, comment on the building design, scheduling and Top Supervision on-site construction activities. Suggest solution of problems during execution.
05 Sep. 2019 To: 1st Feb. 2021	Employer: PERVAD CONSTRUCTION CO. Position: Project Manager Ref Contact: Javaid Zafar Khan 03314195583	Pakistan	Provide engineering expertise and management oversight for the development and construction of the project. Assist various crafts, disciplines and subcontractors in executing their respective work. Plan, prepare and analysis documents, and manage construction contracts. Coordinate with clients on a regular basis. Participate in public meetings and presentations. Take responsibility for personnel matters, workload management, monitoring consultant service contracts and establishing optimum engineering practices to serve the client's project delivery efforts Review the project plans, specifications, Contract and comment on the building design, scheduling Managed on-site construction activity and resolved day to day challenges. Scheduled trade contractors and coordinated workflow resulting in timely, quality production. Monitored and measured timely completion. Communicated with Client and Consultants throughout the construction process and conducted final inspection with all stakeholders for final sign-off. Effectively communicate with building inspectors to ensure projects are in compliance with city code regulations. Oversaw job site safety measures and compliance of safety requirements. possible cost savings measures and potential construction problems. Assist estimator in preparation of project budget. Assist in assembling the job site office and equipment requirements. Expedite all shop drawings and approvals. Monitor and maintain the project construction schedule on a weekly basis. Control and monitor labour, material and equipment expenses.
17 March 2018 To: 31 August 2019	Employer: Design & Engineering System Position: Contract Manager/ Project Coordinator Ref Contact: Col. Rasheed Ahmad 03214380822	Pakistan	Contract negotiation under FIDIC clauses with the Client & Consultant. Contract negotiations with local sub-contractors for rates and work. Coordination regarding all project plans and specifications and comment on the building design, budgeting, scheduling remote management off Site on-site construction activity and resolved day to day challenges. Scheduled trade contractors and coordinated workflow resulting in timely, quality production. Monitored and measured timely completion. Communicated with Client and Consultants throughout the construction process and conducted final inspection with all stakeholders for final sign-off. Effectively communicate with building inspectors to ensure projects are in compliance with city code regulations. Oversaw job site safety measures and compliance of safety requirements. possible cost savings measures and potential construction problems. Assist



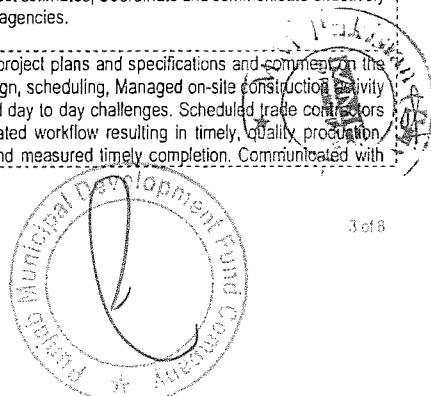


Period	Employing organization and your title / position. Contact information for references	Country	Summary of activities performed relevant to the Assignment
			estimator in preparation of project budget. Assist in assembling the job site office and equipment requirements. Expedite all shop drawings and approvals. Monitor and maintain the project construction schedule on a weekly basis. Control and monitor labour, material and equipment expenses. Coordination with consultant & client. Correspondence under contract clauses.
7 Oct., 2016 To: 28 Feb, 2018	Employer: Associated Consulting Engineers (ACE), Lahore Position: Resident Engineer (Pilot Rehabilitation and Infrastructure Improvement Project Package –II Walled City of Lahore Ref Contact: Col. Nasir Ali Sadeqi 03008475920	Pakistan	Monitoring /Management /contract Management of Infrastructure development i.e Water Supply, Sewerage, Façade and streets improvement of area from Purani Kotwali to Akbari Gate Royal Trail Dahli Gate project Under general supervision, participating in the development, execution, supervision, and coordination of all technical aspects of field engineering assignments including development of plans, schedules, contracts, procedures, and construction methods and systems. As RE responsible for reviewing the performance of contractors to assure contract compliance, the application of accepted construction technology and standards, and the acceptable standardization of materials and supplies. Providing technical guidance to less-experienced field engineering personnel. Performing difficult and complex field engineering assignments involving the development, execution, supervision, and coordination of all technical aspects of construction project. Maintaining first-level quality assurance to confirm that the installation of all work is in accordance with the plans, specifications, and industry standards. supervising the construction engineering work and provide technical expertise for one or more of the construction engineering disciplines. Ensuring that tests and inspections are performed, witnessed, and documented in accordance with approved procedures. Collaborates with construction management to eliminate any hazards associated with the work that may adversely affect the environment or the safety or health. Ensures that personnel of the assigned group engage in safe work practices in compliance with site-specific safety procedures and industry standards. Establishes and maintains liaison with the discipline design engineering staff. Reviews and interprets discipline design drawings and specifications to ensure current revision level and correct technical execution of the work. Provides resolution for technical engineering problems within the assigned discipline(s); coordinates application of solutions. Develops discipline construction schedules and monitors progress. Create and track project schedule using Primavera. Identify potential conflicts/delays and provide solutions to keep projects on track. Provides schedule and progress appraisal report to the Chief Resident Engineer. Ensures that materials received meet specifications and established standards of quality. Initiates and maintains records, back-charge procedures, progress reports, etc., as required. May have some interface with the client and upper-level management. Also has to perform other responsibilities associated with this position as may be appropriate.
05 July, 2011 To: 30 Sep., 2016	Employer: Punjab Municipal Development Company, Lahore Position: Manager Engineering Planning Ref Contact: Talal Ahmad Khan 03004689583	Pakistan	The responsibility involves investigation of Municipal Service (Water Supply, Sewerage, Solid Waste, World Bank funded projects) provided by TMAs of 105 TMAs of Punjab. Report preparation of Municipal Service provided by TMAs. Detailed Design vetting of Elimination of Ponds from Major Villages of Punjab Program started in 36 Districts of Punjab. Implementing Planning exercise for urban areas of Punjab for future need of physical Infrastructure. Detailed design and construction resident supervision of Elimination of Ponds from Major Villages of Punjab Program. Preparation of Planning Activities. Review of TMAs Physical Infrastructure such as Roads, Buildings, Water Supply, Sewerage





Period	Employing organization and your title / position- Contact information for references	Country	Summary of activities performed relevant to the Assignment
			<p>Design of Solid Waste Management and Parks. Preparation of Field Appraisal Report (FARs).</p> <p>Preparation of Planning Reports. Design Review of Sewerage Scheme, Road Layouts. Worked on Clean Drinking Water for All project (CDWA).</p> <p>Monitor and expedite weekly reports for accuracy. Provide timely data input and/or correction information to insure accurate and beneficial reporting Create and track project schedule using Primavera P-6. Identify potential conflicts/delays and provide solutions to keep projects on track Perform quantity take offs and prepare project estimates, Coordinate and communicate effectively with the line agencies.</p>
May, 2009 To: 30 June, 2011	<p>Employer: NDC – RHC Public Health Engineering Project</p> <p>Position: Resident Engineer</p> <p>Ref Contact: Abdul Majeed Javaid 03214090096</p>	South Zone	<p>As Resident Engineer at Ext. & Impr. Of Urban Sewerage Scheme D.G.Khan City and Water Supply Scheme Muzaffar Garh. The task involves detailed design and construction resident supervision of Sewer lines and/ or rehabilitation and up gradation (R&U) of Sewerage System, repair/ re-construction of structures and repair/ renovation/ re-construction of Disposal Stations that are to be ultimately handed over to Public Health Engineering /TMA, DG Khan. Involves in checking of IPCs and Preparation of progress reports. participating in the development, execution, supervision, and coordination of all technical aspects of field engineering assignments including development of plans, schedules, contracts, procedures, and construction methods and systems. supervising the construction engineering work and provide technical expertise for one or more of the construction engineering disciplines. Develops discipline construction schedules and monitors progress. Create and track project schedule using Primavera. Identify potential conflicts/delays and provide solutions to keep projects on track. Provides schedule and progress appraisal report to the Project Manager. Ensures that materials received meet specifications and established standards of quality. Initiates and maintains records, back-charge procedures, progress reports, etc., as required. May have some interface with the client and upper-level management. Also has to perform other responsibilities associated with this position as may be appropriate.</p>
11 March, 2007 To: 30 April, 2009	<p>Employer: Punjab Municipal Development Company, Lahore</p> <p>Position: Manager Engineering</p> <p>Ref Contact: Showib Iftakhar 03334352741</p>	Pakistan	<p>The responsibility involves Investigation of Municipal Service (Water Supply, Sewerage, Solid Waste, World Bank funded projects) provided by TMAs of 32 TMAs of Punjab. Report preparation of Municipal Service provided by TMAs. Planning exercise for urban areas of Punjab for future need of physical Infrastructure.</p> <p>Preparation of Planning Activities. Review of TMAs Physical Infrastructure such as Roads, Buildings, Water Supply, Sewerage, Solid Waste and Parks. Preparation of Field Appraisal Report (FARs).</p> <p>Preparation of Planning Reports. Design Review of Sewerage Scheme, Road Layouts.</p> <p>Monitor and expedite weekly reports for accuracy. Provide timely data input and/or correction information to insure accurate and beneficial reporting Create and track project schedule using Primavera P-6. Identify potential conflicts/delays and provide solutions to keep projects on track Perform quantity take offs and prepare project estimates, Coordinate and communicate effectively with the line agencies.</p>
01Nov. 2001 To: 10 March, 2007	<p>Employer: PERVAD CONSTRUCTION CO.</p> <p>Position: Construction Manager</p> <p>Ref Contact: Javaid Zafar Khan 03314195583</p>	Pakistan	<p>Review the project plans and specifications and comment on the building design, scheduling, Managed on-site construction activity and resolved day to day challenges. Scheduled trade contractors and coordinated workflow resulting in timely, quality production Monitored and measured timely completion. Communicated with</p>





Period	Employing organization and your title / position. Contact information for references	Country	Summary of activities performed relevant to the Assignment
25Oct, 1998 To: 31August 2001	Employer: STFA CONSTRUCTION GROUP Position: Procurement Engineer Ref Contact: That time Mobile Service were not available only site office PTCL Phone was used	TURKEY	Client and Consultants throughout the construction process and conducted final inspection with all stakeholders for final sign-off. Effectively communicate with building inspectors to ensure projects are in compliance with city code regulations. Oversaw job site safety measures and compliance of safety requirements. possible cost savings measures and potential construction problems. Assist estimator in preparation of project budget. Assist in assembling the job site office and equipment requirements. Expedite all shop drawings and approvals. Monitor and maintain the project construction schedule on a weekly basis. Control and monitor labour, material and equipment expenses. General in-charge of goods & services procurement . Review and analysis of procurement documents before submitting them for approval. Working out the Quantities. Correspondence. Dealing with Client & Consultant. Dealing with Sub-Contractors. Co-ordination with Site Staff Working on Final Billing.

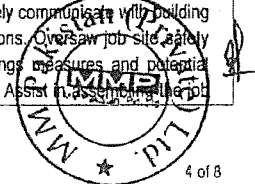
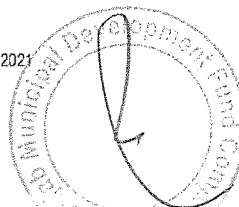
Membership in Professional Associations and Publications:

- Pakistan Engineering Council Pakistan Engineering Congress Institute of Engineers Pakistan Civil-19107

Language Skills (indicate only languages in which you can work): English, Urdu, Saraeki & Punjabi

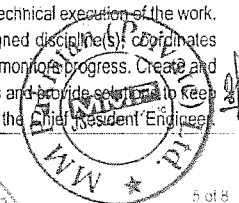
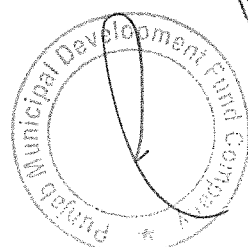
Adequacy for the Assignment:

Detailed Tasks Assigned on Consultant's Team of Experts:	Reference to Prior Work/Assignments that Best Illustrates Capability to Handle the Assigned Tasks
<ul style="list-style-type: none"> Responsible for supervision of all construction activities, attending co-ordination meetings, preparing minutes of the meetings, checking interring payment certificate (IPC) Submitted by the Contractor etc. Provide instructions to the Contractor necessary for proper execution of the work in accordance with the engineering and technical specifications. Supervise construction activities of the infrastructure Schemes To supervise the construction quality & quantity monitoring 	<p>Name of Assignment: Review the project plans Year: 1st. June 2021 To: Date Position held: Technical Consultant (Visiting) Client: AKARAMAZ Associates Location: Various Activities Performed: Review the project plans, specifications, comment on the building design, scheduling and Top Supervision on-site construction activities. Suggest solution of problems during execution.</p> <p>Name of Assignment: Construction of Officers Residences (46 units each 10 Maria) at ASKARI -II Year: 05 Sep. 2019 To: 1st Feb. 2021 Position held: Project Manager Client: Pak Army Location: Sialkot Activities Performed: Provide engineering expertise and management oversight for the development and construction of the project. Assist various crafts, disciplines and subcontractors in executing their respective work. Plan, prepare and analysis documents, and manage construction contracts. Coordinate with clients on a regular basis. Participate in public meetings and presentations. Take responsibility for personnel matters, workload management, monitoring consultant service contracts and establishing optimum engineering practices to serve the client's project delivery efforts Review the project plans, specifications, Contract and comment on the building design, scheduling Managed on-site construction activity and resolved day to day challenges. Scheduled trade contractors and coordinated workflow resulting in timely, quality production. Monitored and measured timely completion. Communicated with Client and Consultants throughout the construction process and conducted final inspection with all stakeholders for final sign-off. Effectively communicate with building inspectors to ensure projects are in compliance with city code regulations. Oversaw job site safety measures and compliance of safety requirements. possible cost savings measures and potential construction problems. Assist estimator in preparation of project budget. Assist in assembling the job</p>





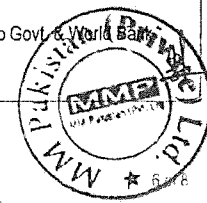
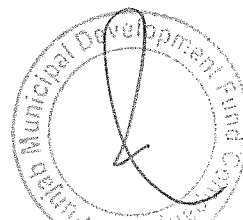
Detailed Tasks Assigned on Consultant's Team of Experts:	Reference to Prior Work/Assignments that Best Illustrates Capability to Handle the Assigned Tasks
	<p>site office and equipment requirements. Expedite all shop drawings and approvals. Monitor and maintain the project construction schedule on a weekly basis. Control and monitor labour, material and equipment expenses.</p> <p>Name of Assignment: Expansion & Renovation of Terminal Building, Rehabilitation of Fokker Apron & Alpha Taxiway Faisalabad International Airport</p> <ul style="list-style-type: none"> • Finishing work of Pearl Continental Hotel Multan • Naval Anchorage Gwadar Infrastructure development works <p>Year: 17 March 2018 31 August 2019</p> <p>Position held: Contract Manager/ Project Coordinator</p> <p>Client: Pakistan Navy / CAA/ PC Engineering</p> <p>Location: Various</p> <p>Activities Performed: Contract negotiation under FIDIC clauses with the Client & Consultant. Contract negotiations with local sub-contractors for rates and work. Coordination regarding all project plans and specifications and comment on the building design, budgeting, scheduling remote management off Site/on-site construction activity and resolved day to day challenges. Scheduled trade contractors and coordinated workflow resulting in timely, quality production. Monitored and measured timely completion. Communicated with Client and Consultants throughout the construction process and conducted Oversight measures and potential construction problems. Assist estimator in preparation of project budget. Assist in assembling the job site office and equipment requirements. Expedite all shop drawings and approvals. Monitor and maintain the project construction schedule on a weekly basis. Control and monitor labour, material and equipment expenses. Coordination with consultant & client. Correspondence under contract clauses.</p> <p>Name of Assignment: Rehabilitation and Infrastructure Improvement Project Package -II Walled City of Lahore</p> <p>Year: 7 Oct., 2016 To: 28 Feb, 2018</p> <p>Position held: Resident Engineer</p> <p>Client: Walled City Authority Lahore</p> <p>Location: Lahore</p> <p>Activities Performed: Monitoring /Management /contract Management of Infrastructure development i.e Water Supply, Sewerage, Façade and streets improvement of area from Purani Kotwali to Akbari Gate Royal Trail Dahli Gate project Under general supervision, participating in the development, execution, supervision, and coordination of all technical aspects of field engineering assignments including development of plans, schedules, contracts, procedures, and construction methods and systems. As RE responsible for reviewing the performance of contractors to assure contract compliance, the application of accepted construction technology and standards, and the acceptable standardization of materials and supplies. Providing technical guidance to less-experienced field engineering personnel. Performing difficult and complex field engineering assignments involving the development, execution, supervision, and coordination of all technical aspects of construction project. Maintaining first-level quality assurance to confirm that the installation of all work is in accordance with the plans, specifications, and industry standards. supervising the construction engineering work and provide technical expertise for one or more of the construction engineering disciplines. Ensuring that tests and inspections are performed, witnessed, and documented in accordance with approved procedures. Collaborates with construction management to eliminate any hazards associated with the work that may adversely affect the environment or the safety or health. Ensures that personnel of the assigned group engage in safe work practices in compliance with site-specific safety procedures and industry standards. Establishes and maintains liaison with the discipline design engineering staff. Reviews and interprets discipline design drawings and specifications to ensure current revision level and correct technical execution of the work. Provides resolution for technical engineering problems within the assigned discipline(s); coordinates application of solutions. Develops discipline construction schedules and monitors progress. Create and track project schedule using Primavera. Identify potential conflicts/delays and provide solutions to keep projects on track. Provides schedule and progress appraisal report to the Chief Resident Engineer.</p>





Detailed Tasks Assigned on Consultant's Team of Experts:	Reference to Prior Work/Assignments that Best Illustrates Capability to Handle the Assigned Tasks
	<p>Ensures that materials received meet specifications and established standards of quality. Initiates and maintains records, back-charge procedures, progress reports, etc., as required. May have some interface with the client and upper-level management. Also has to perform other responsibilities associated with this position as may be appropriate.</p> <p>Name of Assignment: Municipal Services Improvement Project (PMSIP). Year: 05 July, 2011 To: 30 Sep., 2016 Position held: Manager Engineering Planning Client: PMDFC was Client on the behalf of Punjab Govt. & World Bank Location: Punjab Activities Performed: The responsibility involves Investigation of Municipal Service (Water Supply, Sewerage, Solid Waste, World Bank funded projects) provided by TMAs of 105 TMAs of Punjab. Report preparation of Municipal Service provided by TMAs. Detailed Design vetting of Elimination of Ponds from Major Villages of Punjab Program started in 36 Districts of Punjab. Implementing Planning exercise for urban areas of Punjab for future need of physical Infrastructure. Detailed design and construction resident supervision of Elimination of Ponds from Major Villages of Punjab Program. Preparation of Planning Activities. Review of TMAs Physical Infrastructure such as Roads, Buildings, Water Supply, Sewerage, Design of Solid Waste Management and Parks. Preparation of Field Appraisal Report (FARs). Preparation of Planning Reports. Design Review of Sewerage Scheme, Road Layouts. Worked on Clean Drinking Water for All project (CDWA). Monitor and expedite weekly reports for accuracy. Provide timely data input and/or correction information to insure accurate and beneficial reporting Create and track project schedule using Primavera P-6. Identify potential conflicts/delays and provide solutions to keep projects on track Perform quantity take offs and prepare project estimates, Coordinate and communicate effectively with the line agencies.</p> <p>Name of Assignment: RHC Public Health Engineering Project Year: May, 2009 To: 30 June, 2011 Position held: Resident Engineer Client: Public Health Engineering Punjab Location: South Zone D.G.Khan Activities Performed: As Resident Engineer at Ext. & Impr. Of Urban Sewerage Scheme D.G.Khan City and Water Supply Scheme Muzaffar Garh. The task involves detailed design and construction resident supervision of Sewer lines and/ or rehabilitation and up gradation (R&U) of Sewerage System, repair/ re-construction of structures and repair/ renovation/ re-construction of Disposal Stations that are to be ultimately handed over to Public Health Engineering /TMA, DG Khan. Involves in checking of IPCs and Preparation of progress reports. participating in the development, execution, supervision, and coordination of all technical aspects of field engineering assignments including development of plans, schedules, contracts, procedures, and construction methods and systems. supervising the construction engineering work and provide technical expertise for one or more of the construction engineering disciplines. Develops discipline construction schedules and monitors progress. Create and track project schedule using Primavera. Identify potential conflicts/delays and provide solutions to keep projects on track. Provides schedule and progress appraisal report to the Project Manager. Ensures that materials received meet specifications and established standards of quality. Initiates and maintains records, back-charge procedures, progress reports, etc., as required. May have some interface with the client and upper-level management. Also has to perform other responsibilities associated with this position as may be appropriate.</p> <p>Name of Assignment: Municipal Services Improvement Project (PMSIP) Year: 11 March, 2007 To: 30 April., 2009 Position held: Manager Engineering Client: PMDFC was Client on the behalf of Punjab Govt. & World Bank Location: Punjab 32 Cities Activities Performed:</p>

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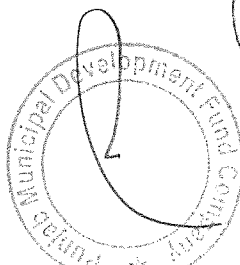


Detailed Tasks Assigned on Consultant's Team of Experts	Reference to Prior Work/Assignments that Best Illustrates Capability to Handle the Assigned Tasks
	<p>The responsibility involves Investigation of Municipal Service (Water Supply, Sewerage, Solid Waste, World Bank funded projects) provided by TMAs of 32 TMAs of Punjab. Report preparation of Municipal Service provided by TMAs.. Planning exercise for urban areas of Punjab for future need of physical Infrastructure..</p> <p>Preparation of Planning Activities. Review of TMAs Physical Infrastructure such as Roads, Buildings, Water Supply, Sewerage, Solid Waste and Parks. Preparation of Field Appraisal Report (FARs). Preparation of Planning Reports. Design Review of Sewerage Scheme, Road Layouts. Monitor and expedite weekly reports for accuracy. Provide timely data input and/or correction information to insure accurate and beneficial reporting Create and track project schedule using Primavera P-6. Identify potential conflicts/delays and provide solutions to keep projects on track Perform quantity take offs and prepare project estimates, Coordinate and communicate effectively with the line agencies.</p> <p>Name of Assignment:</p> <ul style="list-style-type: none"> • Construction of Children Specialty Block 7 stories Building at Mayo Hospital Lahore • Construction Girls Hostel of King Edward Medical Collage at Napier Road Lahore • 5Stories Building • Construction of Judicial Block 3 Story Building at Faridkot Lahore • Construction of Mid Wife's Hostel Lady Willingdon Hospital Lahore <p>Year: 01Nov. 2001 To: 10 March, 2007</p> <p>Position held: Construction Manager</p> <p>Client: Building Department Govt. of Punjab</p> <p>Location: Lahore</p> <p>Activities Performed: Review the project plans and specifications and comment on the building design, scheduling, Managed on-site construction activity and resolved day to day challenges. Scheduled trade contractors and coordinated workflow resulting in timely, quality production. Monitored and measured timely completion. Communicated with Client and Consultants throughout the construction process and conducted final inspection with all stakeholders for final sign-off. Effectively communicate with building inspectors to ensure projects are in compliance with city code regulations. Oversaw job site safety measures and compliance of safety requirements. possible cost savings measures and potential construction problems. Assist estimator in preparation of project budget. Assist in assembling the job site office and equipment requirements. Expedite all shop drawings and approvals. Monitor and maintain the project construction schedule on a weekly basis. Control and monitor labour, material and equipment expenses.</p> <p>Name of Assignment: Construction & Maintenance of Indus Highway(N-55) (Contract No.7)</p> <p>Year: 25Oct.,1998 To: 31August 2001</p> <p>Position held: Procurement Engineer</p> <p>Client: NHA</p> <p>Location: Rajanpur</p> <p>Activities Performed: General in-charge of goods & services procurement. Review and analysis of procurement documents before submitting them for approval. Working out the Quantities. Correspondence. Dealing with Client & Consultant. Dealing with Sub-Contractors. Co-ordination with Site Staff Working on Final Billing.</p>

Expert's contact information: (e-mail: bou@mmpakistan.com phone: 0423-6292525-26-27)

MALIK SHAHID FARID

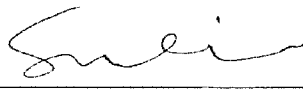
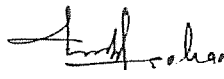
29 September 2021

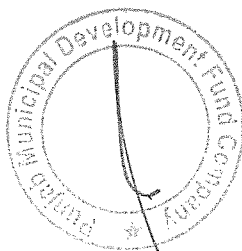




Certification:

I, the undersigned, certify that to the best of my knowledge and belief, this CV correctly describes myself, my qualifications, and my experience, and I am available, as and when necessary, to undertake the assignment in case of an award. I understand that any misstatement or misrepresentation described herein may lead to my disqualification or dismissal by the Client, and/or sanctions by the Bank.

Malik Shahid Farid Name of Expert	 Signature	Date: 29 September 2021 Day/Month/Year
Muhammad Irfan Gohar Name of authorized Representative of the Consultant	 Signature	Date: 29 September 2021 Day/Month/Year




MALIK SHAHID FARID

29 September 2021



8 of 8

Our Ref: Corporate/MMP/2022-03
Date: February 28, 2022



MM Pakistan (Pvt) Ltd.

To:

Managing Director/Program Director,
Punjab Cities Program -Punjab Municipal
Development Fund Company (PMDFC)
H#184, Upper Mall, Scotch Corner, Lahore
Ph: 042-99204386-89

✉ 17-A/1, Zafar Road Lahore
☎ 042-36662595, 36665822
☎ 042-36665049
✉ corporate@mmpakistan.com
🌐 http://www.mmpakistan.com

Subject: AUTHORITY LETTER TO SIGN CONTRACT
No. PK-PMDFC-228549-CS-QCBS
CONSULTANCY AGREEMENT FOR (DETAILED DESIGN OF
INFRASTRUCTURE SUB-PROJECTS, SECTORAL PLANING &
RESIDENT SUPERVISION IN 16 CITIES OF PUNJAB (PACKAGE NO. 03)

Dear Sir,

I Mr. Waseem Nazir, Managing Director of MM Pakistan Private Limited (the "Company") do hereby authorize Mr. Tariq Mahmood s/o Chaudhary Abdul Ghafoor holding CINC # 35200-1449656-9, General Manager (Coordination) MM Pakistan (Pvt.) Ltd. as authorized representative of the company

The said representative is hereby authorized to sign the subject Contract Agreement for and on behalf of the company.

Thanks & regards

for & on behalf of
MM-Pakistan (Pvt.) Limited

Waseem Nazir
Managing Director

