

KINGDOM OF CAMBODIA
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Ministry of Industry, Science, Technology & Innovation

Project Management Unit
Water Supply and Sanitation Improvement Project (WaSSIP)
IDA Credit No. 6386-KH, Project ID No. P163876

(Two-Envelope Bidding Process with rated criteria)

Volume I

Bidding Documents for Procurement of: **Construction of Stoung Water Supply System**

RFB No: MISTI-CW-3

Project: Water Supply and Sanitation Improvement Project (WaSSIP)

Employer: Ministry of Industry, Science, Technology & Innovation (MISTI)

Country: Cambodia

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Standard Procurement Document

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PART 1 – Bidding Procedures

Section I – Instructions to Bidders

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Section I - Instructions to Bidders

A. General

1. Scope of Bid

In connection with the Specific Procurement Notice – Request for Bids (RFB), specified in the **Bid Data Sheet (BDS)**, the Employer, as specified **in the BDS**, issues this Bidding document for the provision of Works as specified in Section VII, Works' Requirements. The name, identification, and number of lots (contracts) of this RFB are specified **in the BDS**.

Throughout this bidding document:

the term **“in writing”** means communicated in written form (e.g., by mail, e-mail, fax, including, if specified **in the BDS**, distributed, or received through electronic-procurement system used by the Employer) with proof of receipt;

if the context so requires, **“singular”** means **“plural”** and vice versa;

“Day” means calendar day, unless otherwise specified as a **“Business Day.”** A **“Business Day”** is any day that is a working day of the Borrower. It excludes the Borrower's official public holidays;

“ES” means environmental and social (including Sexual Exploitation and Abuse (SEA), and Sexual Harassment (SH));

“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;

“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 Contractor's Personnel with other Contractor's or Employer's Personnel;

“Contractor's Personnel” is as defined in Sub-Clause 1.1.17 of the General Conditions; and

“Employer's Personnel” is as defined in Sub-Clause 1.1.33 of the General Conditions.

A non-exhaustive list of (i) behaviors which constitute SEA and (ii) behaviors which constitute SH is attached to the Code of Conduct form in Section IV.

2. Source of Funds

The Borrower or Recipient (hereinafter called “Borrower”) specified **in the BDS** has received or has applied for financing (hereinafter called “funds”) from the International Bank for Reconstruction and Development or the International Development Association (hereinafter called “the Bank”) in an amount specified **in the BDS**, toward the project named **in the BDS**. The Borrower intends to apply a portion of the funds to eligible payments under the contract(s) for which this Bidding document is issued.

Payment by the Bank will be made only at the request of the Borrower and upon approval by the Bank, and will be subject, in all respects, to the terms and conditions of the Loan (or other financing) Agreement. The Loan (or other financing) Agreement prohibits a withdrawal from the loan account for the purpose of any payment to persons or entities, or for any import of goods, equipment, plant, or materials, if such payment or import is prohibited by a decision of the United Nations Security Council taken under Chapter VII of the Charter of the United Nations. No party other than the Borrower shall derive any rights from the Loan (or other financing) Agreement or have any claim to the proceeds of the Loan (or other financing).

3. Fraud and Corruption

The Bank requires compliance with the Bank’s Anti-Corruption Guidelines and its prevailing sanctions policies and procedures as set forth in the WBG’s Sanctions Framework, as set forth in Section VI.

In further pursuance of this policy, Bidders shall permit and shall cause their agents (where declared or not), subcontractors, subconsultants, service providers, suppliers, and personnel, to permit the Bank to inspect all accounts, records and other documents relating to any initial selection process, prequalification process, bid submission, proposal submission, and contract performance (in the case of award), and to have them audited by auditors appointed by the Bank.

4. Eligible Bidders

A Bidder may be a firm that is a private entity, a state-owned enterprise or institution subject to ITB 4.6 or any combination of such entities in the form of a joint venture (JV) under an existing agreement or with the intent to enter into such an agreement supported by a letter of intent. In the case of a joint venture, all members shall be jointly and severally liable for the execution of the entire Contract in accordance with the Contract terms. The JV shall nominate a Representative who shall have the authority to conduct all business for and on

behalf of any and all the members of the JV during the Bidding process and, in the event the JV is awarded the Contract, during contract execution. Unless specified **in the BDS**, there is no limit on the number of members in a JV.

A Bidder shall not have a conflict of interest. Any Bidder found to have a conflict of interest shall be disqualified. A Bidder may be considered to have a conflict of interest for the purpose of this Bidding process, if the Bidder:

- (a) directly or indirectly controls, is controlled by or is under common control with another Bidder; or
- (b) receives or has received any direct or indirect subsidy from another Bidder; or
- (c) has the same legal representative as another Bidder; or
- (d) has a relationship with another Bidder, directly or through common third parties, that puts it in a position to influence the Bid of another Bidder, or influence the decisions of the Employer regarding this Bidding process; or
- (e) or any of its affiliates participated as a consultant in the preparation of the design or technical specifications of the works that are the subject of the Bid; or
- (f) or any of its affiliates has been hired (or is proposed to be hired) by the Employer or Borrower as Engineer for the Contract implementation; or
- (g) would be providing goods, works, or non-consulting services resulting from or directly related to consulting services for the preparation or implementation of the project specified in the BDS ITB 2.1 that it provided or were provided by any affiliate that directly or indirectly controls, is controlled by, or is under common control with that firm; or
- (h) has a close business or family relationship with a professional staff of the Borrower (or of the project implementing agency, or of a recipient of a part of the loan) who: (i) are directly or indirectly involved in the preparation of the Bidding document or specifications of the Contract, and/or the Bid evaluation process of such Contract; or (ii) would be involved in the implementation or supervision of such Contract unless the conflict stemming from such relationship has been resolved in a manner acceptable to the Bank throughout the Bidding process and execution of the Contract.

A firm that is a Bidder (either individually or as a JV member) shall not participate in more than one Bid, except for permitted alternative Bids. This includes participation as a subcontractor

in other Bids. Such participation shall result in the disqualification of all Bids in which the firm is involved. A firm that is not a Bidder or a JV member may participate as a subcontractor in more than one Bid.

A Bidder may have the nationality of any country, subject to the restrictions pursuant to ITB 4.8. A Bidder shall be deemed to have the nationality of a country if the Bidder is constituted, incorporated, or registered in and operates in conformity with the provisions of the laws of that country, as evidenced by its articles of incorporation (or equivalent documents of constitution or association) and its registration documents, as the case may be. This criterion also shall apply to the determination of the nationality of proposed subcontractors or subconsultants for any part of the Contract including related Services.

A Bidder that has been sanctioned by the Bank, pursuant to the Bank's Anti-Corruption Guidelines, and in accordance with its prevailing sanctions policies and procedures as set forth in the World Bank Group's Sanctions Framework, as described in Section VI paragraph 2.2 d. shall be ineligible to be prequalified for, initially selected for, bid for, propose for, or be awarded a Bank-financed contract or benefit from a Bank-financed contract, financially or otherwise, during such period of time as the Bank shall have determined. The list of debarred firms and individuals is available at the electronic address specified **in the BDS**.

Bidders that are state-owned enterprises or institutions in the Employer's Country may be eligible to compete and be awarded a Contract(s) only if they can establish, in a manner acceptable to the Bank, that they (i) are legally and financially autonomous (ii) operate under commercial law, and (iii) are not under supervision of the Employer.

A Bidder shall not be under suspension from bidding by the Employer as the result of the operation of a Bid-Securing or Proposal-Securing Declaration.

Firms and individuals may be ineligible if so indicated in Section V and (a) as a matter of law or official regulations, the Borrower's country prohibits commercial relations with that country, provided that the Bank is satisfied that such exclusion does not preclude effective competition for the supply of goods or the contracting of works or services required; 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 or contracting of works or services from that country, or any payments to any country, person, or entity in that country. When the Works are implemented across

jurisdictional boundaries (and more than one country is a Borrower, and is involved in the procurement), then exclusion of a firm or individual on the basis of ITB 4.8 (a) above by any country may be applied to that procurement across other countries involved, if the Bank and the Borrowers involved in the procurement agree.

A Bidder shall provide such documentary evidence of eligibility satisfactory to the Employer, as the Employer shall reasonably request.

A firm that is under a sanction of debarment by the Borrower from being awarded a contract is eligible to participate in this procurement, unless the Bank, at the Borrower's request, is satisfied that the debarment; (a) relates to fraud or corruption, and (b) followed a judicial or administrative proceeding that afforded the firm adequate due process.

This bidding is open only to prequalified Bidders unless specified **in the BDS**.

5. Eligible Materials, Equipment, and Services

The materials, equipment, and services to be supplied under the Contract and financed by the Bank may have their origin in any country subject to the restrictions specified in Section V, Eligible Countries, and all expenditures under the Contract will not contravene such restrictions. At the Employer's request, Bidders may be required to provide evidence of the origin of materials, equipment, and services.

B. Contents of Bidding Document

6. Sections of Bidding Document

The Bidding document consists of Parts 1, 2, and 3, which includes all the sections specified below, and which should be read in conjunction with any Addenda issued in accordance with ITB 8.

PART 1 Bidding Procedures

- Section I - Instructions to Bidders (ITB)
- Section II - Bid Data Sheet (BDS)
- Section III - Evaluation and Qualification Criteria
- Section IV - Bidding Forms
- Section V - Eligible Countries
- Section VI - Fraud and Corruption

PART 2 Works Requirements

- Section VII - Works' Requirements

PART 3 Conditions of Contract and Contract Forms

- Section VIII - General Conditions (GC)

- Section IX - Particular Conditions (PC)
- Section X - Contract Forms

The Specific Procurement Notice - Request for Bids (RFB) issued by the Employer or the Notice of Request for Bids (RFB) issued by the Employer to the prequalified Bidders are not part of the Bidding document.

Unless obtained directly from the Employer, the Employer is not responsible for the completeness of the Bidding document, responses to requests for clarification, the minutes of the pre-Bid meeting (if any), or Addenda to the Bidding document in accordance with ITB 8. In case of any contradiction, documents obtained directly from the Employer shall prevail.

The Bidder is expected to examine all instructions, forms, terms, and specifications in the Bidding document and to furnish with its Bid all information and documentation as is required by the Bidding document.

7. Clarification of Bidding Document, Site Visit, Pre-Bid Meeting

A Bidder requiring any clarification of the Bidding document shall contact the Employer in writing at the Employer's address specified **in the BDS** or raise its enquiries during the pre-Bid meeting if provided for in accordance with ITB 7.4. The Employer will respond in writing to any request for clarification, provided that such request is received no later than fourteen (14) days prior to the deadline for submission of Bids. The Employer shall forward copies of its response to all Bidders who have acquired the Bidding document in accordance with ITB 6.3, including a description of the inquiry but without identifying its source. If so specified **in the BDS**, the Employer shall also promptly publish its response at the web page identified **in the BDS**. Should the clarification result in changes to the essential elements of the Bidding document, the Employer shall amend the Bidding document following the procedure under ITB 8 and ITB 22.2.

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

The Bidder and any of its personnel or agents will be granted permission by the Employer to enter upon its premises and lands for the purpose of such visit, but only upon the express condition that the Bidder, its personnel, and agents will release and indemnify the Employer and its personnel and agents from and against all liability in respect thereof, and will be responsible for death or personal injury, loss of or damage to

property, and any other loss, damage, costs, and expenses incurred as a result of the inspection.

If so, specified **in the BDS**, the Bidder's designated representative is invited to attend a pre-Bid meeting and/or a Site of Works visit. The purpose of the meeting will be to clarify issues and to answer questions on any matter that may be raised at that stage.

The Bidder is requested to submit any questions in writing, to reach the Employer not later than one week before the meeting.

Minutes of the pre-Bid meeting, if applicable, including the text of the questions asked by Bidders, without identifying the source, and the responses given, together with any responses prepared after the meeting, will be transmitted promptly to all Bidders who have acquired the Bidding document in accordance with ITB 6.3. If so, specified **in the BDS**, the Employer shall also promptly publish the Minutes of the pre-Bid meeting at the web page identified **in the BDS**. Any modification to the Bidding document that may become necessary as a result of the pre-Bid meeting shall be made by the Employer exclusively through the issue of an Addendum pursuant to ITB 8 and not through the minutes of the pre-Bid meeting. Nonattendance at the pre-Bid meeting will not be a cause for disqualification of a Bidder.

8. Amendment of Bidding Document

At any time prior to the deadline for submission of Bids, the Employer may amend the Bidding document by issuing addenda.

Any addendum issued shall be part of the Bidding document and shall be communicated in writing to all who have obtained the Bidding document from the Employer in accordance with ITB 6.3. The Employer shall also promptly publish the addendum on the Employer's web page in accordance with ITB 7.1.

To give Bidders reasonable time in which to take an addendum into account in preparing their Bids, the Employer should extend the deadline for the submission of Bids, pursuant to ITB 22.2.

C. Preparation of Bids

9. Cost of Bidding

The Bidder shall bear all costs associated with the preparation and submission of its Bid, and the Employer shall not be responsible or liable for those costs, regardless of the conduct or outcome of the Bidding process.

10. Language of Bid

The Bid, as well as all correspondence and documents relating to the Bid exchanged by the Bidder and the Employer, shall be written in the language specified **in the BDS**. Supporting documents and printed literature that are part of the Bid may be in another language provided they are accompanied by an accurate translation of the relevant passages in the language specified **in the BDS**, in which case, for purposes of interpretation of the Bid, such translation shall govern.

**11. Documents
Comprising the Bid**

The Bid shall comprise two Parts, namely the Technical Part and the Financial Part. These two Parts shall be submitted simultaneously in two separate sealed envelopes (two-envelope Bidding process). One envelope shall contain only information relating to the Technical Part and the other, only information relating to the Financial Part. These two envelopes shall be enclosed in a separate sealed outer envelope marked “ORIGINAL BID”.

The Technical Part shall contain the following:

Letter of Bid – Technical Part, prepared in accordance with ITB 12;

Bid Security or Bid-Securing Declaration, in accordance with ITB 19.1;

Alternative Bid - Technical Part: if permissible in accordance with ITB 13, the Technical Part of any Alternative Bid;

Authorization: written confirmation authorizing the signatory of the Bid to commit the Bidder, in accordance with ITB 20.3;

Qualifications: documentary evidence in accordance with ITB 17 establishing the Bidder’s eligibility and qualifications;

Conformity: a technical proposal in accordance with ITB 16;

and

any other document required **in the BDS**.

The Financial Part shall contain the following:

(a) Letter of Bid – Financial Part: prepared in accordance with ITB 12 and ITB 14;

(b) Schedules including priced Bill of Quantities, completed in accordance with ITB 12 and ITB 14;

(c) Alternative Bid - Financial Part: if permissible in accordance with ITB 13, the Financial Part of any Alternative Bid; and

(d) any other document required **in the BDS**.

The Technical Part shall not include any information related to the Bid price. Where material financial information related to the Bid price is contained in the Technical Part the Bid shall be declared non-responsive.

The Bidder shall furnish in the Letter of Bid-Technical Part the names of three potential DAAB members and attach their curriculum vitae. The list of potential DAAB members proposed by the Employer (Contract Data 21.1) and by the Bidder (Letter of Bid) shall be subject to Bank's No-objection.

In addition to the requirements under ITB 11.2, Bids submitted by a JV shall include in the Technical Part a copy of the Joint Venture Agreement entered into by all members. Alternatively, a letter of intent to execute a Joint Venture Agreement in the event of a successful Bid shall be signed by all members and submitted with the Bid, together with a copy of the proposed Agreement.

The Bidder shall furnish in the Letter of Bid- Financial Part information on commissions and gratuities, if any, paid or to be paid to agents or any other party relating to this Bid.

12. Letters of Bid and Schedules

The Letter of Bid- Technical Part, Letter of Bid- Financial Part and Schedules, including the Bill of Quantities, shall be prepared using the relevant forms furnished in Section IV, Bidding Forms. The forms must be completed without any alterations to the text, and no substitutes shall be accepted except as provided under ITB 20.3. All blank spaces shall be filled in with the information requested.

13. Alternative Bids

Unless otherwise specified **in the BDS**, alternative Bids shall not be considered.

When alternative times for completion are explicitly invited, a statement to that effect will be included **in the BDS**, and the method of evaluating different alternative times for completion will be described in Section III, Evaluation and Qualification Criteria.

Except as provided under ITB 13.4 below, Bidders wishing to offer technical alternatives to the requirements of the Bidding document must first price the Employer's design as described in the Bidding document and shall further provide all information necessary for a complete evaluation of the alternative by the Employer, including drawings, design calculations, technical specifications, breakdown of prices, and proposed construction methodology and other relevant details. Only the technical alternatives, if any, of the Bidder with the Most Advantageous Bid conforming to the basic technical requirements shall be considered by the Employer.

When specified **in the BDS**, Bidders are permitted to submit alternative technical solutions for specified parts of the Works, and such parts will be identified **in the BDS**, as will the method for their evaluating, and described in Section VII, Works' Requirements.

14. Bid Prices and Discounts

The prices and discounts (including any price reduction) quoted by the Bidder in the Letter of Bid - Financial Part and in the Bill of Quantities shall conform to the requirements specified below.

The Bidder shall fill in rates and prices for all items of the Works described in the Bill of Quantities. Items against which no rate or price is entered by the Bidder shall be deemed covered by the rates for other items in the Bill of Quantities and will not be paid for separately by the Employer. An item not listed in the priced Bill of Quantities shall be assumed to be not included in the Bid, and provided that the Bid is determined substantially responsive notwithstanding this omission, the average price of the item quoted by substantially responsive Bidders will be added to the Bid price and the equivalent total cost of the Bid so determined will be used for price comparison.

The price to be quoted in the Letter of Bid- Financial Part, in accordance with ITB 12.1, shall be the total price of the Bid, excluding any discounts offered.

The Bidder shall quote any discounts and the methodology for their application in the Letter of Bid- Financial Part, in accordance with ITB 12.1.

Unless otherwise specified **in the BDS** and the Conditions of Contract, the rates and prices quoted by the Bidder are subject to adjustment during the performance of the Contract in accordance with the provisions of the Conditions of Contract. In such a case, the Bidder shall furnish the indices and weightings for the price adjustment formulae in the Table of Adjustment Data and the Employer may require the Bidder to justify its proposed indices and weightings.

If so specified in ITB 1.1, Bids are being invited for individual lots (contracts) or for any combination of lots (packages). Bidders wishing to offer discounts for the award of more than one Contract shall specify in their Bid the price reductions applicable to each package, or alternatively, to individual Contracts within the package. Discounts shall be submitted in accordance with ITB 14.4, provided the Bids for all lots (contracts) are opened at the same time. **However, discounts**

on condition of award of more than one contract will not be used for Bid evaluation purpose.

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

15. Currencies of Bid and Payment

The currency (ies) of the Bid and the currency (ies) of payments shall be the same and shall be as specified **in the BDS**.

Bidders may be required by the Employer to justify, to the Employer's satisfaction, their local and foreign currency requirements, and to substantiate that the amounts included in the unit rates and prices and shown in the Table of Adjustment Data in the Appendix to Bid are reasonable, in which case a detailed breakdown of the foreign currency requirements shall be provided by Bidders.

16. Documents Comprising the Technical Proposal

The Bidder shall furnish a technical proposal in the Technical Part of the Bid including a statement of work methods, equipment, personnel, schedule, and any other information as stipulated in Section IV, Bidding Forms, in sufficient detail to demonstrate the adequacy of the Bidder's proposal to meet the work's requirements and the completion time.

17. Documents Establishing the Eligibility and Qualifications of the Bidder

To establish Bidder's eligibility in accordance with ITB 4, Bidders shall complete the Letter of Bid-Technical Part, included in Section IV, Bidding Forms.

In accordance with Section III, Evaluation and Qualification Criteria, to establish its qualifications to perform the Contract, the Bidder shall provide the information requested in the corresponding information sheets included in Section IV, Bidding Forms.

If a margin of preference applies as specified in accordance with ITB 36.2, domestic Bidders, individually or in joint ventures, applying for eligibility for domestic preference shall supply all information required to satisfy the criteria for eligibility specified in accordance with ITB 36.2.

Any change in the structure or formation of a Bidder after being prequalified and invited to Bid, if applicable, (including, in the case of a JV, any change in the structure or formation of any member and also including any change in any specialized subcontractor whose qualifications were considered to prequalify the Applicant) shall be subject to the written approval of the Employer prior to the deadline for submission of Bids. Such approval shall be denied if (i) a Bidder proposes to associate with a disqualified Bidder or in case of a

disqualified joint venture, any of its members; (ii) as a consequence of the change, the Bidder no longer substantially meets the qualification criteria; or (iii) in the opinion of the Employer, the change may result in a substantial reduction in competition. Any such change should be submitted to the Employer not later than fourteen (14) days after the date of the notice for RFB sent to the prequalified Bidders.

Subcontractors

Unless otherwise stated **in the BDS**, the Employer does not intend to execute any specific elements of the Works by subcontractors selected in advance by the Employer.

Bidders may propose subcontracting up to the percentage of total value of contracts or the volume of works as specified **in the BDS**. Subcontractors proposed by the Bidder shall be fully qualified for their parts of the Works.

In case prequalification has not been carried, for the purpose of assessment of qualifications of the Bidder, subcontractor's qualifications shall not be used by the Bidder to qualify for the Works unless their specialized parts of the Works are designated by the Employer **in the BDS** as can be met by subcontractors referred to hereafter as Specialized Subcontractors, in which case, the specific experience of the Specialized Subcontractors proposed by the Bidder, as specified in Section III-A, Qualification, may be considered in the assessment of the qualifications of the Bidder. The general experience and financial resources of the Specialized Subcontractors shall not be added to those of the Bidder for purposes of qualification of the Bidder.

In case prequalification has been carried out, subject to ITB 17.4, the Bidder's Bid shall name the same specialized subcontractor as submitted in the prequalification application and approved by the Employer.

18. Period of Validity of Bids

Bids shall remain valid until the date specified **in the BDS** or any extended date if amended by the Employer in accordance with ITB 8. A Bid that is not valid until the date specified **in the BDS**, or any extended date if amended by the Employer in accordance with ITB 8, shall be rejected by the Employer as nonresponsive.

In exceptional circumstances, prior to the date of expiration of the Bid validity, the Employer may request Bidders to extend the period of validity of their Bids. The request and the responses shall be made in writing. If a Bid Security is requested in accordance with ITB 19, it shall also be extended for twenty-eight (28) days beyond the extended date for bid validity. A Bidder may refuse the request without forfeiting its Bid security. A Bidder granting the request shall not be

required or permitted to modify its Bid, except as provided in ITB 18.3.

If the award is delayed by a period exceeding fifty-six (56) days beyond the date of expiry of the Bid validity specified in accordance with ITB 18.1, the Contract price shall be determined as follows:

- (a) in the case of **fixed price** contracts, the Contract price shall be the Bid price adjusted by the factor specified **in the BDS**;
- (b) in the case of **adjustable price** contracts, no adjustment shall be made; or
- (c) in any case, Bid evaluation shall be based on the Bid price without taking into consideration the applicable correction from those indicated above.

19. Bid Security

The Bidder shall furnish as part of the Technical Part of its Bid, either a Bid-Securing Declaration or a Bid Security as specified **in the BDS**, in original form and, in the case of a Bid Security, in the amount and currency specified **in the BDS**.

A Bid-Securing Declaration shall use the form included in Section IV, Bidding Forms.

If a Bid Security is specified pursuant to ITB 19.1, the Bid Security shall be a demand guarantee in any of the following forms at the Bidder's option:

- (a) an unconditional guarantee issued by a bank or non-bank financial institution (such as an insurance, bonding, or surety company);
- (b) an irrevocable letter of credit;
- (c) a cashier's or certified check; or
- (d) another security specified **in the BDS**,

from a reputable source from an eligible country. If an unconditional guarantee is issued by a non-bank financial institution located outside the Employer's Country, the issuing non-bank financial institution shall have a correspondent financial institution located in the Employer's Country to make it enforceable unless the Employer has agreed in writing, prior to Bid submission, that a correspondent financial institution is not required. In the case of a bank guarantee, the Bid Security shall be submitted either using the Bid Security Form included in Section IV, Bidding Forms, or in another substantially similar format approved by the Employer prior to Bid submission. The Bid Security shall be valid for twenty-eight (28) days beyond the original date of expiry of the Bid validity, or beyond any extended date if requested under ITB 18.2.

If a Bid Security or Bid-Securing Declaration is specified pursuant to ITB 19.1, any Bid not accompanied by a substantially responsive Bid Security or Bid-Securing Declaration shall be rejected by the Employer as non-responsive.

If a Bid Security is specified pursuant to ITB 19.1, the Bid Security of unsuccessful Bidders shall be returned as promptly as possible upon the successful Bidder's signing the Contract and furnishing the Performance Security and if required **in the BDS**, the Environmental and Social (ES) Performance Security pursuant to ITB 49.

The Bid Security of the successful Bidder shall be returned as promptly as possible once the successful Bidder has signed the Contract and furnished the required Performance Security, and if required **in the BDS**, the Environmental and Social (ES) Performance Security.

The Bid Security may be forfeited:

if a Bidder withdraws its Bid prior to the expiry date of the Bid validity specified by the Bidder on the Letter of Bid, or any extended date provided by the Bidder; or

if the successful Bidder fails to:

- (i) sign the Contract in accordance with ITB 48; or
- (ii) furnish a Performance Security and if required **in the BDS**, the Environmental and Social (ES) Performance Security in accordance with ITB 49.

The Bid Security or the Bid-Securing Declaration of a JV shall be in the name of the JV that submits the Bid. If the JV has not been legally constituted into a legally enforceable JV at the time of Bidding, the Bid Security or the Bid-Securing Declaration shall be in the names of all future members as named in the letter of intent referred to in ITB 4.1 and ITB 11.6.

If a Bid Security is not required **in the BDS**, pursuant to ITB 19.1, and:

- (a) if a Bidder withdraws its Bid prior to the expiry date of the Bid validity specified by the Bidder on the Letter of Bid or any extended date provided by the Bidder; or
- (b) if the successful Bidder fails to:
 - (i) sign the Contract in accordance with ITB 48; or
 - (ii) furnish a Performance Security and, if required **in the BDS**, the Environmental and Social (ES) Performance Security in accordance with ITB 49,

the Borrower may, if provided for **in the BDS**, declare the Bidder ineligible to be awarded a contract by the Employer for a period of time stated **in the BDS**.

20. Format and Signing of Bid

The Bidder shall prepare the Bid, in accordance with this Instruction, ITB 11 and ITB 21.

Bidders shall mark as “CONFIDENTIAL” all information in their Bids which is confidential to their business. This may include proprietary information, trade secrets, or commercial or financially sensitive information.

The original and all copies of the Bid shall be typed or written in indelible ink and shall be signed by a person duly authorized to sign on behalf of the Bidder. This authorization shall consist of a written confirmation as specified **in the BDS** and shall be attached to the Bid. The name and position held by each person signing the authorization must be typed or printed below the signature. All pages of the Bid where entries or amendments have been made shall be signed or initialed by the person signing the Bid.

In case the Bidder is a JV, the Bid shall be signed by an authorized representative of the JV on behalf of the JV, and so as to be legally binding on all the members as evidenced by a power of attorney signed by their legally authorized representatives.

Any inter-lineation, erasures, or overwriting shall be valid only if they are signed or initialed by the person signing the Bid.

D. Submission of Bids

21. Sealing and Marking of Bids

The Bidder shall deliver the Bid in two separate, sealed envelopes (the Technical Part and the Financial Part.) These two envelopes shall be enclosed in a separate sealed outer envelope marked “Original BID”. In addition, the Bidder shall submit copies of the Bid in the number specified **in the BDS**. Copies of the Technical Part shall be placed in a separate sealed envelope marked “COPIES: TECHNICAL PART”. Copies of the Financial Part shall be placed in a separate sealed envelope marked “COPIES: FINANCIAL PART”. The Bidder shall place both of these envelopes in a separate, sealed outer envelope marked “BID COPIES”. In the event of any discrepancy between the original and the copies, the original shall prevail.

If alternative Bids are permitted in accordance with ITB 13, the alternative Bids shall be submitted as follows: the original of the alternative Bid Technical Part shall be placed in a sealed envelope marked “ALTERNATIVE BID – TECHNICAL PART” and

the Financial Part shall be placed in a sealed envelope marked “ALTERNATIVE BID – FINANCIAL PART” and these two separate sealed envelopes then enclosed within a sealed outer envelope marked “ALTERNATIVE BID – ORIGINAL”, the copies of the alternative Bid will be placed in separate sealed envelopes marked “ALTERNATIVE BID – COPIES OF TECHNICAL PART”, and “ALTERNATIVE BID – COPIES OF FINANCIAL PART” and enclosed in a separate sealed outer envelope marked “ALTERNATIVE BID - COPIES”.

The envelopes marked “ORIGINAL BID” and “BID COPIES” (and, if appropriate, a third envelope marked “ALTERNATIVE BID”) shall be enclosed in a separate sealed outer envelope for submission to the Employer.

All inner and outer envelopes shall:

bear the name and address of the Bidder;

be addressed to the Employer in accordance with ITB 22.1;

bear the specific identification of this Bidding process specified in accordance with BDS 1.1; and

bear a warning not to open before the time and date for Bid opening.

If all envelopes are not sealed and marked as required, the Employer will assume no responsibility for the misplacement or premature opening of the Bid.

22. Deadline for Submission of Bids

Bids must be received by the Employer at the address and no later than the date and time specified **in the BDS**. When so specified **in the BDS**, Bidders shall have the option of submitting their Bids electronically. Bidders submitting Bids electronically shall follow the electronic Bid submission procedures specified **in the BDS**.

The Employer may, at its discretion, extend the deadline for the submission of Bids by amending the Bidding document in accordance with ITB 8, in which case all rights and obligations of the Employer and Bidders previously subject to the deadline shall thereafter be subject to the deadline as extended.

23. Late Bids

The Employer shall not consider any Bid that arrives after the deadline for submission of Bids, in accordance with ITB 22. Any Bid received by the Employer after the deadline for submission of Bids shall be declared late, rejected, and returned unopened to the Bidder.

24. Withdrawal, Substitution, and Modification of Bids

A Bidder may withdraw, substitute, or modify its Bid after it has been submitted by sending a written notice, duly signed by an authorized representative, and shall include a copy of the authorization in accordance with ITB 20.3, (except that

withdrawal notices do not require copies). The corresponding substitution or modification of the Bid must accompany the respective written notice. All notices must be:

- (a) prepared and submitted in accordance with ITB 20 and ITB 21 (except that withdrawals notices do not require copies), and in addition, the respective envelopes shall be clearly marked “WITHDRAWAL,” “SUBSTITUTION,” “MODIFICATION;” and
- (b) received by the Employer prior to the deadline prescribed for submission of Bids, in accordance with ITB 22.

Bids requested to be withdrawn in accordance with ITB 24.1 shall be returned unopened to the Bidders.

No Bid may be withdrawn, substituted, or modified in the interval between the deadline for submission of Bids and the date of expiry of Bid validity specified by the Bidder on the Letter of Bid or any extended date thereof.

E. Public Opening of Technical Parts of Bids

25. Public Bid Opening of Technical Parts of Bids

Except in the cases specified in ITB 23 and ITB 24.2, the Employer shall publicly open and read out in accordance with this ITB all Bids received by the deadline, at the date, time and place specified **in the BDS**, in the presence of Bidders` designated representatives and anyone who chooses to attend. Any specific electronic Bid opening procedures required if electronic Bidding is permitted in accordance with ITB 22.1, shall be as specified **in the BDS**.

First, envelopes marked “WITHDRAWAL” shall be opened and read out and the envelope with the corresponding Bid shall not be opened but returned to the Bidder. No Bid withdrawal shall be permitted unless the corresponding withdrawal notice contains a valid authorization to request the withdrawal and is read out at Bid opening.

Next, envelopes marked “SUBSTITUTION” shall be opened and read out and exchanged with the corresponding Bid being substituted, and the substituted Bid shall not be opened, but returned to the Bidder. No Bid substitution shall be permitted unless the corresponding substitution notice contains a valid authorization to request the substitution and is read out at Bid opening.

Next, envelopes marked “MODIFICATION” shall be opened and read out with the corresponding Bid. No Bid modification shall be permitted unless the corresponding modification notice contains a valid authorization to request the modification and is read out at Bid opening.

Next, all other envelopes marked “TECHNICAL PART” shall be opened one at a time. All envelopes marked “SECOND ENVELOPE: Financial PART” shall remain sealed and kept by the Employer in safe custody until they are opened at a later public opening, following the evaluation of the Technical Part parts of the Bids. On opening the envelopes marked “TECHNICAL PART” the Employer shall read out: the name of the Bidder, the presence or the absence of a Bid Security, or Bid-Securing Declaration, if required, and whether there is a modification; and Alternative Bid - Technical Part; and any other details as the Employer may consider appropriate.

Only Technical Parts of Bids and Alternative Bid - Technical Parts that are read out at Bid opening shall be considered further for evaluation. The Letter of Bid- Technical Part and the separate sealed envelope marked “SECOND ENVELOPE: FINANCIAL PART” are to be initialed by representatives of the Employer attending Bid opening in the manner specified **in the BDS**.

The Employer shall neither discuss the merits of any Bid nor reject any Bid (except for late Bids, in accordance with ITB 23.1).

The Employer shall prepare a record of the Technical Parts of Bid opening that shall include, as a minimum:

- (a) the name of the Bidder and whether there is a withdrawal, substitution, or modification;
- (b) the receipt of envelopes marked “SECOND ENVELOPE: FINANCIAL PART”;
- (c) if applicable, any alternative Bid- Technical Part;
- (d) the presence or absence of a Bid Security if one was required.

The Bidders’ representatives who are present shall be requested to sign the record. The omission of a Bidder’s signature on the record shall not invalidate the contents and effect of the record. A copy of the record shall be distributed to all Bidders.

F. Evaluation of Bids- General Provisions

26. Confidentiality

Information relating to the evaluation of the Technical Part shall not be disclosed to Bidders or any other persons not officially concerned with the Bidding process until the notification of evaluation of the Technical Part in accordance with ITB 33. Information relating to the evaluation of Financial Part, the

evaluation of combined Technical Part and Financial Part, and recommendation of contract award shall not be disclosed to Bidders, or any other persons not officially concerned with the RFB process until the Notification of Intention to Award the Contract is transmitted to Bidders in accordance with ITB 44.

Any effort by a Bidder to influence the Employer in the evaluation of the Bids or Contract award decisions may result in the rejection of its Bid.

Notwithstanding ITB 26.2, from the time of Bid opening to the time of Contract award, if a Bidder wishes to contact the Employer on any matter related to the Bidding process, it shall do so in writing.

27. Clarification of Bids

To assist in the examination, evaluation, and comparison of the Bids, and qualification of the Bidders, the Employer may, at its discretion, ask any Bidder for a clarification of its Bid, given a reasonable time for a response. Any clarification submitted by a Bidder that is not in response to a request by the Employer shall not be considered. The Employer's request for clarification and the response shall be in writing. No change, including any voluntary increase or decrease, in the prices or substance of the Bid shall be sought, offered, or permitted, except to confirm the correction of arithmetic errors discovered by the Employer in the evaluation of the Bids, in accordance with ITB 35.

If a Bidder does not provide clarifications of its Bid by the date and time set in the Employer's request for clarification, its Bid may be rejected.

28. Deviations, Reservations, and Omissions

During the evaluation of Bids, the following definitions apply:

- (a) "Deviation" is a departure from the requirements specified in the Bidding document;
- (b) "Reservation" is the setting of limiting conditions or withholding from complete acceptance of the requirements specified in the Bidding document; and
- (c) "Omission" is the failure to submit part, or all of the information or documentation required in the Bidding document.

29. Nonmaterial Nonconformities

Provided that a Bid is substantially responsive, the Employer may waive any nonmaterial nonconformities in the Bid.

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

documentation on such nonconformities shall not be related to any aspect of the price of the Bid. Failure of the Bidder to comply with the request may result in the rejection of its Bid.

G. Evaluation of Technical Part of Bids

30. Determination of Responsiveness of Technical Part

The Employer's determination of the Technical Part's responsiveness shall be based on the contents of the Bid, as specified in ITB 11.

Preliminary examination of the Technical Part shall be carried out to identify proposals that are incomplete, invalid, or substantially nonresponsive to the requirements of the Bidding documents. A substantially responsive Bid is one that materially conforms to the of the Bidding document without material deviation, reservation, or omission. A material deviation, reservation, or omission is one that,

if accepted, would:

- (i) affect in any substantial way the scope, quality, or performance of the Works specified in the Contract; or
- (ii) limit in any substantial way, inconsistent with the Bidding document, the Employer's rights, or the Bidder's obligations under the proposed Contract; or

if rectified, would unfairly affect the competitive position of other Bidders presenting substantially responsive Bids.

If the Technical Part is not substantially responsive to the requirements of the Bidding document, it shall be rejected by the Employer and may not subsequently be made responsive by correction of the material deviation, reservation, or omission.

31. Eligibility and Qualifications of the Bidder

The Employer shall determine to its satisfaction whether the Bidders that have been assessed to have submitted substantially responsive Bids are eligible, and either continue to meet (if prequalification applies) or meet (if prequalification has not been carried out), the qualifying criteria specified in Section III, Evaluation and Qualification Criteria.

The determination shall be based upon an examination of the documentary evidence of the Bidder's eligibility and qualifications submitted by the Bidder, pursuant to ITB 17. The determination shall not take into consideration the qualifications of other firms such as the Bidder's subsidiaries, parent entities, affiliates, subcontractors (other than

Specialized Subcontractors if permitted in the bidding document), or any other firm.

Prior to Contract award, the Employer will verify that the successful Bidder (including each member of a JV) is not disqualified by the Bank due to noncompliance with contractual SEA/SH prevention and response obligations. The Employer will conduct the same verification for each subcontractor proposed by the successful Bidder. If any proposed subcontractor does not meet the requirement, the Employer will require the Bidder to propose a replacement subcontractor

Only substantially responsive bids submitted by eligible and qualified bidders shall proceed to the detailed technical evaluation specified in ITB 32.

32. Detailed Evaluation of Technical Part

The Employer's evaluation of Technical Part will be carried out as specified in Section III, Evaluation and Qualification Criteria.

The scores to be given to technical factors and sub factors are specified **in the BDS**.

H. Notification of Evaluation of Technical Parts and Public Opening of Financial Parts

33. Notification of Evaluation of Technical Parts and Public Opening of Financial Parts

Following the completion of the evaluation of the Technical Parts of the Bids, the Employer shall notify in writing those Bidders whose Bids were considered substantially non-responsive to the bidding document or failed to meet the eligibility and qualification requirements, advising them of the following information:

the grounds on which their Technical Part of Bid failed to meet the requirements of the bidding document;

their envelopes marked "SECOND ENVELOPE: FINANCIAL PART" will be returned to them unopened after the completion of the selection process and the signing of the Contract; and

notify them of the date, time, and location of the public opening of the envelopes marked "SECOND ENVELOPE: FINANCIAL PART".

The Employer shall, simultaneously, notify in writing those Bidders whose Technical Part have been evaluated as substantially responsive to the bidding document and met the eligibility and qualification requirements, advising them of the following information:

their Bid has been evaluated as substantially responsive to the bidding document and met the eligibility and qualification requirements;

their envelope marked “SECOND ENVELOPE: FINANCIAL PART” will be opened at the public opening of the Financial Parts; and notify them of the date, time, and location of the second public opening of the envelopes marked “SECOND ENVELOPE: FINANCIAL PART” as specified **in the BDS**.

The opening date shall be not less than ten (10) Business Days from the date of notification of the results of the technical evaluation, specified in ITB 33.1 and 33.2. However, if the Employer receives a complaint on the results of the technical evaluation within the ten (10) Business Days, the opening date shall be subject to ITB 50.1. The Financial Part of the Bid shall be opened publicly in the presence of Bidders’ designated representatives and anyone who chooses to attend.

At this public opening, the Financial Parts will be opened by the Employer in the presence of Bidders, or their designated representatives and anyone else who chooses to attend. Bidders who met the eligibility and qualification requirements and whose bids were evaluated as substantially responsive will have their envelopes marked “SECOND ENVELOPE: FINANCIAL PART” opened at the second public opening. Each of these envelopes marked “SECOND ENVELOPE: FINANCIAL PART” shall be inspected to confirm that they have remained sealed and unopened. These envelopes shall then be opened by the Employer. The Employer shall read out the names of each Bidder, the technical score, and the total Bid prices, per lot (contract) if applicable, including any discounts and Alternative Bid - Financial Part, and any other details as the Employer may consider appropriate.

Only envelopes of Financial Part of Bids, Financial Parts of Alternative Bids and discounts that are opened and read out at Bid opening shall be considered further for evaluation. The Letter of Bid – Financial Part and the Priced Activity Schedules are to be initialed by a representative of the Employer attending the Bid opening in the manner specified **in the BDS**.

The Employer shall neither discuss the merits of any Bid nor reject any envelopes marked “SECOND ENVELOPE: FINANCIAL PART” at this public opening.

The Employer shall prepare a record of the Financial Part of the Bid opening that shall include, as a minimum:

the name of the Bidder whose Financial Part was opened;

the Bid price, per lot (contract) if applicable, including any discounts; and

if applicable, any Alternative Bid – Financial Part.

The Bidders whose envelopes marked “SECOND ENVELOPE: FINANCIAL PART” have been opened or their representatives who are present shall be requested to sign the record. The omission of a Bidder’s signature on the record shall not invalidate the contents and effect of the record. A copy of the record shall be distributed to all Bidders.

I. Evaluation of Financial Part of Bids

34. Adjustments for Nonmaterial Nonconformities

Provided that a Bid is substantially responsive, the Employer shall rectify quantifiable nonmaterial nonconformities related to the Bid Price. To this effect, the Bid Price shall be adjusted, for comparison purposes only to reflect the price of a missing or non-conforming item or component, by adding the average price of the item or component quoted by substantially responsive Bidders. If the price of the item or component cannot be derived from the price of other substantially responsive Bids, the Employer shall use its best estimate.

35. Correction of Arithmetic Errors

In evaluating the Financial Part of each Bid, the Employer shall correct arithmetical errors on the following basis:

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

if there is an error in a total corresponding to the addition or subtraction of subtotals, the subtotals shall prevail, and the total shall be corrected; and

if there is a discrepancy between words and figures, the amount in words shall prevail, unless the amount expressed in words is related to an arithmetic error, in which case the amount in figures shall prevail subject to (a) and (b) above.

Bidders shall be requested to accept correction of arithmetical errors. Failure to accept the correction in accordance with ITB 35.1, shall result in the rejection of the Bid.

36. Conversion to Single Currency and Margin of Preference

For evaluation and comparison purposes, the currency(ies) of the Bid shall be converted into a single currency as specified in the BDS.

Unless otherwise specified **in the BDS**, a margin of preference for domestic Bidders¹ shall not apply.

37. Evaluation Process, Financial Parts

To evaluate the Financial Part, the Employer shall consider the following:

the Bid price, excluding Provisional Sums and the provision, if any, for contingencies in the Summary Bill of Quantities, but including Daywork² items, where priced competitively;

price adjustment for correction of arithmetic errors in accordance with ITB 35;

price adjustment due to discounts offered in accordance with ITB 14.4;

converting the amount resulting from applying (a) to (c) above, if relevant, to a single currency in accordance with ITB 36.1;

price adjustment due to quantifiable nonmaterial nonconformities in accordance with ITB 34;

and the additional evaluation factors are specified in Section III, Evaluation and Qualification Criteria.

If price adjustment is allowed in accordance with ITB 14.5, the estimated effect of the price adjustment provisions of the Conditions of Contract, applied over the period of execution of the Contract, shall not be taken into account in Bid evaluation.

If this bidding document allows Bidders to quote separate prices for different lots (contracts), each lot will be evaluated separately to determine the Most Advantageous Bid using the methodology specified in Section III, Evaluation and Qualification Criteria. **Discounts that are conditional on the award of more than one lot or slice shall not be considered for Bid evaluation.**

¹ An individual firm is considered a domestic Bidder for purposes of the margin of preference if it is registered in the country of the Employer, has more than 50 percent ownership by nationals of the country of the Employer, and if it does not subcontract more than 10 percent of the contract price, excluding provisional sums, to foreign contractors. JVs are considered as domestic Bidders and eligible for domestic preference only if the individual member firms are registered in the country of the Employer or have more than 50 percent ownership by nationals of the country of the Employer, and the JV shall be registered in the country of the Borrower. The JV shall not subcontract more than 10 percent of the contract price, excluding provisional sums, to foreign firms. JVs between foreign and national firms will not be eligible for domestic preference.

² Daywork is work carried out following instructions of the Engineer and paid for on the basis of time spent by workers, and the use of materials and the Contractor's equipment, at the rates quoted in the Bid. For Daywork to be priced competitively for Bid evaluation purposes, the Employer must list tentative quantities for individual items to be costed against Daywork (e.g., a specific number of tractor driver staff-days, or a specific tonnage of Portland cement), to be multiplied by the Bidders' quoted rates and included in the total Bid price.

38. Abnormally Low Bids

An Abnormally Low Bid is one where the Bid price, in combination with other elements of the Bid, appears so low that it raises material concerns as to the capability of the Bidder in regard to the Bidder's ability to perform the Contract for the offered Bid Price.

In the event of identification of a potentially Abnormally Low Bid, the Employer shall seek written clarifications from the Bidder, including detailed price analyses of its Bid price in relation to the subject matter of the contract, scope, proposed methodology, schedule, allocation of risks and responsibilities and any other requirements of the Bidding document.

After evaluation of the price analyses, in the event that the Employer determines that the Bidder has failed to demonstrate its capability to perform the Contract for the offered Bid Price, the Employer shall reject the Bid.

39. Unbalanced or Front Loaded Bids

If the Bid that is evaluated as the lowest evaluated cost is, in the Employer's opinion, seriously unbalanced or front loaded, the Employer may require the Bidder to provide written clarifications. Clarifications may include detailed price analyses to demonstrate the consistency of the Bid prices with the scope of works, proposed methodology, schedule, and any other requirements of the Bidding document.

After the evaluation of the information and detailed price analyses presented by the Bidder, the Employer may as appropriate:

- (a) accept the Bid; or
- (b) require that the total amount of the Performance Security be increased at the expense of the Bidder to a level not exceeding 20% of the Contract Price; or
- (c) reject the Bid.

J. Evaluation of Combined Technical and Financial Parts, Most Advantageous Bid and Notification of Intention to Award**40. Evaluation of combined Technical and Financial Parts**

The Employer's evaluation of responsive Bids will take into account technical factors, in addition to cost factors in accordance with Section III Evaluation and Qualification Criteria. The weight to be assigned for the Technical factors and cost is specified **in the BDS**. The Employer will rank the Bids based on the evaluated Bid score (B).

41. Most Advantageous Bid

The Employer shall determine the Most Advantageous Bid. The Most Advantageous Bid is the Bid of the Bidder that meets the Qualification Criteria and whose Bid has been determined to

be substantially responsive to the Bidding document and is the Bid with the highest combined technical and financial score.

42. Employer’s Right to Accept Any Bid, and to Reject Any or All Bids

The Employer reserves the right to accept or reject any Bid and to annul the Bidding process and reject all Bids at any time prior to Contract Award, without thereby incurring any liability to Bidders. In case of annulment, all Bids submitted and specifically, Bid securities, shall be promptly returned to the Bidders.

43. Standstill Period

The Contract shall not be awarded earlier than the expiry of the Standstill Period. The Standstill Period shall be ten (10) Business Days unless extended in accordance with ITB 47. The Standstill Period commences the day after the date the Employer has transmitted to each Bidder the Notification of Intention to Award the Contract. Where only one Bid is submitted, or if this contract is in response to an emergency situation recognized by the Bank, the Standstill Period shall not apply.

44. Notification of Intention to Award

The Employer shall send to each Bidder the Notification of Intention to Award the Contract to the successful Bidder. The Notification of Intention to Award shall contain, at a minimum, the following information:

the name and address of the Bidder submitting the successful Bid;

the Contract price of the successful Bid;

the total combined score of the successful Bid;

the names of all Bidders who submitted Bids, and their Bid prices as readout, and as evaluated and technical scores;

a statement of the reason(s) the Bid (of the unsuccessful Bidder to whom the notification is addressed) was unsuccessful;

the expiry date of the Standstill Period; and

instructions on how to request a debriefing and/or submit a complaint during the standstill period.

K. Award of Contract

45. Award Criteria

Subject to ITB 42.1, the Employer shall award the Contract to the successful Bidder. This is the Bidder whose Bid has been determined to be the Most Advantageous Bid.

46. Notification of Award

Prior to the date of expiry of the bid validity, and upon expiry of the Standstill Period specified in ITB 43.1 or any extension thereof, and, upon satisfactorily addressing any complaint that

has been filed within the Standstill Period, the Employer shall notify the successful Bidder, in writing, that its Bid has been accepted. The notification of award (hereinafter and in the Conditions of Contract and Contract Forms called the “Letter of Acceptance”) shall specify the sum that the Employer will pay the Contractor in consideration of the execution of the Contract (hereinafter and in the Conditions of Contract and Contract Forms called “the Contract Price”).

Within ten (10) Business Days after the date of transmission of the Letter of Acceptance, the Employer shall publish the Contract Award Notice which shall contain, at a minimum, the following information:

- (a) name and address of the Employer;
- (b) name and reference number of the contract being awarded, and the selection method used;
- (c) names of all Bidders that submitted Bids, and their Bid prices as read out at Bid opening, and as evaluated;
- (d) names of all Bidders whose Bids were rejected, with the reasons therefor;
- (e) the name of the successful Bidder, the final total contract price, the contract duration, and a summary of its scope; and
- (f) successful Bidder’s Beneficial Ownership Disclosure Form.

The Contract Award Notice shall be published on the Employer’s website with free access if available, or in at least one newspaper of national circulation in the Employer’s Country, or in the official gazette. The Employer shall also publish the contract award notice in UNDB online.

Until a formal Contract is prepared and executed, the Letter of Acceptance shall constitute a binding Contract.

47. Debriefing by the Employer

On receipt of the Employer’s Notification of Intention to Award referred to in ITB 44.1, an unsuccessful Bidder has three (3) Business Days to make a written request to the Employer for a debriefing. The Employer shall provide a debriefing to all unsuccessful Bidders whose request is received within this deadline.

Where a request for debriefing is received within the deadline, the Employer shall provide a debriefing within five (5) Business Days, unless the Employer decides, for justifiable reasons, to provide the debriefing outside this timeframe. In that case, the standstill period shall automatically be extended until five (5) Business Days after such debriefing is provided. If more than one debriefing is so delayed, the standstill period shall not end earlier than five (5) Business Days after the last debriefing takes place. The Employer shall promptly inform,

by the quickest means available, all Bidders of the extended standstill period.

Where a request for debriefing is received by the Employer later than the three (3) Business Day deadline, the Employer should provide the debriefing as soon as practicable, and normally no later than fifteen (15) Business Days from the date of publication of Public Notice of Award of contract. Requests for debriefing received outside the three (3)-day deadline shall not lead to extension of the standstill period.

Debriefings of unsuccessful Bidders may be done in writing or verbally. The Bidder shall bear its own costs of attending such a debriefing meeting.

48. Signing of Contract

The Employer shall send to the successful Bidder the Letter of Acceptance including the Contract Agreement, and a request to submit the Beneficial Ownership Disclosure Form providing additional information on its beneficial ownership. The Beneficial Ownership Disclosure Form shall be submitted within eight (8) Business Days of receiving this request.

The successful Bidder shall sign, date, and return to the Employer, the Contract Agreement within twenty-eight (28) days of its receipt.

49. Performance Security

Within twenty-eight (28) days of the receipt of the Letter of Acceptance from the Employer, the successful Bidder shall furnish the Performance Security and, if required **in the BDS**, the Environmental and Social (ES) Performance Security in accordance with the Conditions of Contract, subject to ITB 39.2 (b), using for that purpose the Performance Security and ES Performance Security Forms included in Section X, Contract Forms, or another form acceptable to the Employer. If the Performance Security furnished by the successful Bidder is in the form of a bond, it shall be issued by a bonding or insurance company that has been determined by the successful Bidder to be acceptable to the Employer. A foreign institution providing a bond shall have a correspondent financial institution located in the Employer's Country, unless the Employer has agreed in writing that a correspondent financial institution is not required.

Failure of the successful Bidder to submit the above-mentioned Performance Security and, if required **in the BDS**, the Environmental and Social (ES) Performance Security, or sign the Contract shall constitute sufficient grounds for the annulment of the award and forfeiture of the Bid Security. In that event the Employer may award the Contract to the Bidder offering the next Most Advantageous Bid.

**50. Procurement
Related Complaint**

The procedures for making a Procurement-related Complaint are as specified **in the BDS.**

Section II – Bid Data Sheet (BDS)

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

A. General	
ITB 1.1	<p>The reference number of the Request for Bids (RFB) is: MISTI-CW-3</p> <p>The Employer is: Ministry of Industry, Science, Technology & Innovation (MISTI)</p> <p>The name of the RFB is: Construction of Stoung Water Supply System</p> <p>The number and identification of lots (contracts) comprising this RFB is: None</p>
ITB 2.1	<p>The Borrower is: Kingdom of Cambodia</p> <p>Loan or Financing Agreement amount: US\$ 55 Million</p> <p>The name of the Project is: Water Supply and Sanitation Improvement Project (WaSSIP)</p>
ITB 4.1	Maximum number of members in the JV shall be: Three (03)
ITB 4.5	A list of debarred firms and individuals is available on the Bank's external website: http://www.worldbank.org/debarr .
ITB 4.11	This Bidding Process is not subject to prequalification.
B. Contents of Bidding Document	
ITB 7.1	<p>For Clarification of Bid purposes only, the Employer's address is:</p> <p>Attention: H.E. Houl Bonnarith, WaSSIP Project Director/Under Secretary of State/MISTI.</p> <p>Address: Ministry of Industry, Science, Technology & Innovation (MISTI).</p> <p>#45, Preah Norodom Blvd, Sangkat Chaktomok, Khan Daun Penh, Phnom Penh, Cambodia.</p> <p>Floor: 13th Floor, Techo Sen Building.</p> <p>City: Phnom Penh.</p> <p>Country: Cambodia.</p> <p>Email: houl.bonnarith@misti.gov.kh Cc: tan.sokchea@gmail.com and kimchanrithy123@gmail.com.</p>

ITB 7.4	<p>A Pre-Bid meeting shall take place.</p> <p>If a Pre-Bid meeting will take place, it will be at the following date, time and place:</p> <p>Date: 14 March 2024.</p> <p>Time: 9:00 AM (Cambodia Time).</p> <p>Place: Ministry of Industry, Science, Technology & Innovation, #45, Norodom Blvd, Sangkat Chaktomok, Khan Daun Penh, Phnom Penh, Cambodia.</p> <p>The Bidder’s designated representative(s) may come physically to the place mentioned above to attend the meeting.</p> <p>A site visit conducted by the Bidder shall be arranged as per requested.</p>
ITB 7.6	Web page: N/A
C. Preparation of Bids	
ITB 10.1	<p>The language of the Bid is: English</p> <p>All correspondence exchange shall be in English</p> <p>Language for translation of supporting documents and printed literature is English</p> <p>The supporting documents to prove eligibility and qualification of bidder (statutory documents, business licenses, similar contracts, audit reports, balance sheets etc.) which are to be translated into English shall be certified by a public notary. Any translation of documents submitted without public notary certification may be subject to rejection of the bid for material omission.</p>
ITB 11.2 (g)	<p>The Bidder shall submit the following additional documents in the Technical Part of its Bid:</p> <p>Copies of Contract Agreements and Certificate of Completion or Acceptance/ Taking-Over Certificate/ Substantial Completion for the contracts mentioned in the Forms EXP – 1 and EXP – 2 under Section IV (Bidding Forms)</p> <p>Code of Conduct for Contractor’s Personnel (ES)</p> <p>The Bidder shall submit its Code of Conduct that will apply to Contractor’s Personnel (as defined in Sub-Clause 1.1.17 of the General Conditions of Contract), to ensure compliance with the Contractor’s Environmental and Social (ES) obligations under the Contract. The Bidder shall use for this purpose the Code of Conduct form provided in Section IV. No substantial modifications shall be made to this form, except that the Bidder may introduce additional requirements, including as necessary to take into account specific Contract issues/risks.</p>

Management Strategies and Implementation Plans (MSIP) to manage the (ES) risks stated in the ESMP attached in this bidding document.

The Bidder shall submit Management Strategies and Implementation Plans (MSIPs) to manage the key Environmental and Social (ES) risks as follow but not limited to:

- Water Resource Protection Plan to prevent contamination of drinking water;
- Boundary Marking and Protection Strategy for mobilization and construction to prevent offsite adverse impacts;
- Strategy for obtaining consents/permits prior to the start relevant works such as opening a quarry or borrow pit,
- Gender based violence and sexual exploitation and abuse (GBV/SEA) prevention and response action plan.
- Action Plan to ensure that no children under 18 years of age are employed at construction site.
- Traffic Management Plan to ensure safety of local communities from construction traffic
- The traffic Management Plan will also include measures to maintain and facilitate access to housing, shops, mobile vendors, public amenities and private institutions during pipeline work, and immediately backfill after work completion.
- Activities in place during construction works in order to minimize the disruption in water and power supply. The contractor will have to inform public in advance and make this period as short as possible.
- A grievance mechanism needs to be in place, where contractor will be responsible for recording citizen complaints and concerns as they arise on the work sites and should have a community liaison office dedicated to this task.
- Contractors will also be required to conduct a public information meeting before the commencement of the works to disseminate information about the project activities and on how the work site grievance handling mechanism will function.
- Any night-time work must obtain prior approval from MISTI. Illumination and reflection signs must be provided if such happens.
- The contractor shall be required to submit for approval, and subsequently implement the Contractor's Environment and Social Management Plan (C-ESMP) after winning a bid, in accordance with the Particular Conditions of Contract, that include the agreed Management Strategies and Implementation Plans described here.
- The contactors shall undertake measures to avoid or minimize the spread of communicable diseases (such as HIV and COVID-19 pandemic) and non-communicable diseases associated with the execution of the Contract.
- Except the Letter of Bid, the Bidder shall make one completed submission with a content as per requirement of Clause 11 of ITB.

Other specific information required in the Schedules and Forms of the technical Proposal, such as:

	<ol style="list-style-type: none"> (1) Demonstrate the understanding of the Bidder regarding the works to be carried out by the Contractor. This should include a method statement detailing the approach and work program for the design phase. (2) Detailed Organizational Structure of the Bidder including CV of key staff of Contractor, Consultant (Designer) and other Parties listed in Section IV (Bidding Forms- Key Personnel); Work Division between the parties; Functions and Assignments; and all other elements indicating the level of understanding of the Bidder. (3) Detailed Work Program including time schedule, equipment, materials inputs and outputs for the Rehabilitation works by milestone. (4) Detailed Quality Control Plan including Lines of communications, CV of Quality Control Engineers, laboratory setup and organization, and Quality Control Procedures. (5) Detailed information on the availability of the proposed equipment, ownership or lease/rent documentation or purchase documents, picture, license plates as applicable etc.; (6) Detailed information on the key staff's education, past positions, specific experience and languages, with supporting documents. (7) Copies of invoices/receipts issue, payment received and other relevant documents/reports, if any.
11.3 (d)	<p>The Bidder shall submit the following additional documents in the Financial Part of its Bid:</p> <p>Letter of Bid – Financial Part</p> <p>The priced Bill of Quantities.</p>
ITB 13.1	Alternative Bids shall not be considered.
ITB 13.2	Alternative times for completion shall not be permitted.
ITB 13.4	Alternative technical solutions shall be permitted for the following parts of the Works: N/A
ITB 14.5	The prices quoted by the Bidder shall be: fixed
ITB 15.1	<p>The currency(ies) of the Bid and the payment currency(ies) shall be in accordance with Alternative A as described below:</p> <p>Alternative A (Bidders to quote entirely in local currency):</p> <p>(a) The unit rates and the prices shall be quoted by the Bidder in the Bill of Quantities, entirely in United States Dollar (USD), and further referred to as “the local currency”. A Bidder expecting to incur expenditures in other currencies for inputs to the Works supplied from outside the Employer’s Country (referred to as “the foreign currency requirements”) shall indicate in the Appendix to Bid - Table C, the</p>

	<p>percentage(s) of the Bid Price (excluding Provisional Sums), needed by the Bidder for the payment of such foreign currency requirements, limited to no more than three foreign currencies.</p> <p>(b) The rates of exchange to be used by the Bidder in arriving at the local currency equivalent and the percentage(s) mentioned in (a) above shall be specified by the Bidder in the Appendix to Bid - Table C and shall apply for all payments under the Contract so that no exchange risk will be borne by the successful Bidder.</p>
ITB 17.5	At this time the Employer does not intend to execute certain specific parts of the Works by subcontractors selected in advance.
ITB 17.6	<p>(a) Contractor's proposed subcontracting: Maximum percentage of subcontracting permitted is: 20 % of the total contract amount</p> <p>(b) Bidders proposing to subcontract shall specify in Section IV- Bidding Forms, the activity (ies) or parts of the Works to be subcontracted along with complete details of the subcontractors and their qualifications.</p>
ITB 17.7	The parts of the Works for which the Employer permits Bidders to propose Specialized Subcontractors are designated as follows: N/A
ITB 18.1	The Bid shall be valid until: 7 October 2024 (one hundred and eighty (180) days from the bid opening date) .
ITB 18.3 (a)	The Bid price shall be adjusted by the following factor(s): N/A
ITB 19.1	<p>A Bid Security shall be required.</p> <p>(Bid -Securing Declaration is not acceptable.)</p> <p>A Bid Security shall be submitted with its Technical Bid. The amount and currency of the Bid Security shall be: at least USD 221,800.00.</p> <p>If the issuing bank is not located in Cambodia, the Bid Security in favor of the Employer shall be issued by a correspondent bank located in Cambodia in accordance with an instruction of the issuing bank.</p> <p>If the amount and currency of the Bid Security is found to be less than the required amount, the Bid shall be rejected by the Employer as nonresponsive.</p>
ITB 19.3 (d)	Other types of acceptable securities: None
ITB 19.9	If the Bidder performs any of the actions prescribed in ITB 19.9 (a) or (b), the Borrower will declare the Bidder ineligible to be awarded contracts by the Employer for a period of three (3) years , starting from the date the Bidder performs any of the actions specified in ITB 19. 9 (a) or (b).
ITB 20.3	<p>The written confirmation of authorization to sign on behalf of the Bidder shall consist of:</p> <p>Bids submitted by a limited liability company or a corporation: It shall be signed by a duly authorized person(s) holding a Power of Attorney notarized by Attorney-at-law or shall include an authorization by the Company's or Corporation's Board of Directors</p>

	<p>by a Board resolution and certified by the Company Secretary authorizing for such person(s) to sign the documents.</p> <p>Bids submitted by an individual: The person signing on behalf of the bidder shall be duly authorized person holding a Power of Attorney notarized by Attorney-at-law.</p> <p>Bids submitted by existing or intended Joint Venture (JV) shall include an undertaking signed by all parties (i) stating that all parties shall be jointly and severally liable, and (ii) nominating a representative who shall have the authority to conduct all business for and on behalf of any and all the parties of the JV during the bidding process and, in the event the JV is awarded the Contract, during contract execution.</p>
D. Submission of Bids	
ITB 21.1	<p>In addition to the original of the Bid, the number of copies is: two (02) copies for Technical Parts and two (02) for Financial Parts.</p> <p>Plus:</p> <p>For Technical Parts – one (01) USB containing soft copy of Technical Proposal in pdf version (one scan with signatures and one searchable) of the whole Bid containing all pages of the original Bid including the supporting documents. The USB shall be duly sealed and enclosed with the Technical Proposal.</p> <p>For Financial Parts - one (01) USB containing soft copy of a) the priced Bill of Quantities (Spread Sheet using Microsoft Excel), and b) soft copy of Financial Proposal in pdf version (one scan with signatures and one searchable) of the whole Bid containing all pages of the original Bid including the supporting documents. The USB shall be duly sealed and enclosed with the Financial Proposal.</p> <p>In case of any discrepancy between the electronic copy and the original hard copy, the original hard copy shall prevail. The Employer reserves the right to request a USB copy of Bid in case it is not submitted.</p>
ITB 22.1	<p>For <u>Bid submission purposes</u> only, the Employer’s address is:</p> <p>Attention: H.E. Houl Bonnarith, WaSSIP Project Director/Under Secretary of State/ MISTI.</p> <p>Address: Ministry of Industry, Science, Technology & Innovation (MISTI). #45, Preah Norodom Blvd, Sangkat Chaktomok, Khan Daun Penh, Phnom Penh, Cambodia.</p> <p>The deadline for Bid submission is:</p> <p>Date: 10 April 2024 (48 days after the specific procurement notice was published).</p> <p>Time: 10:00 AM (Cambodia Time).</p> <p>Bidders shall not have the option of submitting their Bids electronically.</p>

E. Public Opening of Technical Parts of Bids													
ITB 25.1	<p>The Bid opening shall take place at: Ministry of Industry, Science, Technology & Innovation (MISTI), #45, Norodom Blvd, Sangkat Chaktomok, Khan Daun Penh, Phnom Penh, Cambodia. Date: 10 April 2024. Time: 10:00 AM (Cambodia Time).</p>												
ITB 25.1	The electronic Bid opening procedures shall be: N/A												
ITB 25.6	<p>The Letter of Bid – Technical Part and the separate sealed envelope marked “SECOND ENVELOPE: FINANCIAL PART” shall be initialed by three (3) representatives of the Employer conducting Bid opening (including MEF’s Representative).</p> <p>The main content of the bid will be announced and recorded in the minute of bid opening.</p>												
G. Evaluation of Technical Part of Bids													
ITB 32.2	<p>The technical factors (sub-factors) and the corresponding weight in % are: 40%</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: center;">Technical Factor</th> <th style="text-align: center;">weight in percentage (insert weight in %)</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">Firm Relevant Experience</td> <td style="text-align: center;">25</td> </tr> <tr> <td style="text-align: center;">Methodology/Work Plan/Understanding of specific project requirements and proposed approach</td> <td style="text-align: center;">30</td> </tr> <tr> <td style="text-align: center;">Quality of Team Leader (Construction Project Manager) proposed</td> <td style="text-align: center;">35</td> </tr> <tr> <td style="text-align: center;">Quality of Environmental Specialist proposed</td> <td style="text-align: center;">5</td> </tr> <tr> <td style="text-align: center;">Quality of Social Specialist proposed</td> <td style="text-align: center;">5</td> </tr> </tbody> </table>	Technical Factor	weight in percentage (insert weight in %)	Firm Relevant Experience	25	Methodology/Work Plan/Understanding of specific project requirements and proposed approach	30	Quality of Team Leader (Construction Project Manager) proposed	35	Quality of Environmental Specialist proposed	5	Quality of Social Specialist proposed	5
Technical Factor	weight in percentage (insert weight in %)												
Firm Relevant Experience	25												
Methodology/Work Plan/Understanding of specific project requirements and proposed approach	30												
Quality of Team Leader (Construction Project Manager) proposed	35												
Quality of Environmental Specialist proposed	5												
Quality of Social Specialist proposed	5												
H. Notification of Evaluation of Technical Parts and Public Opening of Financial Parts													
ITB 33.5	<p>The Letter of Bid – Financial Part and Schedules shall be initialed by three (3) representatives of the Employer conducting Bid opening (including MEF’s Representative).</p> <p>The main content of the bid will be announced and recorded in the minute of bid opening.</p>												

I. Evaluation of Financial Part of Bids	
ITB 36.1	<p>The currency that shall be used for Bid evaluation and comparison purposes to convert at the selling exchange rate all Bid prices expressed in various currencies into a single currency is: United States Dollar (USD)</p> <p>The source of exchange rate shall be: National Bank of Cambodia</p> <p>The date for the exchange rate shall be the selling rates for similar transactions prevailing on the date 28 days prior to the deadline for submission of Bids published by National Bank of Cambodia.</p>
ITB 36.2	A margin of domestic preference shall not apply.
J. Evaluation of Combined Technical and Financial Parts and Most Advantageous Bid	
ITB 40.1	The weight to be given for Financial Part is 60% and Technical Part is 40%
K. Award of Contract	
ITB 49.1 and 49.2	<p>Within twenty-eight (28) days of the receipt of the Letter of Acceptance from the Employer, the successful Bidder shall:</p> <ul style="list-style-type: none"> (i) Furnish the Performance Security and the Environmental and Social (ES) Performance Security to the Employer. (ii) Furnish the Beneficial Ownership Disclosure Form, as included in Section X – Contract Forms, to the Employer. (iii) Immediately register itself at relevant institutions in accordance with requirements, laws, and regulations of the Kingdom of Cambodia.
ITB 50.1	<p>The procedures for making a Procurement-related Complaint are detailed in the “Procurement Regulations for IPF Borrowers (Annex III).” If a Bidder wishes to make a Procurement-related Complaint, the Bidder shall submit its complaint following these procedures, In Writing (by the quickest means available, such as by email or fax), to:</p> <p>For the attention: H.E. SIM Sitha.</p> <p>Title/position: Secretary of State.</p> <p>Employer: Ministry of Industry, Science, Technology & Innovation (MISTI).</p> <p>Email address: sim.sitha@misti.gov.kh</p> <p>Cc: houl.bonnarith@misti.gov.kh; tan.sokchea@gmail.com; kimchanrithy123@gmail.com</p> <p>In summary, a Procurement-related Complaint may challenge any of the following:</p>

	<ol style="list-style-type: none">1. the terms of the Bidding Documents;2. the Employer's decision to exclude a Bidder from the procurement process prior to the award of contract; and3. the Employer's decision to award the contract.
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Section III - Evaluation and Qualification Criteria (*Without Prequalification*)

This section contains all the criteria that the Employer shall use to evaluate Bids and qualify Bidders. No other factors, methods or criteria shall be used other than specified in this Bidding document. The Bidder shall provide all the information requested in the forms included in Section IV, Bidding Forms.

Wherever a Bidder is required to state a monetary amount, Bidders should indicate the USD equivalent using the rate of exchange determined as follows:

For construction turnover or financial data required for each year - Exchange rate prevailing on the last day of the respective calendar year (in which the amounts for that year are to be converted) was originally established.

Value of single contract - Exchange rate prevailing on the date of the contract.

Exchange rates shall be taken from the publicly available source identified in the ITB 36.1. Any error in determining the exchange rates in the Bid may be corrected by the Employer.

Evaluation of Bids:

1. Qualification:

The Qualification evaluation will be evaluated based on requirements stated in Qualification tables included in this section and information provided by the Bidders under section 1.4 Contractor’s Representative and Key Personnel, section 1.5 Contractor’s Equipment for this Contract and section 1.6 Minimum Specification requirements of major items. All “Must Meet” conditions have to be met for Bidders to qualify for the next step, Evaluation of Technical Proposal.

1.1 Update of Information

The Bidder’s qualification shall be assessed in accordance with the Qualification table included in this section.

1.2 Subcontractors (Not applicable)

Only the Specialized Subcontractors as approved by the Employer will be considered. The bidder shall provide in Section IV-Bidding Forms the relevant details of all proposed subcontractors.

1.3 Financial Resources

Using the relevant Form 3.1 in Section IV, Bidding Forms, the Bidder must demonstrate access to, or availability of, financial resources such as liquid assets, unencumbered real assets, lines of credit, and other financial means, other than any contractual advance payments to meet the overall cash flow requirements for this Contract and its current Works commitment.

1.4 Contractor’s Representative and Minimum of Key Personnel

The Bidder must demonstrate that it will have a suitably qualified Contractor’s Representative and suitably qualified (and in adequate numbers) Key Personnel, as described in table below:

Table 1: Minimum of Key Personnel:

Item No.	Position/specialization	Relevant academic qualifications	Minimum years of relevant work experience
1	1 Construction Project Manager	Master degree of Civil Engineer or Management	5 years similar size and type
2	1 Construction Manager	Master degree of Civil Engineer	5 years similar size and type
3	1 Plant Manager	Bachelor degree of Civil Engineer or relevant	5 years similar size
4	2 Construction Supervisors	Bachelor degree of Civil Engineer or relevant	3 years similar size
5	1 Structural Engineer	Bachelor degree of Civil Engineer or relevant	3 years similar size

Item No.	Position/specialization	Relevant academic qualifications	Minimum years of relevant work experience
6	1 Mechanical Engineer	Bachelor degree of Mechanical Engineer or relevant	3 years similar size
7	1 Electrical Engineer	Bachelor degree of Electrical Engineer or relevant	3 years similar size
8	1 Materials Engineers	Bachelor degree of Civil Engineer or relevant	3 years similar size
9	1 Survey Engineer	Bachelor degree of Civil Engineer or relevant	2 years similar size
10	1 Environmental specialist	Master/Bachelor degree of Environmental Science or other related fields	3 years similar size and type
11	1 Social specialist	Master/Bachelor degree of Social Science, Development Studies or related field	3 years similar size and type

The Bidder shall provide details of the Contractor's Representative and Key Personnel and such other Key Personnel that the Bidder considers appropriate to perform the Contract, together with their academic qualifications and work experience. The Bidder shall complete the relevant Forms PER in Section IV, Bidding Forms. The Bidder shall attach the copies of diplomas / certificates for professional education, with translation in English.

1.5 Contractor's Equipment:

The Bidder must demonstrate that it has access to the key equipment listed hereafter:

Table 2: Equipment:

No.	Equipment Type and Characteristics	Capacity	Minimum Number Required
1	Excavator	0.4 m ³	2
2	Excavator	0.6 m ³	1
3	Excavator	0.9 m ³	2
4	Hydraulic Breaker (500-900bpm)	4-5 tons	1
5	Wheel Loader	0.5 m ³	2
6	Backhoe Loader	0.5-1.0 m ³	2
7	Walk Behind Loader	1-ton	2
8	Plate Compactor, Weight 155Kg (341-lbs)	6Kw (9-hp)	6
9	Tamping Rammer (80Kg)	3.0W(4.0hp)	4
10	Dump Truck (cap - 6m ³ and 12m ³)	7-20 tons	2
11	Transit Mixer	10-ton	1
12	Mobile Crane	55-ton	1
13	Concrete Pump	6 cum	1
14	Cargo Truck with Crane	3-ton	1

No.	Equipment Type and Characteristics	Capacity	Minimum Number Required
15	Cargo Truck with Crane	5-ton	1
16	Cargo Truck with Crane	16-ton	1
17	Cargo Truck with Crane	25-ton	1
18	Fuel and Water Truck	1000 liter	2
19	Service Truck	2-ton	1
20	Welding Machine	300-400Amp	2
21	Generator Set	25 kVA	2
22	Generator Set	45 kVA	2
23	Generator Set	60 kVA	1
24	Generator Set	150 kVA	1
25	Concrete Cutting Machine- Dia 16"	14HP	2
26	Air Compressor	5-7bars	1 (lease/hire)
27	Dewatering Pumps	Q =5 -15lps	6
28	Concrete Batching Plant	50cumday	1 (lease /hire)
29	2 Bagger Concrete Mixer	11kw; Cap =0.5m ³	2
Other equipment needed by contractor to execute the works (Additional Equipment to be proposed by contractor, if any)			
30			
31			

The Bidder shall provide further details of proposed items of equipment using the relevant Form EQU in Section IV, Bidding Forms. The Bidder must demonstrate their ownership with their equipment by sales contracts and invoices or equipment registration papers under the Bidder's name. For hired equipment, the Bidder must provide a contract with the lessor and documents demonstrating that the equipment belongs to the lessor (Sales contract and invoices or equipment registration papers).

1.6 Minimum technical requirements:

The employer will assess technical specifications of major items against the minimum technical specification requirements required in the work requirement part whether the bid is substantially responsive to the minimum technical specification requirement. The major items to be assessed is provided in table below:

No.	Item	Specification	Remark
1	Ductile Iron pipe	ISO 2531-2009 or BS 4772 or equivalent Cement line in accordance with ISO 16132:2016 or equivalent	DN 250 – DN500 Refer to technical specification
2	Steel Pipe	ISO 9001:2005, ISO 559, ISO 1460, JIS G3442, JIS G3443 or equivalent	DN40 – DN200 Refer to technical specification
3	HDPE pipe and Fitting	PE 100, PN10 for OD 63- OD 225mm ISO 4427 - Part 2:2007 + A1:2014, BS 3412 or DIN 16961 or equivalent	Size OD 63 – OD 225mm Refer to technical specification
4	Raw water Pump	ISO 9001:2015 or equivalent	Refer to technical specification

5	Distribution Pump	ISO 9001:2015 or equivalent	Refer to technical specification
6	Electromagnetic Flow Meter	Pressure: 10bar Type of installation: Flange as standard ISO 7005.2 Accuracy: $\pm 0.5\%$ Protection class: IP68	Refer to technical specification
7	Air compressor & Air blower	ISO 9001-2015 or equivalent	Refer to technical specification

The major items which the Bidder did not manufacturer or otherwise produce, the Bidder shall provide the Manufacturer's authorization showing that the bidder has been duly authorized by the Manufacturer or producer of the related plant and equipment or component to supply and install that item in the Employer's country.

2. Evaluation of Technical Proposal

The Technical Assessment will be rated/scored in accordance with **Table 3**.

Table 3: Rated Criteria for Technical Assessment

Criteria for Technical Assessment (A)	Weighting (%) (B)	Score (C)	Weighted Score (D) = (B)x(C)
1. Firm Relevant Experience	25		
2. Methodology/Work Plan/ Understanding of specific project requirements and proposed approach	30		
3. Quality of Team Leader (Construction Project Manager) proposed	35		
4. Quality of Environmental Specialist proposed	5		
5. Quality of Social Specialist proposed	5		
Total Weight (%)	100		

Note: Bidders require to submit relevant documents for Technical Assessment.

Technical Proposal Scoring Methodology:

No.	ITEM	Weighting (%)	DESCRIPTION	How to evaluate	Score	
1	Firm Relevant Experience	25	<p>At least one similar contract that has been satisfactorily and substantially completed as a prime contractor or joint venture member between 1st January 2018 and bid submission deadline with contract amount US\$ 8.50 million/contract.</p> <p>Provide details of relevant project experience in the region / in country. The key information of project to meet the requirement of the projects such as:</p> <ul style="list-style-type: none"> - Experience in water supply sector - Similar Capacity of water treatment system - Scope of pipe network (Diameter, material, and length). 	<p>Has the contractor / bidders: Adequately and clearly described and provided evidence:</p> <ul style="list-style-type: none"> - previous experience (number of experience and years of experiences) in construction of water supply utilities - Cost of project - Capacity, facilities and type of water treatment system - Scope of pipe network (Diameter, material, and length). 	4	<ul style="list-style-type: none"> ● Experience more than requirement (minimum requirement + 3 or more similar contracts)
					3	<ul style="list-style-type: none"> ● Experience more than requirement (minimum requirement + 2 similar contracts)
					2	<ul style="list-style-type: none"> ● Experience more than requirement (minimum requirement + 1 similar contract)
					1	<ul style="list-style-type: none"> ● Meet minimum requirement
					0	<ul style="list-style-type: none"> ● Not meet requirement.
2	Methodology/ Work Plan/ Understanding of specific project requirements and proposed approach	30	<p>Detail how you have taken into account the specific project requirement (detailed below), and how they will affect the delivery and quality of project. The method statement shall include the following project requirements:</p> <ul style="list-style-type: none"> - Production facilities (water source, intake, raw water conveyance pipe, WTP, reservoir, pump station, electrical and mechanical system, administration building, chemical building, waste management system). - Pipe network facilities (water transmission main, water distribution network, substation (if any). - Team composition and organization 	<p>Has the contractor / bidder provided:</p> <ul style="list-style-type: none"> - Key specific project requirement identified within the project - An explanation of how the proposed approach will ensure the quality and timely deliverable of project. - Work plan for the project. - Risks to the critical path including effective proposals for mitigation of those risks. 	4	<ul style="list-style-type: none"> ● Excellent, addresses the requirements of the Work and how it will impact the delivery, and where relevant demonstrates fine tuning, to make a match with Client expectations, and is of a quality and level of detail and understanding that provides confidence in certainty of delivery and permits full contractual reliance (where applicable).
					3	<ul style="list-style-type: none"> ● Very good understanding of all issues relating to delivery of the Statement of Work and tailoring the response to demonstrate that proposals are feasible so that there is a good level of confidence that they will deliver; can be transposed into contractual terms (where applicable).

No.	ITEM	Weighting (%)	DESCRIPTION	How to evaluate	Score						
			<ul style="list-style-type: none"> - Work plan - Risk identification and risk managements. - Understanding Environment and Social Safeguard requirement. - Adequacy of equipment 		<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 5%; text-align: center;">2</td> <td> <ul style="list-style-type: none"> ● Understands largely the issues relating to delivery of the Statement of Work and addresses them appropriately with sufficient information, but only some relevant tailoring and so only some confidence that they will be able deliver in line with expectations. May not reflect a complete appreciation of all issues. </td> </tr> <tr> <td style="text-align: center;">1</td> <td> <ul style="list-style-type: none"> ● Some understanding of the issues relating to delivery of the Statement of Work and a generally low level of quality information and detail. Poor appetite to tailor when asked and so fails to meet expectations in many ways and provides insufficient confidence. </td> </tr> <tr> <td style="text-align: center;">0</td> <td>Complete failure to address the requirements of the Work.</td> </tr> </table>	2	<ul style="list-style-type: none"> ● Understands largely the issues relating to delivery of the Statement of Work and addresses them appropriately with sufficient information, but only some relevant tailoring and so only some confidence that they will be able deliver in line with expectations. May not reflect a complete appreciation of all issues. 	1	<ul style="list-style-type: none"> ● Some understanding of the issues relating to delivery of the Statement of Work and a generally low level of quality information and detail. Poor appetite to tailor when asked and so fails to meet expectations in many ways and provides insufficient confidence. 	0	Complete failure to address the requirements of the Work.
2	<ul style="list-style-type: none"> ● Understands largely the issues relating to delivery of the Statement of Work and addresses them appropriately with sufficient information, but only some relevant tailoring and so only some confidence that they will be able deliver in line with expectations. May not reflect a complete appreciation of all issues. 										
1	<ul style="list-style-type: none"> ● Some understanding of the issues relating to delivery of the Statement of Work and a generally low level of quality information and detail. Poor appetite to tailor when asked and so fails to meet expectations in many ways and provides insufficient confidence. 										
0	Complete failure to address the requirements of the Work.										
3	Quality of Team Leader (Construction Project Manager) proposed	35	Assess on the experience of proposed team leader: <ul style="list-style-type: none"> - Experience of proposed team leader. - Recommendation letter from previous client for the assignment carried out in the last 7 years indicating satisfactory performance. 	Has the contractor /bidder: <ul style="list-style-type: none"> - CV of proposed team leader. - Recommendation letter from previous client for the assignment carried out in the last 7 years indicating satisfactory performance. 	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 5%; text-align: center;">4</td> <td> <ul style="list-style-type: none"> ● Has 4 years' experience exceed the minimum qualification requirement and submit the recommendation letters from previous clients on the assignment carried out in the last 7 years indicating satisfactory performance </td> </tr> <tr> <td style="text-align: center;">3</td> <td> <ul style="list-style-type: none"> ● Has 2 years' experience exceed the minimum qualification requirement and submit the recommendation letters from previous clients on the assignment carried out in the last 7 years indicating satisfactory performance. </td> </tr> <tr> <td style="text-align: center;">2</td> <td> <ul style="list-style-type: none"> ● Has experience meet the minimum qualification requirement and submit the recommendation letters from previous clients on the assignment carried out in the last 7 years indicating satisfactory performance </td> </tr> </table>	4	<ul style="list-style-type: none"> ● Has 4 years' experience exceed the minimum qualification requirement and submit the recommendation letters from previous clients on the assignment carried out in the last 7 years indicating satisfactory performance 	3	<ul style="list-style-type: none"> ● Has 2 years' experience exceed the minimum qualification requirement and submit the recommendation letters from previous clients on the assignment carried out in the last 7 years indicating satisfactory performance. 	2	<ul style="list-style-type: none"> ● Has experience meet the minimum qualification requirement and submit the recommendation letters from previous clients on the assignment carried out in the last 7 years indicating satisfactory performance
4	<ul style="list-style-type: none"> ● Has 4 years' experience exceed the minimum qualification requirement and submit the recommendation letters from previous clients on the assignment carried out in the last 7 years indicating satisfactory performance 										
3	<ul style="list-style-type: none"> ● Has 2 years' experience exceed the minimum qualification requirement and submit the recommendation letters from previous clients on the assignment carried out in the last 7 years indicating satisfactory performance. 										
2	<ul style="list-style-type: none"> ● Has experience meet the minimum qualification requirement and submit the recommendation letters from previous clients on the assignment carried out in the last 7 years indicating satisfactory performance 										

No.	ITEM	Weighting (%)	DESCRIPTION	How to evaluate	Score	
					1	<ul style="list-style-type: none"> Has experience meet the minimum qualification requirement.
					0	<ul style="list-style-type: none"> Not meet the minimum qualification requirements.
4	Quality of Environmental specialist	5	<ul style="list-style-type: none"> Minimum 3 years experience related to E&S works with Development Partner’s funded projects or experience in environmental and social impact projects in Cambodia or other countries in the region Recommendation letter from previous employers 	<ul style="list-style-type: none"> has the contractor/bidder: <ul style="list-style-type: none"> proposed CVs of environmental and social consultants recommendation letter from previous employers 	4	<ul style="list-style-type: none"> Has 3 years’ experience exceed the minimum E&S requirements and submit recommendation letter from previous employers indicating good performance for ES risk management
					3	<ul style="list-style-type: none"> Has 2 years’ experience exceed the minimum E&S requirements and submit recommendation letter from previous employers indicating good performance for ES risk management
					2	<ul style="list-style-type: none"> Has 1 years’ experience exceed the minimum E&S requirements and submit recommendation letter from previous employers indicating good performance for ES risk management
					1	<ul style="list-style-type: none"> Has experience meet the minimum qualification requirements
					0	<ul style="list-style-type: none"> Not meet the minimum E&S requirements
5	Quality of Social specialist	5	<ul style="list-style-type: none"> Minimum 3 years experience related to E&S works with Development Partner’s funded projects or experience in environmental and social impact projects in Cambodia or other countries in the region Recommendation letter from previous employers 	<ul style="list-style-type: none"> has the contractor/bidder: <ul style="list-style-type: none"> proposed CVs of environmental and social consultants recommendation letter from previous employers 	4	<ul style="list-style-type: none"> Has 3 years’ experience exceed the minimum E&S requirements and submit recommendation letter from previous employers indicating good performance for ES risk management
					3	<ul style="list-style-type: none"> Has 2 years’ experience exceed the minimum E&S requirements and submit recommendation letter from previous employers indicating good performance for ES risk management

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No.	ITEM	Weighting (%)	DESCRIPTION	How to evaluate	Score						
					<table border="1"> <tr> <td>2</td> <td> <ul style="list-style-type: none"> Has 1 years' experience exceed the minimum E&S requirements and submit recommendation letter from previous employers indicating good performance for ES risk management </td> </tr> <tr> <td>1</td> <td> <ul style="list-style-type: none"> Has experience meet the minimum qualification requirements </td> </tr> <tr> <td>0</td> <td> <ul style="list-style-type: none"> Not meet the minimum E&S requirements </td> </tr> </table>	2	<ul style="list-style-type: none"> Has 1 years' experience exceed the minimum E&S requirements and submit recommendation letter from previous employers indicating good performance for ES risk management 	1	<ul style="list-style-type: none"> Has experience meet the minimum qualification requirements 	0	<ul style="list-style-type: none"> Not meet the minimum E&S requirements
2	<ul style="list-style-type: none"> Has 1 years' experience exceed the minimum E&S requirements and submit recommendation letter from previous employers indicating good performance for ES risk management 										
1	<ul style="list-style-type: none"> Has experience meet the minimum qualification requirements 										
0	<ul style="list-style-type: none"> Not meet the minimum E&S requirements 										

Calculate the Final Technical Weighted Score:

To determine the technical score of bidder A, divide the weighted technical score of bidder A by the highest technical score, then multiply by 100, then multiply by the technical cost weighting (40%)

This will determine the technical score as follows:

$$\frac{\text{Weighted technical score of Bidder A}}{\text{Highest technical score}} \times 100 = \text{XX} \times \text{Technical Weighting (40\%)} = \text{XX points}$$

Alternative Technical Solutions for specified parts of the Works (Not Applicable)

3. Financial Evaluation

Margin of Preference (Not Applicable)

If the BDS so specifies, the Employer will grant a margin of preference of 7.5% (seven and one-half percent) to domestic contractors, in accordance with, and subject to, the following provisions:

- (i) Contractors applying for such preference shall be asked to provide, as part of the data for qualification, such information, including details of ownership, as shall be required to determine whether, according to the classification established by the Borrower and accepted by the Bank, a particular contractor or group of contractors qualifies for a domestic preference. The Bidding document shall clearly indicate the preference and the method that will be followed in the evaluation and comparison of Bids to give effect to such preference.
- (ii) After Bids have been received and reviewed by the Employer, responsive Bids shall be classified into the following groups:
 - (a) Group A: Bids offered by domestic contractors eligible for the preference.
 - (b) Group B: Bids offered by other contractors.

All evaluated Bids in each group shall, as a first evaluation step, be compared to determine the Most Advantageous Bid, and the Most Advantageous Bid in each group shall be further compared with each other. If a result of this comparison, a Bid from Group A is the Most Advantageous Bid, it shall be selected for the award, if the Bidder is qualified. If a Bid from Group B is the Most Advantageous Bid, as a second evaluation step, all Bids from Group B shall then be further compared with the Most Advantageous Bid from Group A. For the purpose of this further comparison only, an amount equal to 7.5% (seven and one-half percent) of the respective Bid price corrected for arithmetical errors, including unconditional discounts but excluding provisional sums and the cost of day works, if any, shall be added to the evaluated cost offered in each Bid from Group B. If the Bid from Group A is the Most Advantageous Bid, it shall be selected for award. If not, the most advantageous Bid from Group B based on the first evaluation step shall be selected.

Criteria for Financial Evaluation:

In addition to the criteria listed in ITB 37.1 (a) – (e) the following criteria shall apply:

Time Schedule

Time for completion of the Works from the Commencement Date shall be as specified in the Particular Conditions Part A-Contract Data Sub-clause 1.1.84. No credit will be given for earlier completion.

Life Cycle Costs (Not Applicable)

[Life cycle costing should be used when the costs of operation and/or maintenance over the specified life of the Works are estimated to be considerable in comparison with the initial cost and may vary among different Bids. It shall be evaluated on a net present value basis. If life cycle costing is to be applied for Bid evaluation, the Employer shall specify the relevant information on its application here:]

[State either life cycle costing “shall” or “shall not apply”. If life cycle costing applies for Bid evaluation, the methodology and the information expected from Bidders shall be specified]

The factors for calculation of the life cycle cost are:

number of years for life cycle: *_[Insert number of years],*
operating costs *[state how they will be determined],*
maintenance costs, including the cost of spare parts for the initial period of operation *[state how they will be determined],* and
Discount rate: _____ *[insert discount rate in percent]* to be used to discount to present value all annual future costs calculated under (ii) and (iii) above for the period specified in (i).

Sustainable Procurement (Not Applicable)

[Specify any adjustments to be made for financial bid evaluation purposes for any quantifiable sustainable procurement requirements. Ensure that there is no duplication (double counting) with the point system technical factors/subfactors specified in BDS ITB 32.2.]

Determining the Weighted Financial Cost Score:

The Bidder/Proposer with the lowest evaluated financial cost is assigned a score of 100 points (e.g., 100%); other Bidders' evaluated financial costs are then divided into the lowest evaluated financial cost score to arrive at a comparative score (ratio/percentage), then multiply by 100, then multiply by the technical cost weighting (60%)

$$\frac{\text{Lowest evaluated bid cost}}{\text{Evaluated bidder A cost}} \times 100 = \text{YY} \times \text{Financial Cost Weighting (60\%)} = \text{YY points}$$

4. Combined Evaluation

The Employer will evaluate and compare the Bids that have been determined to be substantially responsive.

The combined score will be calculated for each responsive Bid using the following formula, which permits a comprehensive assessment of the evaluated cost and the technical merits of each Bid:

$$\text{Total Score Bidder A} = \text{Final Technical score Bidder A} + \text{Final Financial Cost score Bidder A.}$$

The Bid with the best evaluated Bid Score among responsive Bids shall be the Most Advantageous Bid provided the Bidder is qualified to perform the Contract.

4. Multiple Contracts (Not Applicable):

A. Qualification Evaluation Criteria for the Bids

Eligibility and Qualification Criteria			Compliance Requirements				Documentation
No.	Subject	Requirement	Single Entity	Joint Venture (existing or intended)			Submission Requirements
				All Members Combined	Each Member	One Member	
1. Eligibility							
1.1	Nationality	Nationality in accordance with ITB 4.4	Must meet requirement	Must meet requirement	Must meet requirement	N/A	Forms ELI – 1.1 and 1.2, with attachments
1.2	Conflict of Interest	No conflicts of interest in accordance with ITB 4.2	Must meet requirement	Must meet requirement	Must meet requirement	N/A	Letter of Bid
1.3	Bank Eligibility	Not having been declared ineligible by the Bank, as described in ITB 4.5.	Must meet requirement	Must meet requirement	Must meet requirement	N/A	Letter of Bid
1.4	State- owned Enterprise or Institution of the Borrower country	Meets conditions of ITB 4.6	Must meet requirement	Must meet requirement	Must meet requirement	N/A	Forms ELI – 1.1 and 1.2, with attachments
1.5	United Nations resolution or Borrower’s country law	Not having been excluded as a result of prohibition in the Borrower’s country laws or official regulations against commercial relations with the Bidder’s country, or by an act of compliance with UN Security Council resolution, both in accordance with ITB 4.8 and Section V.	Must meet requirement	Must meet requirement	Must meet requirement	N/A	Forms ELI – 1.1 and 1.2, with attachments

Eligibility and Qualification Criteria			Compliance Requirements			Documentation	
No.	Subject	Requirement	Single Entity	Joint Venture (existing or intended)			Submission Requirements
				All Members Combined	Each Member	One Member	
2. Historical Contract Non-Performance							
2.1	History of Non-Performing Contracts	Non-performance of a contract ¹ did not occur as a result of contractor default since 1st January 2018 .	Must meet requirement	Must meet requirements	Must meet requirement ²	N/A	Form CON-2
2.2	Suspension Based on Execution of Bid/Proposal Securing Declaration by the Employer	Not under suspension based on-execution of a Bid/Proposal Securing Declaration pursuant to ITB 4.7 and ITB 19.9	Must meet requirement	Must meet requirement	Must meet requirement	N/A	Letter of Bid
2.3	Pending Litigation	Bidder's financial position and prospective long-term profitability still sound according to criteria established in 3.1 below and assuming that all pending litigation will be resolved against the Bidder	Must meet requirement	N/A	Must meet requirement	N/A	Form CON – 2

¹ Nonperformance, as decided by the Employer, shall include all contracts where (a) nonperformance was not challenged by the contractor, including through referral to the dispute resolution mechanism under the respective contract, and (b) contracts that were so challenged but fully settled against the contractor. Nonperformance shall not include contracts where Employers decision was overruled by the dispute resolution mechanism. Nonperformance must be based on all information on fully settled disputes or litigation, i.e., dispute or litigation that has been resolved in accordance with the dispute resolution mechanism under the respective contract and where all appeal instances available to the Bidder have been exhausted.

² This requirement also applies to contracts executed by the Bidder as JV member.

Eligibility and Qualification Criteria			Compliance Requirements				Documentation
No.	Subject	Requirement	Single Entity	Joint Venture (existing or intended)			Submission Requirements
				All Members Combined	Each Member	One Member	
2.4	Litigation History	No consistent history of court/arbitral award decisions against the Bidder ³ since 1st January 2018	Must meet requirement	Must meet requirement	Must meet requirement	N/A	Form CON – 2
2.5	Declaration: Environmental and Social (ES) past performance	Declare any civil work contracts that have been suspended or terminated and/or performance security called by an employer for reasons of breach of environmental, or social (including Sexual Exploitation, and Abuse) contractual obligations in the past five years. ⁴	Must make the declaration. Where there are Specialized Subcontractor/s, the Specialized Subcontractor/s must also make the declaration.	N/A	Each must make the declaration. Where there are Specialized Subcontractor /s, the Specialized Subcontractor /s must also make the declaration.	N/A	Form CON-3 ES Performance Declaration
2.6	Bank's SEA and/or SH Disqualification	At the time of Contract Award, not subject to disqualification by the Bank for non-compliance with SEA/ SH obligations	Must meet requirement (including each subcontractor proposed by the Bidder)	N/A	Must meet requirement (including each subcontractor proposed by the Bidder)	N/A	Letter of Bid, Form CON-4

³ The Bidder shall provide accurate information on the related Bid Form about any litigation or arbitration resulting from contracts completed or ongoing under its execution over the last five years. A consistent history of awards against the Bidder or any member of a joint venture may result in failure of the Bid.

⁴ The Employer may use this information to seek further information or clarifications in carrying out its due diligence.

Eligibility and Qualification Criteria			Compliance Requirements			Documentation	
No.	Subject	Requirement	Single Entity	Joint Venture (existing or intended)			Submission Requirements
				All Members Combined	Each Member	One Member	
		If the Bidder had been subject to disqualification by the Bank for non-compliance with SEA/ SH obligations, the Bidder shall either (i) provide evidence of an arbitral award on the disqualification made in its favour; or (ii) demonstrate that it has adequate capacity and commitment to comply with SEA/SH prevention and response obligations; or (iii) provide evidence that it has already demonstrated such capacity and commitment on another Bank financed works contract.	Must meet requirement (including each subcontractor proposed by the Bidder)	N/A	Must meet requirement (including each subcontractor proposed by the Bidder)	N/A	Letter of Bid, Form CON-4
3. Financial Situation and Performance							
3.1	Financial Capabilities	(i) The Bidder shall demonstrate that it has access to, or has available, liquid assets, unencumbered real assets, lines of credit, and other financial means (independent of any contractual advance payment) sufficient to meet the construction cash flow requirements estimated as at least US\$ 1.85 million for the subject contract(s) net of the Bidder's other commitments (ii) The Bidders shall also demonstrate, to the satisfaction of the Employer, that it has adequate sources of finance to	Must meet requirement	Must meet requirement	N/A	N/A	Form FIN – 3.1, with attachments

Eligibility and Qualification Criteria			Compliance Requirements				Documentation
No.	Subject	Requirement	Single Entity	Joint Venture (existing or intended)			Submission Requirements
				All Members Combined	Each Member	One Member	
		meet the cash flow requirements on works currently in progress and for future contract commitments. (iii) The audited balance sheets or, if not required by the laws of the Bidder's country, other financial statements acceptable to the Employer, for the last three (3) years (2020, 2021, 2022) shall be submitted and must demonstrate the current soundness of the Bidder's financial position and indicate its prospective long-term profitability.	Must meet requirement Must meet requirement	Must meet requirement N/A	N/A Must meet requirement	N/A N/A	
3.2	Average Annual Construction Turnover	Minimum average annual construction turnover of US\$ 16.63 million , calculated as total certified payments received for contracts in progress and/or completed within the last three (3) years (2020, 2021, 2022) , divided by 3 years	Must meet requirement	Must meet requirement	Must meet 25% of the requirement	Must meet 75% of the requirement	Form FIN – 3.2
4. Experience							
4.1 (a)	General Construction Experience	Experience under construction contracts in the role of prime contractor or JV member for at least the last five (5) years, starting 1st January 2018	Must meet requirement	N/A	Must meet requirement	N/A	Form EXP – 4.1

Eligibility and Qualification Criteria			Compliance Requirements			Documentation	
No.	Subject	Requirement	Single Entity	Joint Venture (existing or intended)			Submission Requirements
				All Members Combined	Each Member	One Member	
4.2 (a)	Specific Construction & Contract Management Experience	<p>(i) A minimum number of one (1) similar contract specified below that have been satisfactorily and substantially⁵ completed as a prime contractor or joint venture member⁶ between 1st January 2018 and bid submission deadline:</p> <p>(i) One (1) contract with a minimum value of US\$8.50 million</p> <p>The similarity of the contracts shall be based on the following:</p> <p>The supply, installation, construction and commissioning of a water supply system comprising of at least 1) water treatment plant, and 2) water distribution networks.</p> <p>(The similarity of the contracts could be the similar experience of a single contract/project or the combined similar experience from different contracts/projects)</p>	Must meet requirement	Must meet requirement ⁷	N/A	N/A	Form EXP 4.2(a)

⁵ Substantial completion shall be based on 80% or more works completed under the contract.

⁶ For contracts under which the Bidder participated as a joint venture member or Subcontractor, only the Bidder’s share, by value, shall be considered to meet this requirement

⁷ In the case of JV, the value of contracts completed by its members shall not be aggregated to determine whether the requirement of the minimum value of a single contract has been met. Instead, each contract performed by each member shall satisfy the minimum value of a single contract as required for single entity. In determining whether the JV meets the requirement of total number of contracts, only the number of contracts completed by all members each of value equal or more than the minimum value required shall be aggregated.

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Eligibility and Qualification Criteria			Compliance Requirements			Documentation	
No.	Subject	Requirement	Single Entity	Joint Venture (existing or intended)			Submission Requirements
				All Members Combined	Each Member	One Member	
4.2 (b)		<p>For the above and any other contracts [substantially completed and under implementation] as prime contractor or joint venture member between 1st January 2018 and Application submission deadline, a minimum construction experience in the following key activities successfully completed⁸:</p> <p>1. Construction of water treatment plant of at least 4,500 cum/day capacity and</p> <p>2. Supply, laying and commission of water distribution network of at least 150km length with pipe diameters ranging from 63mm to 400mm and with pipe material of HDPE and Ductile Cast Iron Pipe (DCIP)</p>	Must meet requirements	Must meet requirements	N/A	N/A	Form EXP – 4.2 (b)
4.2 (c)	Specific Experience in managing ES aspects	For the contracts in 4.2 (a) above and/or any other contracts [substantially completed and under implementation] as prime contractor or joint venture member between 1st January 2018 and Application submission deadline, experience in managing the following ES risks and impacts and any additional	Must meet requirements	Must meet requirement	N/A	N/A	Form EXP – 4.2 (c)

⁸ Volume, number, or rate of production of any key activity can be demonstrated in one or more contracts combined if executed during same time period.

Eligibility and Qualification Criteria			Compliance Requirements			Documentation	
No.	Subject	Requirement	Single Entity	Joint Venture (existing or intended)			Submission Requirements
				All Members Combined	Each Member	One Member	
		sustainable procurement aspects: The Bidder shall submit “Management Strategies and Implementation Plans (MSIPs)” to manage key Environmental and Social (ES) risks as defined in ITB 11.2 (g) of Section II - Bid Data Sheet (BDS).					

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Letter of Bid- Technical Part

INSTRUCTIONS TO BIDDERS: DELETE THIS BOX ONCE YOU HAVE COMPLETED THE DOCUMENT

The Bidder must prepare this Letter of Bid on stationery with its letterhead clearly showing the Bidder's complete name and business address.

Note: All italicized text is to help Bidders in preparing this form.

Date of this Bid submission: *[insert date (as day, month, and year) of Bid submission]*

Request for Bid No.: *[insert identification]*

Alternative No.: *[insert identification No if this is a Bid for an alternative]*

To: *[insert complete name of Employer]*

We, the undersigned, hereby submit our Bid, in two parts, namely:

- (a) the Technical Part, and
- (b) the Financial Part

In submitting our Bid, we make the following declarations:

- (a) **No reservations:** We have examined and have no reservations to the bidding document, including Addenda issued in accordance with Instructions to Bidders (ITB 8);
- (b) **Eligibility:** We meet the eligibility requirements and have no conflict of interest in accordance with ITB 4;
- (c) **Bid-Securing Declaration:** We have not been suspended nor declared ineligible by the Employer based on execution of a Bid-Securing Declaration or Proposal-Securing Declaration in the Employer's country in accordance with ITB 4.7;
- (d) **Sexual Exploitation and Abuse (SEA) and/or Sexual Harassment (SH):** *[select the appropriate option from (i) to (v) below and delete the others].*

We *[where JV, insert: "including any of our JV members"]*, and any of our subcontractors:

- (i) *[have not been subject to disqualification by the Bank for non-compliance with SEA/ SH obligations.]*
- (ii) *[are subject to disqualification by the Bank for non-compliance with SEA/ SH obligations.]*
- (iii) *[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.]*

- (iv) [had been subject to disqualification by the Bank for non-compliance with SEA/SH obligations for a period of two years. We have subsequently provided and demonstrated that we have adequate capacity and commitment to comply with SEA and SH prevention and response obligations.]
- (v) [had been subject to disqualification by the Bank for non-compliance with SEA/SH obligations for a period of two years. We have attached documents demonstrating that we have adequate capacity and commitment to comply with SEA and SH prevention and response obligations.]
- (e) **Conformity:** We offer to execute in conformity with the bidding document the following Works: *[insert a brief description of the Works]* _____
_____;
- (f) **Bid Validity:** Our Bid shall be valid until *[insert day, month, and year in accordance with ITB 18.1]*, and it shall remain binding upon us and may be accepted at any time on or before this date;
- (g) **Performance Security:** If our Bid is accepted, we commit to obtain a Performance Security *[and an Environmental and Social (ES) Performance Security, Delete if not applicable]* in accordance with the bidding document;
- (h) **One Bid Per Bidder:** We are not submitting any other Bid(s) as an individual Bidder, and we are not participating in any other Bid(s) as a Joint Venture member or as a subcontractor, and meet the requirements of ITB 4.3, other than alternative Bids submitted in accordance with ITB 13;
- (i) **Suspension and Debarment:** We, along with any of our subcontractors, suppliers, consultants, manufacturers, or service providers for any part of the contract, are not subject to, and not controlled by any entity or individual that is subject to, a temporary suspension or a debarment imposed by the World Bank Group, or a debarment imposed by the World Bank Group in accordance with the Agreement for Mutual Enforcement of Debarment Decisions between the World Bank and other development banks. Further, we are not ineligible under the Employer's country laws or official regulations or pursuant to a decision of the United Nations Security Council;
- (j) **State-owned enterprise or institution:** *[select the appropriate option and delete the other] [We are not a state-owned enterprise or institution] / [We are a state-owned enterprise or institution but meet the requirements of ITB 4.6];*
- (k) **Binding Contract:** We understand that this Bid, together with your written acceptance thereof included in your Letter of Acceptance, shall constitute a binding contract between us, until a formal contract is prepared and executed;
- (l) **Not Bound to Accept:** We understand that you are not bound to accept the lowest evaluated cost Bid, the Most Advantageous Bid, or any other Bid that you may receive; and
- (m) **Fraud and Corruption:** We hereby certify that we have taken steps to ensure that no person acting for us or on our behalf engages in any type of Fraud and Corruption;
- (n) **Potential DAAB Members:** We hereby propose the following three persons, whose curriculum vitae are attached, as potential DAAB members:

Name	Address
1.	
2.	
3.	

Name of the Bidder: *[insert complete name of the Bidder]

Name of the person duly authorized to sign the Bid on behalf of the Bidder: ** [insert complete name of person duly authorized to sign the Bid]

Title of the person signing the Bid: [insert complete title of the person signing the Bid]

Signature of the person named above: [insert signature of person whose name and capacity are shown above]

Date signed [insert date of signing] day of [insert month], [insert year]

*: In the case of the Bid submitted by joint venture specify the name of the Joint Venture as Bidder

** : Person signing the Bid shall have the power of attorney given by the Bidder to be attached with the Bid

Appendix to Technical Part of Bid

Technical Proposal

- **Site Organization**
- **Method Statement**
- **Sustainable Procurement Proposal (Not Applicable)**
- **Mobilization Schedule**
- **Construction Schedule**
- **ES Management Strategies and Implementation Plans**
- **Health and Safety**
- **Code of Conduct for Contractor's Personnel (ES)**
- **Equipment**
- **Key Personnel Schedule**

Site Organization

[insert Site Organization information]

Method Statement

[insert Method Statement]

[Note to the Bidder: In addition to providing method statement for construction activities (and design, if any), If the contract has been assessed to present potential or actual cyber security risks, include method statement, management strategies, implementation plans and innovations to manage cyber security risks. Similarly, if there are assessed supply chain risks, the method statement must include supply chain risk assessment and proposed management plan.]

Sustainable Procurement Proposal (Not Applicable)

*[Note to Bidder: In addition to submitting the **required** ES Management Strategies and Implementation Plans, the Bidder shall provide its proposal to demonstrate how additional sustainable procurement requirements, if any, specified in Section VII- Works' Requirements would be addressed. The Bidder shall also provide its proposal, if any, for exceeding the sustainable procurement requirements.]*

Mobilization Schedule

[insert Mobilization Schedule]

In accordance with the Particular Conditions, Sub-Clause 4.1, the Contractor shall not carry out mobilization to Site unless the Engineer gives consent that appropriate measures are in place to address environmental and social risks and impacts, which as a minimum shall include applying the Environmental and Social Management Strategies and Implementation Plans (ES-MSIPs) and Code of Conduct for Contractor's Personnel, submitted as part of the Bid, and agreed as part of the Contract.

Construction Schedule

[insert Construction Schedule]

The construction schedule shall include the following key milestones:

- *No-objection to the Contractor's MSIPs, which collectively form the C-ESMP, in accordance with the Particular Conditions – Special provisions Sub-Clause 4.1.*
- *Constitution of the DAAB*
- *SEA and SH orientation conference*

ES Management Strategies and Implementation Plans (ES-MSIP)

The Bidder shall submit comprehensive and concise Environmental and Social Management Strategies and Implementation Plans (ES-MSIP) as required by ITB 11.2 (g) of the Bid Data Sheet. These strategies and plans shall describe in detail the actions, materials, equipment, management processes etc. that will be implemented by the Contractor, and its subcontractors.

In developing these strategies and plans, the Bidder shall have regard to the ESMP and ES provisions of the contract including those as may be more fully described in the Works Requirements in Section VII.

Code of Conduct for Contractor’s Personnel (ES) Form

Note to the Employer:

The following minimum requirements shall not be modified. The Employer may add additional requirements to address identified issues, informed by relevant environmental and social assessment.

The types of issues identified could include risks associated with: labour influx, spread of communicable diseases, Sexual Exploitation and Abuse (SEA), Sexual Harassment (SH) etc.

Delete this Box prior to issuance of the bidding documents.

Note to the Bidder:

The minimum content of the Code of Conduct form as set out by the Employer shall not be substantially modified. However, the Bidder may add requirements as appropriate, including to take into account Contract-specific issues/risks.

The Bidder shall initial and submit the Code of Conduct form as part of its bid.

CODE OF CONDUCT FOR CONTRACTOR’S PERSONNEL

We are the Contractor, [enter name of Contractor]. We have signed a contract with [enter name of Employer] for [enter description of the Works]. These Works will be carried out at [enter the Site and other locations where the Works will be carried out]. Our contract requires us to implement measures to address environmental and social risks related to the Works, 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 Works. It applies to all our staff, labourers and other employees at the Works Site or other places where the Works are being carried out. It also applies to the personnel of each subcontractor and any other personnel assisting us in the execution of the Works. All such persons are referred to as “**Contractor’s Personnel**” and are subject to this Code of Conduct.

This Code of Conduct identifies the behavior that we require from all Contractor’s Personnel.

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

Contractor’s Personnel shall:

carry out his/her duties competently and diligently;

comply with this Code of Conduct and all applicable laws, regulations, project’s ESMP and other requirements, including requirements to protect the health, safety and well-being of other Contractor’s Personnel and any other person;

maintain a safe working environment including by:

ensuring that workplaces, machinery, equipment, and processes under each person's control are safe and without risk to health;

wearing required personal protective equipment;

using appropriate measures relating to chemical, physical and biological substances, and agents; and

following applicable emergency operating procedures.

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;

treat other people with respect, and not discriminate against specific groups such as women, people with disabilities, migrant workers, or children;

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 Contractor's or Employer's Personnel;

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;

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;

not engage in any form of sexual activity with individuals under the age of 18, except in case of pre-existing marriage;

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);

report violations of this Code of Conduct; and

not retaliate against any person who reports violations of this Code of Conduct, whether to us or the Employer, or who makes use of the grievance mechanism for Contractor's Personnel 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 of the following ways:

1. Contact [*enter name of the Contractor's Social Expert with relevant experience in handling sexual exploitation, sexual abuse, and sexual harassment cases, or if such person is not required under the Contract, another individual designated by the Contractor to handle these matters*] in writing at this address [] or by telephone at [] or in person at []; or
2. Call [] to reach the Contractor's hotline (*if any*) 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 Contractor’s Personnel may result in serious consequences, up to and including termination and possible referral to legal authorities.

FOR CONTRACTOR’S PERSONNEL:

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 Contractor’s contact person(s) with relevant experience*] requesting an explanation.

Name of Contractor’s Personnel: [insert name]

Signature: _____

Date: (day month year): _____

Countersignature of authorized representative of the Contractor:

Signature: _____

Date: (day month year): _____

ATTACHMENT 1: Behaviors constituting Sexual Exploitation and Abuse (SEA) and behaviors and behaviors constituting Sexual Harassment (SH)

ATTACHMENT 1 TO THE CODE OF CONDUCT FORM**BEHAVIORS CONSTITUTING SEXUAL EXPLOITATION AND ABUSE (SEA) AND
BEHAVIORS CONSTITUTING SEXUAL HARASSMENT (SH)**

The following non-exhaustive list is intended to illustrate types of prohibited behaviors.

Examples of sexual exploitation and abuse include, but are not limited to:

- A Contractor's Personnel tells a member of the community that he/she can get them jobs related to the work site (e.g., cooking and cleaning) in exchange for sex.
- A Contractor's Personnel that is connecting electricity input to households says that he can connect women headed households to the grid in exchange for sex.
- A Contractor's Personnel rapes, or otherwise sexually assaults a member of the community.
- A Contractor's Personnel denies a person access to the Site unless he/she performs a sexual favor.
- A Contractor's Personnel tells a person applying for employment under the Contract that he/she will only hire him/her if he/she has sex with him/her.

Examples of sexual harassment in a work context

- Contractor's Personnel comment on the appearance of another Contractor's Personnel (either positive or negative) and sexual desirability.
- When a Contractor's Personnel complains about comments made by another Contractor's Personnel on his/her appearance, the other Contractor's Personnel comment that he/she is "asking for it" because of how he/she dresses.
- Unwelcome touching of a Contractor's or Employer's Personnel by another Contractor's Personnel.
- A Contractor's Personnel tells another Contractor's Personnel that he/she will get him/her a salary raise, or promotion if he/she sends him/her naked photographs of himself/herself.

Form EQU: Contractor's Equipment

The Bidder shall provide adequate information to demonstrate clearly that it has the capability to meet the requirements for the key equipment listed in Section III, Evaluation and Qualification Criteria. A separate Form shall be prepared for each item of equipment listed, or for alternative equipment proposed by the Bidder.

Item of equipment		
Equipment information	Name of manufacturer	Model and power rating
	Capacity	Year of manufacture
Current status	Current location	
	Details of current commitments	
Source	Indicate source of the equipment <input type="checkbox"/> Owned <input type="checkbox"/> Rented <input type="checkbox"/> Leased <input type="checkbox"/> Specially manufactured	

Omit the following information for equipment owned by the Bidder.

Owner	Name of owner	
	Address of owner	
	Telephone	Contact name and title
	Fax	Telex
Agreements	Details of rental / lease / manufacture agreements specific to the project	

Subcontractors (Not Applicable)

[Note to Bidder: As applicable, select either Option 1 if prequalification process has not been carried out or Option 2: if prequalification process has been carried out, and delete the option that is not applicable]

Option 1- Without Prequalification

(a) Specialized Subcontractors

The following Specialized Subcontractors are proposed for parts of the Works permitted by the Employer in accordance with BDS ITB 17.7 [state “Not Applicable”, if not permitted]

<i>No.</i>	<i>Part of the Works to be subcontracted</i>	<i>Specialized Subcontractor’s name and address</i>	<i>Nationality</i>	<i>Specific Experience</i>

The following [add: “other” if Specialized Subcontractors are included above. Bidders are free to propose more than one subcontractor for each part of the Works.] Subcontractors are proposed.

<i>No.</i>	<i>Part of the Works to be subcontracted</i>	<i>Subcontractor’s name and address</i>	<i>Nationality</i>	<i>Specific Experience</i>

Option 2- After Prequalification

(a) Specialized Subcontractors

[Insert the following if Specialized Subcontractors were accepted by the Employer as part of the prequalification process and/or through any change approved by the Employer prior to the deadline for Bid submission; otherwise, state: N/A.]

“ The same specialized subcontractor/s accepted by the Employer as part of the prequalification process and/or through any change approved by the Employer prior to the deadline for Bid submission are proposed.”

(b) The following [add: “other” if Specialized Subcontractors are included above] Subcontractors are proposed. Bidders are free to propose more than one subcontractor for the same part of the Works.]

<i>No.</i>	<i>Part of the Works to be subcontracted</i>	<i>Subcontractor’s name and address</i>	<i>Nationality</i>	<i>Specific Experience</i>

Form PER -1: Contractor's Representative and Key Personnel Schedule

Bidders should provide the names and details of the suitably qualified Contractor's Representative and Key Personnel to perform the Contract. The data on their experience should be supplied using the Form PER-2 below for each candidate.

Contractor' Representative and Key Personnel

1.	Title of position: Contractor's Representative	
	Name of candidate:	
	Duration of appointment:	<i>[insert the whole period (start and end dates) for which this position will be engaged]</i>
	Time commitment for this position:	<i>[insert the number of days/week/months/ that has been scheduled for this position]</i>
	Expected time schedule for this position:	<i>[insert the expected time schedule for this position (e.g., attach high level Gantt chart)]</i>
2.	Title of position:	
	Name of candidate:	
	Duration of appointment:	<i>[insert the whole period (start and end dates) for which this position will be engaged]</i>
	Time commitment for this position:	<i>[insert the number of days/week/months/ that has been scheduled for this position]</i>
	Expected time schedule for this position:	<i>[insert the expected time schedule for this position (e.g., attach high level Gantt chart)]</i>
3.	Title of position:	
	Name of candidate:	
	Duration of appointment:	<i>[insert the whole period (start and end dates) for which this position will be engaged]</i>
	Time commitment for this position:	<i>[insert the number of days/week/months/ that has been scheduled for this position]</i>
	Expected time schedule for this position:	<i>[insert the expected time schedule for this position (e.g., attach high level Gantt chart)]</i>
4.	Title of position:	
	Name of candidate:	
	Duration of appointment:	<i>[insert the whole period (start and end dates) for which this position will be engaged]</i>
	Time commitment for this position:	<i>[insert the number of days/week/months/ that has been scheduled for this position]</i>
	Expected time schedule for this position:	<i>[insert the expected time schedule for this position (e.g., attach high level Gantt chart)]</i>

5.	Title of position:	
	Name of candidate	
	Duration of appointment:	<i>[insert the whole period (start and end dates) for which this position will be engaged]</i>
	Time commitment for this position:	<i>[insert the number of days/week/months/ that has been scheduled for this position]</i>
	Expected time schedule for this position:	<i>[insert the expected time schedule for this position (e.g., attach high level Gantt chart)]</i>
6.	Title of position:	
	Name of candidate	
	Duration of appointment:	<i>[insert the whole period (start and end dates) for which this position will be engaged]</i>
	Time commitment for this position:	<i>[insert the number of days/week/months/ that has been scheduled for this position]</i>
	Expected time schedule for this position:	<i>[insert the expected time schedule for this position (e.g., attach high level Gantt chart)]</i>

Form PER-2: Resume and Declaration Contractor’s Representative and Key Personnel

Name of Bidder

Position [#1]: <i>[title of position from Form PER-1]</i>											
Personnel information	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 40%; padding: 5px;">Name:</td> <td style="width: 20%; padding: 5px;">Date of birth:</td> </tr> <tr> <td style="padding: 5px;">Address:</td> <td style="padding: 5px;">E-mail:</td> </tr> <tr> <td colspan="2" style="padding: 5px;">Professional qualifications:</td> </tr> <tr> <td colspan="2" style="padding: 5px;">Academic qualifications:</td> </tr> <tr> <td colspan="2" style="padding: 5px;">Language proficiency: <i>[language and levels of speaking, reading, and writing skills]</i></td> </tr> </table>	Name:	Date of birth:	Address:	E-mail:	Professional qualifications:		Academic qualifications:		Language proficiency: <i>[language and levels of speaking, reading, and writing skills]</i>	
Name:	Date of birth:										
Address:	E-mail:										
Professional qualifications:											
Academic qualifications:											
Language proficiency: <i>[language and levels of speaking, reading, and writing skills]</i>											
Details	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td colspan="2" style="padding: 5px;">Address of employer:</td> </tr> <tr> <td style="width: 40%; padding: 5px;">Telephone:</td> <td style="padding: 5px;">Contact (manager / personnel officer):</td> </tr> <tr> <td style="padding: 5px;">Fax:</td> <td style="padding: 5px;"></td> </tr> <tr> <td style="padding: 5px;">Job title:</td> <td style="padding: 5px;">Years with present employer:</td> </tr> </table>	Address of employer:		Telephone:	Contact (manager / personnel officer):	Fax:		Job title:	Years with present employer:		
Address of employer:											
Telephone:	Contact (manager / personnel officer):										
Fax:											
Job title:	Years with present employer:										

Summarize professional experience in reverse chronological order. Indicate particular technical and managerial experience relevant to the project.

Project	Role	Duration of involvement	Relevant experience
<i>[main project details]</i>	<i>[role and responsibilities on the project]</i>	<i>[time in role]</i>	<i>[describe the experience relevant to this position]</i>

Declaration

I, the undersigned *[insert either “Contractor’s Representative” or “Key Personnel” as applicable]*, certify that to the best of my knowledge and belief, the information contained in this Form PER-2 correctly describes myself, my qualifications, and my experience.

R. N. [Signature]

I confirm that I am available as certified in the following table and throughout the expected time schedule for this position as provided in the Bid:

Commitment	Details
Commitment to duration of contract:	<i>[insert period (start and end dates) for which this Contractor's Representative or Key Personnel is available to work on this contract]</i>
Time commitment:	<i>[insert period (start and end dates) for which this Contractor's Representative or Key Personnel is available to work on this contract]</i>

I understand that any misrepresentation or omission in this Form may:

1. be taken into consideration during Bid evaluation;
2. result in my disqualification from participating in the Bid
3. result in my dismissal from the contract.

Name of Contractor's Representative or Key Personnel: *[insert name]*

Signature: _____

Date: (day month year): _____

Countersignature of authorized representative of the Bidder:

Signature: _____

Date: (day month year): _____

Bidder's Qualification without prequalification

To establish its qualifications to perform the contract in accordance with Section III, Evaluation and Qualification Criteria the Bidder shall provide the information requested in the corresponding Information Sheets included hereunder.

Form ELI -1.1: Bidder Information Form

Date: _____
 RFB No. and title: _____
 Page _____ of _____ pages

Bidder's name
In case of Joint Venture (JV), name of each member:
Bidder's actual or intended country of registration: <i>[indicate country of Constitution]</i>
Bidder's actual or intended year of incorporation:
Bidder's legal address [in country of registration]:
Bidder's authorized representative information Name: _____ Address: _____ Telephone/Fax numbers: _____ E-mail address: _____
1. Attached are copies of original documents of <input type="checkbox"/> Articles of Incorporation (or equivalent documents of constitution or association), and/or documents of registration of the legal entity named above, in accordance with ITB 4.4 <input type="checkbox"/> In case of JV, letter of intent to form JV or JV agreement, in accordance with ITB 4.1 <input type="checkbox"/> In case of state-owned enterprise or institution, in accordance with ITB 4.6, documents establishing: <ul style="list-style-type: none"> • Legal and financial autonomy • Operation under commercial law • Establishing that the Bidder is not under the supervision of the Employer
2. Included are the organizational chart, a list of Board of Directors, and the beneficial ownership. The successful Bidder shall provide additional information on beneficial ownership, using the Beneficial Ownership Disclosure Form.

Form ELI -1.2: Bidder's JV Information Form
(to be completed for each member of Bidder's JV)

Date: _____
 RFB No. and title: _____
 Page _____ of _____ pages

Bidder's JV name:
JV member's name:
JV member's country of registration:
JV member's year of constitution:
JV member's legal address in country of constitution:
JV member's authorized representative information Name: _____ Address: _____ Telephone/Fax numbers: _____ E-mail address: _____
<p>1. Attached are copies of original documents of</p> <p><input type="checkbox"/> Articles of Incorporation (or equivalent documents of constitution or association), and/or registration documents of the legal entity named above, in accordance with ITB 4.4.</p> <p><input type="checkbox"/> In case of a state-owned enterprise or institution, documents establishing legal and financial autonomy, operation in accordance with commercial law, and that they are not under the supervision of the Employer, in accordance with ITB 4.6.</p> <p>2. Included are the organizational chart, a list of Board of Directors, and the beneficial ownership. The successful Bidder shall provide additional information on beneficial ownership for each JV member using the Beneficial Ownership Disclosure Form.</p>

Form CON – 2: Historical Contract Non-Performance, Pending Litigation and Litigation History

Bidder's Name: _____

Date: _____

JV Member's Name _____

RFB No. and title: _____

Page _____ of _____ pages

Non-Performed Contracts in accordance with Section III, Evaluation and Qualification Criteria			
<input type="checkbox"/> Contract non-performance did not occur since 1 st January <i>[insert year]</i> <input type="checkbox"/> Contract(s) _____ not performed since 1 st January <i>[insert year]</i>			
Year	Non-performed portion of contract	Contract Identification	Total Contract Amount (current value, currency, exchange rate and US\$ equivalent)
<i>[insert year]</i>	<i>[insert amount and percentage]</i>	Contract Identification: <i>[indicate complete contract name/ number, and any other identification]</i> Name of Employer: <i>[insert full name]</i> Address of Employer: <i>[insert street/city/country]</i> Reason(s) for nonperformance: <i>[indicate main reason(s)]</i>	<i>[insert amount]</i>
Pending Litigation, in accordance with Section III, Evaluation and Qualification Criteria			
<input type="checkbox"/> No pending litigation <input type="checkbox"/> Pending litigation			

Year of dispute	Amount in dispute (currency)	Contract Identification	Total Contract Amount (currency), USD Equivalent (exchange rate)
		Contract Identification: _____ Name of Employer: _____ Address of Employer: _____ Matter in dispute: _____ Party who initiated the dispute: _____ Status of dispute: _____	
		Contract Identification: Name of Employer: Address of Employer: Matter in dispute: Party who initiated the dispute: Status of dispute:	
Litigation History in accordance with Section III, Evaluation and Qualification Criteria			
<input type="checkbox"/> No Litigation History <input type="checkbox"/> Litigation History			
Year of award	Outcome as percentage of Net Worth	Contract Identification	Total Contract Amount (currency), USD Equivalent (exchange rate)
<i>[insert year]</i>	<i>[insert percentage]</i>	Contract Identification: <i>[indicate complete contract name, number, and any other identification]</i> Name of Employer: <i>[insert full name]</i> Address of Employer: <i>[insert street/city/country]</i> Matter in dispute: <i>[indicate main issues in dispute]</i> Party who initiated the dispute: <i>[indicate "Employer" or "Contractor"]</i> Reason(s) for Litigation and award decision <i>[indicate main reason(s)]</i>	<i>[insert amount]</i>

Form CON – 3: Environmental and Social Performance Declaration

[The following table shall be filled in for the Bidder, each member of a Joint Venture and each Specialized Subcontractor]

Bidder’s Name: *[insert full name]*
 Date: *[insert day, month, year]*
 Joint Venture Member’s or Specialized Subcontractor’s Name: *[insert full name]*
 RFB No. and title: *[insert RFB number and title]*
 Page *[insert page number]* of *[insert total number]* pages

Environmental and Social Performance Declaration in accordance with Section III, Qualification Criteria, and Requirements			
<input type="checkbox"/> No suspension or termination of contract: An employer has not suspended or terminated a contract and/or called the performance security for a contract for reasons related to Environmental or Social (ES) performance since the date specified in Section III, Qualification Criteria, and Requirements, Sub-Factor 2.5.			
<input type="checkbox"/> Declaration of suspension or termination of contract: The following contract(s) has/have been suspended or terminated and/or Performance Security called by an employer(s) for reasons related to Environmental or Social (ES) performance since the date specified in Section III, Qualification Criteria, and Requirements, Sub-Factor 2.5. Details are described below:			
Year	Suspended or terminated portion of contract	Contract Identification	Total Contract Amount (current value, currency, exchange rate and US\$ equivalent)
<i>[insert year]</i>	<i>[insert amount and percentage]</i>	Contract Identification: <i>[indicate complete contract name/ number, and any other identification]</i> Name of Employer: <i>[insert full name]</i> Address of Employer: <i>[insert street/city/country]</i> Reason(s) for suspension or termination: <i>[indicate main reason(s) e.g., gender-based violence; sexual exploitation or sexual abuse breaches]</i>	<i>[insert amount]</i>
<i>[insert year]</i>	<i>[insert amount and percentage]</i>	Contract Identification: <i>[indicate complete contract name/ number, and any other identification]</i> Name of Employer: <i>[insert full name]</i> Address of Employer: <i>[insert street/city/country]</i> Reason(s) for suspension or termination: <i>[indicate main reason(s)]</i>	<i>[insert amount]</i>
...	...	<i>[list all applicable contracts]</i>	...

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Performance Security called by an employer(s) for reasons related to ES performance		
Year	Contract Identification	Total Contract Amount (current value, currency, exchange rate and US\$ equivalent)
<i>[insert year]</i>	Contract Identification: <i>[indicate complete contract name/ number, and any other identification]</i> Name of Employer: <i>[insert full name]</i> Address of Employer: <i>[insert street/city/country]</i> Reason(s) for calling of performance security: <i>[indicate main reason(s) e.g., for gender-based violence; sexual exploitation or sexual abuse breaches]</i>	<i>[insert amount]</i>

Form CON – 4: Sexual Exploitation and Abuse (SEA) and/or Sexual Harassment Performance Declaration

[The following table shall be filled in by the Bidder, each member of a Joint Venture and each subcontractor proposed by the Bidder]

Bidder’s Name: *[insert full name]*
 Date: *[insert day, month, year]*
 Joint Venture Member’s or Subcontractor’s Name: *[insert full name]*
 RFB No. and title: *[insert RFB number and title]*
 Page *[insert page number]* of *[insert total number]* pages

SEA and/or SH Declaration in accordance with Section III, Qualification Criteria, and Requirements
We: <input 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. <input type="checkbox"/> (d) had been subject to disqualification by the Bank for non-compliance with SEA/ SH obligations for a period of two years. We have subsequently demonstrated that we have adequate capacity and commitment to comply with SEA/ SH obligations. <input type="checkbox"/> (e) had been subject to disqualification by the Bank for non-compliance with SEA/ SH obligations for a period of two years. We have attached evidence demonstrating that we have adequate capacity and commitment to comply with SEA/ SH obligations.
<p><i>[If (c) above is applicable, attach evidence of an arbitral award reversing the findings on the issues underlying the disqualification.]</i></p>
<p><i>[If (d) or (e) above are applicable, provide the following information:]</i></p>
Period of disqualification: From: _____ To: _____
If previously provided on another Bank financed works contract, details of evidence that demonstrated adequate capacity and commitment to comply with SEA/ SH obligations (as per (d) above) Name of Employer: _____ Name of Project: _____ Contract description: _____ Brief summary of evidence provided: _____ _____ Contact Information: (Tel, email, name of contact person): _____ _____
As an alternative to the evidence under (d), other evidence demonstrating adequate capacity and commitment to comply with SEA/ SH obligations (as per (e) above) <i>[attach details as appropriate]</i> .

R-21/2014

Form FIN – 3.1: Financial Situation and Performance

Bidder's Name: _____

Date: _____

JV Member's Name _____

RFB No. and title: _____

Page _____ of _____ pages

1. Financial data

Type of Financial information in (currency)	Historic information for previous _____ years, (amount in currency, currency, exchange rate*, USD equivalent)				
	Year 1	Year 2	Year 3	Year4	Year 5
Statement of Financial Position (Information from Balance Sheet)					
Total Assets (TA)					
Total Liabilities (TL)					
Total Equity/Net Worth (NW)					
Current Assets (CA)					
Current Liabilities (CL)					
Working Capital (WC)					
Information from Income Statement					
Total Revenue (TR)					
Profits Before Taxes (PBT)					
Cash Flow Information					
Cash Flow from Operating Activities					

*Refer to ITB 36.1 for the exchange rate

2. Sources of Finance

Specify sources of finance to meet the cash flow requirements on works currently in progress and for future contract commitments.

No.	Source of finance	Amount (US\$ equivalent)
1		
2		
3		

2. Financial documents

The Bidder and its parties shall provide copies of financial statements for _____years pursuant Section III, Evaluation and Qualifications Criteria, Sub-factor 3.1. The financial statements shall:

- (a) reflect the financial situation of the Bidder or in case of JV member, and not an affiliated entity (such as parent company or group member).
- (b) be independently audited or certified in accordance with local legislation.
- (c) be complete, including all notes to the financial statements.
- (d) correspond to accounting periods already completed and audited.

Attached are copies of financial statements¹ for the _____years required above; and complying with the requirements

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

Form FIN – 3.2: Average Annual Construction Turnover

Bidder's Name: _____

Date: _____

JV Member's Name _____

RFB No. and title: _____

Page _____ of _____ pages

		Annual turnover data (construction only)	
Year	Amount Currency	Exchange rate	USD equivalent
<i>[indicate year]</i>	<i>[insert amount and indicate currency]</i>		
Average Annual Construction Turnover *			

* See Section III, Evaluation and Qualification Criteria, Sub-Factor 3.2.

Form FIN – 3.3: Financial Resources

Specify proposed sources of financing, such as liquid assets, unencumbered real assets, lines of credit, and other financial means, net of current commitments, available to meet the total construction cash flow demands of the subject contract or contracts as specified in Section III, Evaluation and Qualification Criteria

Financial Resources		
No.	Source of financing	Amount (US\$ equivalent)
1		
2		
3		

Form FIN – 3.4: Current Contract Commitments / Works in Progress

Bidders and each member to a JV should provide information on their current commitments on all contracts that have been awarded, or for which a letter of intent or acceptance has been received, or for contracts approaching completion, but for which an unqualified, full completion certificate has yet to be issued.

Current Contract Commitments					
No.	Name of Contract	Employer's Contact Address, Tel, Fax	Value of Outstanding Work [Current US\$ Equivalent]	Estimated Completion Date	Average Monthly Invoicing Over Last Six Months [US\$/month]
1					
2					
3					
4					
5					

Form EXP - 4.1: General Construction Experience

Bidder's Name: _____

Date: _____

JV Member's Name _____

RFB No. and title: _____

Page _____ of _____ pages

Starting Year	Ending Year	Contract Identification	Role of Bidder
		Contract name: _____ Brief Description of the Works performed by the Bidder: _____ Amount of contract: _____ Name of Employer: _____ Address: _____	
		Contract name: _____ Brief Description of the Works performed by the Bidder: _____ Amount of contract: _____ Name of Employer: _____ Address: _____	
		Contract name: _____ Brief Description of the Works performed by the Bidder: _____ Amount of contract: _____ Name of Employer: _____ Address: _____	

Form EXP - 4.2(a): Specific Construction and Contract Management Experience

Bidder's Name: _____

Date: _____

JV Member's Name _____

RFB No. and title: _____

Page _____ of _____ pages

Similar Contract No.	Information			
Contract Identification				
Award date				
Completion date				
Role in Contract	Prime Contractor <input type="checkbox"/>	Member in JV <input type="checkbox"/>	Management Contractor <input type="checkbox"/>	Subcontractor <input type="checkbox"/>
Total Contract Amount				US\$
If member in a JV or Subcontractor, specify participation in total Contract amount				
Employer's Name:				
Address: Telephone/fax number E-mail:				

**Form EXP - 4.2(a) (cont.): Specific Construction and Contract
Management Experience (cont.)**

Similar Contract No.	Information
Description of the similarity in accordance with Sub-Factor 4.2(a) of Section III:	
1. Amount	
2. Physical size of required works items	
3. Complexity	
4. Methods/Technology	
5. Construction rate for key activities	
6. Other Characteristics	

Form EXP - 4.2(b): Construction Experience in Key Activities

Bidder's Name: _____

Date: _____

Bidder's JV Member Name: _____

Subcontractor's Name² (as per ITB 17): _____

RFB No. and title: _____

Page _____ of _____ pages

All Subcontractors for key activities must complete the information in this form as per ITB 17 and Section III, Evaluation and Qualification Criteria, Sub-Factor 4.2.

1. Key Activity No One: _____

Information				
Contract Identification				
Award date				
Completion date				
Role in Contract	Prime Contractor <input type="checkbox"/>	Member in JV <input type="checkbox"/>	Management Contractor <input type="checkbox"/>	Subcontractor <input type="checkbox"/>
Total Contract Amount			US\$	
Quantity (Volume, number, or rate of production, as applicable) performed under the contract per year or part of the year	Total quantity in the contract (i)	Percentage participation (ii)		Actual Quantity Performed (i) x (ii)
Year 1				
Year 2				
Year 3				
Year 4				
Employer's Name:				
Address:				
Telephone/fax number				
E-mail:				

² If applicable

	Information
Description of the key activities in accordance with Sub-Factor 4.2(b) of Section III:	

2. Activity No. Two

3.

Form EXP - 4.2(c): Specific Experience in Managing ES aspects

[The following table shall be filled in for contracts performed by the Bidder, and each member of a Joint Venture]

Bidder's Name: _____
 Date: _____
 Bidder's JV Member Name: _____
 RFB No. and title: _____
 Page _____ of _____ pages

2. Key Requirement no 1 in accordance with 4.2 (c): _____

Contract Identification				
Award date				
Completion date				
Role in Contract	Prime Contractor <input type="checkbox"/>	Member in JV <input type="checkbox"/>	Management Contractor <input type="checkbox"/>	Subcontractor <input type="checkbox"/>
Total Contract Amount			US\$	
Details of relevant experience				

3. Key Requirement no 2 in accordance with 4.2 (c): _____

4. Key Requirement no 3 in accordance with 4.2 (c): _____

Form of Bid Security - Demand Guarantee

Beneficiary: _____

Request for Bids No: _____

Date: _____

BID GUARANTEE No.: _____

Guarantor: _____

We have been informed that _____ (hereinafter called "the Applicant") has submitted or will submit to the Beneficiary its Bid (hereinafter called "the Bid") for the execution of _____ under Request for Bids No. _____ ("the RFB").

Furthermore, we understand that, according to the Beneficiary's conditions, Bids must be supported by a Bid guarantee.

At the request of the Applicant, we, as Guarantor, hereby irrevocably undertake to pay the Beneficiary any sum or sums not exceeding in total an amount of _____ (_____) upon receipt by us of the Beneficiary's complying demand, supported by the Beneficiary's statement, whether in the demand itself or a separate signed document accompanying or identifying the demand, stating that either the Applicant:

- (a) has withdrawn its Bid prior to the Bid validity expiry date set forth in the Applicant's Letter of Bid, or any extended date provided by the Applicant; or
- (b) having been notified of the acceptance of its Bid by the Beneficiary prior to the expiry date of the Bid validity or any extension thereto provided by the Applicant, (i) has failed to execute the contract agreement, or (ii) has failed to furnish the Performance Security and, if required, the Environmental and Social (ES) Performance Security, in accordance with the Instructions to Bidders ("ITB") of the Beneficiary's Bidding document.

This guarantee will expire: (a) if the Applicant is the successful Bidder, upon our receipt of copies of the contract agreement signed by the Applicant and the Performance Security and, if required, the Environmental and Social (ES) Performance Security, issued to the Beneficiary in relation to such contract agreement; or (b) if the Applicant is not the successful Bidder, upon the earlier of (i) our receipt of a copy of the Beneficiary's notification to the Applicant of the results of the Bidding process; or (ii) twenty-eight days after the expiry date of the Bid validity.

Consequently, any demand for payment under this guarantee must be received by us at the office indicated above 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)]

Form of Bid – Securing Declaration (Not Applicable)

Date: _____

RFB No.: _____

Alternative No.: _____

To:

We, the undersigned, declare that:

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

We accept that we will automatically be suspended from being eligible for Bidding, or submitting Proposals in any contract with the Employer for the period of time specified in Section II – Bid Data Sheet, if we are in breach of our obligation(s) under the Bid conditions, because we:

- (a) have withdrawn our Bid prior to the expiry date of the Bid validity specified in the Letter of Bid or any extended date provided by us; or
- (b) having been notified of the acceptance of our Bid by the Employer prior to the expiry date of the Bid validity in the Letter of Bid or any extended date provided by us, (i) fail or refuse to execute the Contract, if required, or (ii) fail or refuse to furnish the Performance Security and, if required, the Environmental and Social (ES) Performance Security, in accordance with the ITB 49.

We understand this Bid-Securing Declaration shall expire if we are not the successful Bidder, upon the earlier of (i) our receipt of your notification to us of the name of the successful Bidder; or (ii) twenty-eight days after the expiry date of the Bid validity.

Name of the Bidder* _____

Name of the person duly authorized to sign the Bid on behalf of the Bidder** _____

Title of the person signing the Bid _____

Signature of the person named above _____

Date signed _____ day of _____, _____

*: In the case of the Bid submitted by joint venture specify the name of the Joint Venture as Bidder

** : Person signing the Bid shall have the power of attorney given by the Bidder attached to the Bid

[Note: In case of a Joint Venture, the Bid-Securing Declaration must be in the name of all members to the Joint Venture that submits the Bid.]

Letter of Bid - Financial Part

INSTRUCTIONS TO BIDDERS: DELETE THIS BOX ONCE YOU HAVE COMPLETED THE DOCUMENT

The Bidder must prepare this Letter of Bid on stationery with its letterhead clearly showing the Bidder's complete name and business address.

Note: All italicized text is to help Bidders in preparing this form.

Date of this Bid submission: *[insert date (as day, month, and year) of Bid submission]*

Request for Bid No.: *[insert identification]*

Alternative No.: *[insert identification No if this is a Bid for an alternative]*

To: *[insert complete name of Employer]*

We, the undersigned, hereby submit the second part of our Bid, the Bid Price, and Bill of Quantities. This accompanies the Letter of Bid- Technical Part.

In submitting our Bid, we make the following additional declarations:

- (a) **Bid Validity:** Our Bid shall be valid until *[insert day, month, and year in accordance with ITB 18.1]*, and it shall remain binding upon us and may be accepted at any time on or before this date;
- (b) **Total Price:** The total price of our Bid, excluding any discounts offered in item (f) below is: *[Insert one of the options below as appropriate]*

[Option 1, in case of one lot:] Total price is: [insert the total price of the Bid in words and figures, indicating the various amounts and the respective currencies];

Or

*[Option 2, in case of multiple lots:] (a) Total price of each lot *[insert the total price of each lot in words and figures, indicating the various amounts and the respective currencies]*; and (b) Total price of all lots (sum of all lots) *[insert the total price of all lots in words and figures, indicating the various amounts and the respective currencies]*;*

- (c) **Discounts:** The discounts offered and the methodology for their application are:

(i) The discounts offered are: *[Specify in detail each discount offered]*

(ii) The exact method of calculations to determine the net price after application of discounts is shown below: *[Specify in detail the method that shall be used to apply the discounts];*

- (d) **Commissions, gratuities, and fees:** We have paid, or will pay the following commissions, gratuities, or fees with respect to the Bidding process or execution of the Contract: *[insert complete name of each Recipient, its full address, the reason for which each commission or gratuity was paid and the amount and currency of each such commission or gratuity]*.

Name of Recipient	Address	Reason	Amount

(If none has been paid or is to be paid, indicate “none.”)

Name of the Bidder: **[insert complete name of the Bidder]*

Name of the person duly authorized to sign the Bid on behalf of the Bidder: *** [insert complete name of person duly authorized to sign the Bid]*

Title of the person signing the Bid: *[insert complete title of the person signing the Bid]*

Signature of the person named above: *[insert signature of person whose name and capacity are shown above]*

Date signed *[insert date of signing]* **day of** *[insert month]*, *[insert year]*

*: In the case of the Bid submitted by a Joint Venture specify the name of the Joint Venture as Bidder.

** : Person signing the Bid shall have the power of attorney given by the Bidder. The power of attorney shall be attached with the Bid Schedules

Appendix to Financial Part

Schedule of Cost Indexation (Not Applicable)

[Note to Employer: Schedule for Cost Indexation shall normally be applied for contracts where the specified Time for Completion exceeds 18 months. Contracts for shorter specified Time for Completion, where local or foreign inflation is expected to be high, shall also include Schedule for Cost Indexation as appropriate.]

*It is recommended that the Employer is advised by a professional with experience in construction costs and the inflationary effect on construction costs when preparing the contents of the Schedule of Cost Indexation. In the case of very large and/or complex works contracts, it may be necessary to specify several families of price adjustment formulae corresponding to the different works involved. **When finalizing the contract document, ensure that the finalized Schedule of Cost Indexation is attached to the Contract Agreement.**]*

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

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

where:

“P_n” is the adjustment multiplier to be applied to the estimated contract value in the relevant currency of the work carried out in period “n”, this period being a month unless otherwise stated in the Contract Data;

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

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

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

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

The cost indices or reference prices stated in the Table of Adjustment Data shall be used. If their source is in doubt, it shall be determined by the Engineer. For this purpose, reference shall be made to the values of the indices at stated dates (quoted in the fourth and fifth columns respectively of the table).

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

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

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

Table of Adjustment Data

[In Tables A, B, and C, below, the Bidder shall (a) indicate its amount of local currency payment, (b) indicate its proposed source and base values of indices for the different foreign currency elements of cost, (c) derive its proposed weightings for local and foreign currency payment, and (d) list the exchange rates used in the currency conversion. In the case of very large and/or complex works contracts, it may be necessary to specify several families of price adjustment formulae corresponding to the different works involved.]

Table A. Local Currency

Index code*	Index description*	Source of index*	Base value and date*	Bidder's related currency amount	Bidder's proposed weighting
	Nonadjustable	—	—	—	A: ___* B: ___* C: ___* D: ___* E: ___*
Total					1.00

[* To be entered by the Employer. Whereas “A” should a fixed percentage, B, C, D and E should specify a range of values and the Bidder will be required to specify a value within the range such that the total weighting = 1.00]

Table B. Foreign Currency (FC)

State type: [If the Bidder is allowed to receive payment in foreign currencies this table shall be used. If Bidder wishes to quote in more than one foreign currency (up to three currencies permitted) then this table should be repeated for each foreign currency.]

Index code	Index description	Source of index	Base value and date	Bidder's related source currency in type/amount	Equivalent in FC1	Bidder's proposed weighting
	Nonadjustable	—	—	—		A: ____* B: ____* C: ____* D: ____* E: ____*
Total						1.00

[* To be entered by the Employer. Whereas “A” should a fixed percentage, B, C, D and E should specify a range of values and the Bidder will be required to specify a value within the range such that the total weighting = 1.00]

Table C. Summary of Payment Currencies

Table: Alternative A

For [insert name of Section of the Works]

Name of payment currency	A Amount of currency	B Rate of exchange (local currency per unit of foreign)	C Local currency equivalent $C = A \times B$	D Percentage of Total Bid Price (TBP) $\frac{100 \times C}{TBP}$
Local currency _____		1.00		
Foreign currency #1 _____				
Foreign currency #2 _____				
Foreign currency # _____				
Total Bid Price				100.00
Provisional sums expressed in local currency	<i>[To be entered by the Employer]</i>		<i>[To be entered by the Employer]</i>	
TOTAL BID PRICE (including provisional sum)				

Table: Alternative B (Not Applicable)

To be used only with Alternative B Prices directly quoted in the currencies of payment. (ITB 15.1)

Summary of currencies of the Bid for _____ *[insert name of Section of the Works]*

<i>Name of currency</i>	<i>Amounts payable</i>
Local currency: _____	
Foreign currency #1: _____	
Foreign currency #2: _____	
Foreign currency #3: _____	
Provisional sums expressed in local currency _____	<i>[To be entered by the Employer]</i>

Bill of Quantities

A. PREAMBLE

1. General

The Bill of Quantities shall be read in conjunction with the Instructions to Bidders, General and Particular Conditions of Contract, Technical Specifications, and Drawings.

General directions and descriptions of work and materials are not necessarily repeated nor summarized in the Bill of Quantities. References to the relevant sections of the Contract documentation shall be made before entering prices against each item in the priced Bill of Quantities.

It should be noted that while the Bills of Quantities are an essential item in the Bidding and Contract documents, the technical information, descriptions and quantities contained therein are subject to modification by statements in the technical specifications, drawings and elsewhere in the Bid/Contract documents in accordance with prioritization of documents as given in GCC/PCC.

2. Application of Preamble to Subsequent Work

The relevant clause of this Preamble shall be deemed to apply equally to work subsequently ordered for execution by the Contractor, either under Provisional Sum orders or variation orders, except where specifically varied therein.

3. Method of Measurement

The Works as executed will be measured for payment in accordance with the method adopted in the Bill of Quantities and under the item as therein set forth. The net measurement or weight of the finished work in place will always be taken, and except where otherwise stated or where separate items are provided. Payment will be made for only those materials, which are specified and permanently installed in the works to the approval of the Engineer.

4. Units and Extension of Bills of Quantities

All sizes and quantities have been entered in the Bills of Quantities in Metric Units. The Bidder shall indicate the total amount for each item (i.e. the quantity multiplied by the rate) to the nearest cent when inserting the figures in the BOQ.

The following abbreviations are used in this Contract:

<i>Unit</i>	<i>Abbreviation</i>	<i>Unit</i>	<i>Abbreviation</i>
Metre	m	Day(s)	D(s)
Square metre	m ²	Month	mon
Cubic metre	m ³	Vehicle-month	veh-mon
Litre	ltr	Number	nr
Kilogram	Kg	Lump Sum	LS
metric ton (1000Kg)	t		
Megapascal	MPa		
Unit(s)	Unit		
Set(s)	Set		

5. Rates and Prices Bid to be Paid for Work Completed

The rates and prices bid in the priced Bill of Quantities shall, except as otherwise provided under the Contract, include all construction equipment, labour, supervision, materials, erection, maintenance, insurance, profit, taxes, and duties, together with all general risks, liabilities, and obligations set out or implied in the Contract.

A rate or price shall be entered against each item in the priced Bill of Quantities, whether quantities are stated or not. Items against which no rates or prices are entered by the Contractor, whether quantities are stated or not, will not be paid for when executed. The cost of items against which the Contractor has failed to enter a rate or price shall be deemed to be covered by other rates and prices entered in the Bill of Quantities.

The quantities given in the Bill of Quantities are estimated and provisional, and are given to provide a common basis for bidding. The basis of payment will be the actual quantities of work ordered and carried out, as measured by the Contractor and verified by the Engineer and valued at the rates and prices bid in the priced Bill of Quantities, where applicable, and otherwise at such rates and prices as the Engineer may fix within the terms of the Contract.

The whole cost of complying with the provisions of the Contract shall be included in the items provided in the priced Bill of Quantities, and where no items are provided, the cost shall be deemed to be distributed among the rates and prices entered for the related items of work.

The Contractor shall be deemed to have taken into account all recognized holidays, festivals, religious and other customs in his bid prices and his construction programmes.

6. Provisional Sum Items

Provisional Sums will be dealt with as provided for in the Conditions of Contract. Provisional Sums included and so designated in the Bill of Quantities shall be expended in whole or in part at the direction and discretion of the Engineer in accordance with the Conditions of Contract.

Provisional Sums are represented by the words “Provisional Sum” or “PS” entered under the description.

7. Payment of Lump Sums for General and Other Items

Lump Sum items stipulated in Bills and where the Bidder includes additional items for complying with the general conditions etc. will be paid on the basis of a proportion of respective lump sum in the same ratio as the value of the work completed bears to the total value of the Contract.

Lump Sum items stipulated in Bills which are related to a specific work will be paid on the basis of the proportion of actual work done to the total work of that specific item as assessed by the Engineer.

Items with quantities and units will be paid against number of units used and/or incorporated in the works.

8. Protection of Work and Cleaning up on Completion

The Contractor shall allow, in his rates, for protecting completed work from subsequent operations, making good all damage to complete work, for clearing away all rubbish as it accumulates, and leaving the site in a tidy condition to the satisfaction of the Engineer.

Note: The bid price is inclusive of all Environmental, Health and Safety management and compliant cost.

B. WORK ITEMS

The Bill of Quantities contains the following part Bills, which have been grouped according to the nature or timing of the work:

Currency: ITB 15.1, Section II – Bid Data Sheet (BDS)

BILL NO.	GRAND SUMMARY	Amount in USD
WORK ITEMS		
BILL-G1	GENERAL ITEMS	
BILL-1C	FIXED INTAKE PUMP STATION (NEW STATION) & DAM CROSS CULVERT	
BILL-2C	WATER TREATMENT PLANT (NEW STATION)	
BILL-3C	CHEMICAL BUILDING, LABORATORY, WAREHOUSE & WORKSHOP (NEW STATION)	
BILL-4C	SLUDGE DRYING BED (NEW STATION)	
BILL-5C	ADMINISTRATION BUILDING (NEW STATION)	
BILL-6C	CLEAR WATER RESERVOIR & DISTRIBUTION PUMP ROOM (NEW STATION)	
BILL-7C	DRAINAGE BASIN (NEW STATION)	
BILL-8C	GENERATOR HOUSE (NEW STATION)	
BILL-9C	CIVIL AND LANDSCAPE WORK	
BILL-10C	ELECTROMAGNETIC FLOW METER (EXISTING STATION)	
BILL-11C	CHEMICAL BUILDING (EXISTING STATION)	
BILL-12C	PIPED DISTRIBUTION NETWORK	
BILL-G2	SPECIFIED PROVISIONAL SUMS	
BILL-G3	DAYWORK SCHEDULE	
BILL-1M	PIPING SYSTEM INSIDE WTP (NEW STATION)	
BILL-2M	STORMWATER & WATER SUPPLY SYSTEM INSIDE WTP (NEW STATION)	
BILL-3M	INTAKE STATION (NEW STATION) & RAW WATER TRANSMISSION PIPELINE	
BILL-4M	CHEMICAL BUILDING (NEW STATION)	
BILL-5M	WATER TREATMENT PLANT BUILDING (NEW STATION)	
BILL-6M	CLEAR WATER RESERVOIR & PUMP ROOM (NEW STATION)	
BILL-7M	DRAINAGE BASIN (NEW STATION)	
BILL-8M	SLUDGE DRYING BED (NEW STATION)	
BILL-9M	GENERATOR HOUSE (NEW STATION)	
BILL-10M	ADMINISTRATION BUILDING (NEW STATION)	
BILL-11M	CHEMICAL BUILDING (EXISTING STATION)	
BILL-1E	GENERAL ELECTRICAL WORKS FOR NEW STATION	
BILL-2E	INTAKE PUMP STATION FOR NEW STATION	
BILL-3E	CHEMICAL BUILDING FOR NEW STATION	
BILL-4E	WATER TREATMENT PLANT BUILDING FOR NEW STATION	
BILL-5E	CLEAR WATER RESERVOIR & PUMP ROOM BUILDING FOR NEW STATION	
BILL-6E	DRAINAGE BASIN FOR NEW STATION	
BILL-7E	SLUDGE DRYING BED FOR NEW STATION	
BILL-8E	GENERATOR HOUSE FOR NEW STATION	
BILL-9E	ADMINISTRATION BUILDING FOR NEW STATION	
BILL-10E	CHEMICAL BUILDING FOR EXISTING STATION	
BILL-1-SCA	SCADA WORKS FOR NEW STATION	
BILL-2-SCA	SCADA WORKS FOR EXISTING STATION	
BILL-3-SCA	SCADA WORKS FOR DISTRICT METERED AREA FLOW METER	
TOTAL CARRIED TO BID FORM		

Name of Bidder _____

Signature of Bidder _____

BILL-G1: GENERAL ITEMS
(Refer to Technical Specification Chapter)

ITEM NO.	DESCRIPTION	UNIT	QUANTITY	RATE (IN \$)	AMOUNT (IN \$)
G1	<u>GENERAL ITEMS</u> All necessary materials required to perform the work to be provided by the contractor to the respective sites. Any contractual or specified requirement not itemized hereunder, shall deemed to be included in the rates of the other bill items.				
<u>Preliminary studies</u>					
G1.01	Civil and structural engineering and other necessary studies to adapt the project with functional modifications. This price includes especially calculations and shop drawings. Calculation per Lump Sum.	ls	1		
G1.02	Allow for preliminary survey including excavations and remote sensing of underground facilities before carrying out the works where not specifically indicated elsewhere in these bills of quantities	ls	1		
<u>Mobilization and Demobilization</u>					
G1.03	Mobilization including Transport of Materials	ls	1		
G1.04	Supply and shipment of equipment for construction work	ls	1		
G1.05	Establishment, dis-establishment and cleanup of site, including solid waste management.	ls	1		
G1.06	Demobilization	ls	1		
<u>Contractual Requirements</u>					
G1.07	All bonds and guarantees in accordance with the Conditions of Contract	ls	1		
G1.08	All insurance policies in accordance with the Conditions of Contract	ls	1		
<u>Specified Requirements: Engineer's and Employer's Facilities</u> The Contractor shall provide, establish, maintain and remove at completion of works as described in Specification					
<u>Temporary Site Office and Equipment for the Engineer's Staff</u>					
G1.09	Establishment	ls	1		
G1.10	Maintenance	month	18		
G1.11	Removal	ls	1		
G1.12	Office Equipment for the Engineer's Staff	ls	1		
G1.13	Survey equipment, facilities and associated works required as described in specification for the project duration.	ls	1		

<u>Services for the Engineer's Staff</u>					
G1.14	Supply and Maintenance of vehicles supplied to Engineer's staff including fuel	veh-month	18		
G1.15	Local Area Network with DSL internet connection (minimum 2mbps and router)	month	18		
G1.16	Set of Initial and Progress Photographs (to cover all major activities and including monthly drone photos) as in specification.	month	18		
G1.17	Arrangement for the weekly/monthly progress meeting with the Engineer's Staff	Day	72		
G1.18	Preparation and submission of shop drawings for the Engineer's approval	ls	1		
G1.19	Preparation and submission of As-built Drawings for the Engineer's approval	ls	1		
<u>Testing of Materials and Works; to be carried out within or outside Cambodia by independent Specialist Laboratories as required by relevant specifications</u>					
G1.20	Testing of water retaining structures	ls	1		
G1.21	All specified testing relating to civil and building works for concrete, roads, paving, water retaining structures and any other testing required as specified and not listed above.	ls	1		
G1.22	Pressure testing pipelines in access road, yard piping and process piping as specified.	ls	1		
G1.23	Disinfection and flushing of pipelines after pressure testing	ls	1		
G1.24	Factory Inspection/Performance Test for Major Mechanical Equipment as specified in the Specifications	ls	1		
G1.25	Factory Inspection/Performance Test for Major Electrical Equipment as specified in the Specifications. Testing required by the Engineer not covered by the specifications	ls	1		
G1.26	Compacted backfill - Field Density Test - MDD 95%	nr	18		
G1.27	Compacted backfill - CBR	nr.	18		
<u>Testing of the Works; Plant Installation Testing and Trial Operation</u>					
G1.28	Rotating equipment checklist and description of test procedures	ls	1		
G1.29	Rotating equipment test report: vibration and alignment check.	ls	1		
G1.30	Dry run tests for treatment plant M&E equipment as specified prior to start up including services of equipment manufacturers representative and test reports.	ls	1		

G1.31	Dry run tests for Intake Pump Station M&E equipment as specified prior to start up including services of equipment manufacturers representative and test reports.	ls	1		
G1.32	Wet run tests on Water Treatment Plant M&E equipment prior to start up including services of equipment manufacturers representative and test reports.	ls	1		
G1.33	Wet run tests on Intake Pumping Station M&E equipment prior to start up including services of equipment manufacturers representative and test reports.	ls	1		
G1.34	Trial Operation of treatment plant, raw water and treated water pumping station for acceptance and completion certificate, with Commissioning specialist on site full time for all tests on completion including 30 days after successfully completing trial operation	ls	1		
G1.35	Allow for any other testing required as specified and not listed above	ls	1		
<u>Training for staff</u>					
Trainings: manuals will be supplied in Khmer and English language. Trainings will be as specified and include 35 workdays of 'on the job training' for raw water intake and WTP operation. -					
G1.36	Contractor's outline of the training program within 90 days after notice to start work.	ls	1		
G1.37	Course materials, student notes and instruction manuals 30 days prior to training	ls	1		
G1.38	Training for instrumentation and control systems operation and maintenance	ls	1		
G1.39	Training for operation and maintenance of pumping station and treatment plant equipment (Mechanical and Electrical)	ls	1		
G1.40	Training for operation of all treatment plant processes during trial operation.	ls	1		
G1.41	Allow for any other training required as specified and not listed above	ls	1		
<u>Temporary Works (Project Sign Board)</u>					
G1.42	Establishment	nr	1		
G1.43	Maintenance	month	18		
G1.44	Removal	nr	1		
G1.45	Traffic Regulation (management), safety and control as specified	days	540		

G1.46	Site Fencing including Relocation as specified	month	18		
G1.47	Protection and Upkeep of Site, adjacent areas and properties, Tidying and cleaning the site including disposal of construction debris to the satisfaction of the Engineer during the construction and on completion [including delivery of any remaining pipes, fittings, specials and valves to the Employer's stores]	month	18		
<u>Specified Requirements: Submittals and Services</u>					
G1.48	Preparing Project Schedule, reports, manuals, submittals and other deliverables for meeting as specified	ls	1		
G1.49	Provide adequate Health, Safety and environmental protection and safety precautions, particularly taking account of COVID-19 requirements in the SCC, during construction and preparation of HSP and CEMP, implement EMP and prepare monthly monitoring report	ls	1		
G1.50	Preparation of QC/QA and QMS and Compliance with the Quality Assurance Standards as specified	ls	1		
G1.51	Recording of (GIS) coordinates of all installed pipelines and assets (including facilities, fences and boundaries), including valves, hydrants, manholes etc. and submission of all data in readable and editable format to STWW/MISTI	ls	1		
G1.52	Allow for any other submittals and services required as specified and not listed above	ls	1		
<u>Specified Requirements: Personnel</u>					
<p>Costs for Key Personnel who meet the requirement in the qualification criteria plus costs for other personnel, engineers and surveyors with the exception of the foreman and labourers who are included in the cost of the works.</p> <p>Bidder shall specify the person months of each professional (with the exception of the Project Manager) to be assigned according to the construction schedule.</p>					
G1.53	Project Manager	month	18		
G1.54	Site Engineer: civil works	month	18		
G1.55	Site Engineer: mechanical works	month	8		
G1.56	Site Engineer: electrical works	month	8		
G1.57	Pump engineer	month	4		
G1.58	Water treatment process engineer	month	4		
G1.59	Electrical engineer	month	4		
G1.60	Health and Safety officer	month	18		
G1.61	Environmental Specialist	month	18		
G1.62	Social Specialist	Month	18		

G1.63	Quality assurance engineer	month	18		
G1.64	Commissioning Specialist	month	2		
G1.65	Other Engineers and Surveyors	ls	1		
<u>Specified Requirements: Environmental Monitoring and Management</u>					
The Contractor will comply with requirements of the Environmental and Social Management Plan included in Volume V of the Bid Documents as well as all Environmental and Social requirements covered elsewhere in the Contract Documents					
G1.66	Replacement of trees - not covered elsewhere	ls	1		
G1.67	Environmental Baseline Monitoring and Testing				
G1.68	Environmental Training	ls	1		
<u>Unexploded Ordinance</u>					
G1.69	Provisional of Mine/UXO detection, removal and disposal for all project sites	Ls	1		
SUBTOTAL FOR BILL-G1 (Carried Forward to Grand Summary)					

Name of Bidder _____

Signature of Bidder _____

BILL-1C: FIXED INTAKE PUMP STATION (NEW STATION) & DAM CROSS CULVERT
(Refer to Technical Specification Chapter)

Rates in USD

Item Nr	Description	Unit	Quantity	Rate (in \$)	Amount (in \$)
1C.1	FIXED INTAKE PUMP STATION (NEW STATION)				
	Civil & Structural Works: Works include ground preparation, excavation, concrete construction, and backfilling around structures, supply and delivery of architectural fittings, surface finishes, building services as shown on the drawings and in the specifications or as directed by the Engineer				
1C.1.1	Driven pile size 0.3x0.3x9.0m	m	1,944.00		
1C.1.2	Excavation for structure to be disposed to the sites specified by the project Manager. Haul not exceeding 1,000m	m ³	1,810.00		
1C.1.3	Structural Backfill and Site area (Compact at 90% MMD Modified AASHTO)	m ³	200.00		
1C.1.4	Compacted Stone size 40x60mm with mortar cement 30% under footing works	m ³	43.68		
1C.1.5	Lean concrete class E (15Mpa) works	m ³	7.28		
1C.1.6	Concrete class B (30 MPa, with water proof) works including formworks	m ³	635.00		
1C.1.7	Mild Steel Round Bar (>250N/mm ²)	Kg	200.00		
1C.1.8	High Yield Steel Deformed Bar(>400N/mm ²)	Kg	60,000.00		
1C.1.9	Exterior emulsion (acrylic) paint to all surfaces, including skim coat, primer & undercoats	m ²	192.04		
1C.1.10	Interior emulsion (acrylic) painting to walls, including skim coat, primer & undercoats	m ²	128.04		
1C.1.11	Aluminum frame window and glass window size (1200 x 1500) with steel grill using steel Tube ϕ 20mm@100 including 2 coats of oil paint, anti-rust paint and enamel paint	unit	6.00		
1C.1.12	Supply and installation of concrete louvers	unit	9.00		
1C.1.13	Aluminum frame and glass door (900 x 2200mm) including key lock, handle complete accessories	unit	1.00		
1C.1.14	Supply & fix Rolling doors (2000 x 3000mm) including key lock, handle complete accessories	unit	1.00		
1C.1.15	Supply, installation and fixing of Stainless Steel Ladder and Cage (Class 306) including complete accessories as shown in drawings no. ST-IWS-C-004.1.2-02 & ST-IWS-C-004.1.2-04	nr	4.00		
1C.1.16	Steel tube Handrail1 outside pump room	Ls	1.00		
1C.1.17	Steel grit cover and completed installation	m ²	55.00		

1C.1.18	Mobile Aluminum Stair (600mm width, length 18m)	Nr	1.00		
1C.1.19	Mortar Decoration trim top and bottom window, louver, door and other structures, 50 to 100 mm strip	m ²	7.50		
1C.2	DAM CROSS CULVERT FOR TRANSMISSION PIPELINE				
Civil & Structural Works: Works include ground preparation, excavation, concrete construction, and backfilling around structures, supply and delivery of architectural fittings, surface finishes, building services as shown on the drawings and in the specifications or as directed by the Engineer					
1C.2.1	Excavation for structure to be disposed to the sites specified by the project Manager. Haul not exceeding 1,000m	m ³	12.00		
1C.2.2	Structural Backfill and Site area (Compact at 90% MMD Modified AASHTO)	m ³	12.00		
1C.2.3	Stone Rip Rap	m ³	8.00		
1C.2.4	Lean concrete class E (15Mpa) works	m ³	4.00		
1C.2.5	Concrete class B (30 MPa) works including formworks	m ³	20.00		
1C.2.6	Mild Steel Round Bar (>250N/mm ²)	Kg	20.00		
1C.2.7	High Yield Steel Deformed Bar(>400N/mm ²)	Kg	2,200.00		
SUBTOTAL FOR BILL-1C (Carried Forward to Grand Summary)					

Name of Bidder _____

Signature of Bidder _____

BILL NR-2C: WATER TREATMENT PLANT (NEW STATION)
(Refer to Technical Specification Chapter)

Rates in USD

Item Nr	Description	Unit	Quantity	Rate (in \$)	Amount (in \$)
2C	WATER TREATMENT PLANT (NEW STATION)				
	Civil & Structural Works: Works include ground preparation, excavation, concrete construction, and backfilling around structures, supply and delivery of architectural fittings, surface finishes, building services as shown on the drawings and in the specifications or as directed by the Engineer				
2C.1	Driven pile size 0.3x0.3x8.0m	m	1,528.00		
2C.2	Excavation for structure to be disposed to the sites specified by the project Manager. Haul not exceeding 1,000m	m ³	458.19		
2C.3	Structural Backfill (Compact at 90% MMD Modified AASHTO)	m ³	36.60		
2C.4	Compacted Stone size 40x60mm with mortar cement 30% under footing and ground slab	m ³	91.50		
2C.5	Lean concrete works, Concrete class E (15Mpa)	m ³	30.50		
2C.6	Concrete class B (30 MPa, with water proof) works including formworks	m ³	889.85		
2C.7	Mild Steel Round Bar (>250N/mm ²)	Kg	42.00		
2C.8	High Yield Steel Deformed Bar(>400N/mm ²)	ton	106.78		
2C.9	200mm thick holly brick walls including cement plaster 20mm thick	m ²	64.42		
2C.10	Cement mortar plaster to all exterior walls, columns, beams & soffits (mix with water proofing liquid product)	m ²	71.32		
2C.11	Cement mortar plaster to all interior walls, columns, beams & soffits	m ²	71.32		
2C.12	Exterior emulsion (acrylic) paint to all surfaces, including skim coat, primer & undercoats	m ²	71.32		
2C.13	Interior emulsion (acrylic) painting to walls, including skim coat, primer & undercoats	m ²	71.32		
2C.14	Mortar Decoration trim top and bottom window and other structures, 50 to 100 mm strip	m ²	11.40		
2C.15	Three (3) concrete shutter window	unit	3.00		
2C.16	Aluminum frame and double door glass (900 x 2200mm) including key lock, handle complete accessories	set	4.00		
2C.17	Aluminum frame and glass swing & fix window size (1100 x 1800) with steel grill using steel Tube ϕ 20mm@100 including 2 coats of oil paint, anti-rust paint and	set	5.00		

	enamel paint and all fittings and complete accessories				
2C.18	Steel Handrail, H=1.10m for whole water treatment plant building	m	263.32		
2C.19	Concrete Ladder including concrete support, steel handle complete accessories	m	17.20		
2C.20	Supply and Install Stainless steel Stairs and platforms	ls	1.00		
2C.21	Steel grit cover and completed installation for filtration tank	m ²	39.00		
2C.22	External Waterproofing work: Bitumen coating	m ²	575.00		
2C.23	Internal Waterproofing work: Hydroperoxyl painting	m ²	3,658.58		
2C.24	Complete tile roof works with anti-rust, including frame support, bolts, welding, stiffeners, bracings, connections, joints	m ²	44.98		
2C.25	Polypropylene Filter Nozzle ϕ 32mm, with 200mm long shaft	nr	2,784.00		
2C.26	SS304-Plate bar 100 x 100 x 8mm thk, J Bolt SM16 SS 304 and nozzle connections	Lot	1.00		
2C.27	Supply and install of media: fine sand, thk. 900 mm	m ³	41.29		
2C.28	Supply and install of media: fine gravel, thk. 200 mm	m ³	9.18		
SUBTOTAL FOR BILL-2C (Carried Forward to Grand Summary)					

Name of Bidder _____

Signature of Bidder _____

BILL NR-3C: CHEMICAL BUILDING, LABORATORY, WAREHOUSE & WORKSHOP (NEW STATION)

(Refer to Technical Specification)

Rates in USD

Item	Description	Unit	Quantity	Rate (in \$)	Amount (in \$)
3C	CHEMICAL BUILDING, LABORATORY, WAREHOUSE & WORKSHOP (NEW STATION)				
Civil & Structural Works: Works include ground preparation, piling works, excavation, concrete construction, and backfilling around structures, supply and delivery of architectural fittings, surface finishes, building services as shown on the drawings and in the specifications or as directed by the Engineer					
3C.1	Driven pile size 0.3x0.3x5.0m	m	175.00		
3C.2	Excavation for structure to be disposed to the sites specified by the project Manager. Haul not exceeding 1,000m	m ³	192.66		
3C.3	Structural Backfill (Compact at 90% MMD Modified AASHTO)	m ³	165.41		
3C.4	Compacted Stone size 40x60mm with mortar cement 30% under footing and ground slab	m ³	9.60		
3C.5	Lean concrete works, Concrete class E (15Mpa)	m ³	1.92		
3C.6	Concrete works, Concrete class B (30 MPa) including formworks	m ³	71.14		
3C.7	Mild Steel Round Bar (>250N/mm ²)	kg	334.30		
3C.8	High Yield Steel Deformed Bar(>400N/mm ²)	kg	6,971.25		
3C.9	200mm thick holly brick walls including cement plaster 20mm thick	m ²	296.45		
3C.10	100mm thick holly brick walls including cement plaster 20mm thick	m ²	38.15		
3C.11	Cement mortar plaster to all exterior walls, columns, beams & soffits (mix with water proofing liquid product)	m ²	217.93		
3C.12	Cement mortar plaster to all interior walls, columns, beams & soffits (mix with water proofing liquid product)	m ²	372.75		
3C.13	Exterior emulsion (acrylic) paint to all surfaces, including skim coat, primer & undercoats	m ²	217.93		
3C.14	Interior emulsion (acrylic) painting to walls, including skim coat, primer & undercoats	m ²	372.75		
3C.15	Mortar Decoration trim top and bottom window and other structures, 50 to 100 mm strip	m ²	4.06		

3C.16	Aluminum frame and glass window CW1 size (1800x1200) with steel grill using steel Tube ϕ 20mm@100 including 2 coats of oil paint, anti-rust paint and enamel paint and all fittings and complete accessories	unit	13.00		
3C.17	Aluminum frame and glass window CW2 size 1000x1200) with steel grill using steel Tube ϕ 20mm@100 including 2 coats of oil paint, anti-rust paint and enamel paint and all fittings and complete accessories	unit	1.00		
3C.18	Supply & fix Type (LD1) hard wooden door (1600 x 2200mm) including key lock, handle complete accessories	unit	3.00		
3C.19	Supply & fix Type (LD2) hard wooden door (1000 x 2200mm) including key lock, handle complete accessories	unit	3.00		
3C.20	Supply & fix Rolling doors (2000 x 3000mm) including key lock, handle complete accessories	unit	1.00		
3C.21	Supply & fix Rolling doors (3000 x 31500mm) including key lock, handle complete accessories	unit	2.00		
3C.22	Supply & fix Rolling doors (2000 x 31500mm) including key lock, handle complete accessories	unit	1.00		
3C.23	External Waterproofing work: Hydroperoxyl painting as specified including supply and application	m ²	112.32		
3C.24	Supply & lay 600x600mm homogeneous floor tiles including 25mm thk. mortar 1:3 mix laying base, joint and labor cost. (Tiles to be approved by the Engineer).	m ²	211.68		
3C.25	Supply and fix Water Closet, tile floor, wall, Lavabo including accessories and completed installation	Ls	1.00		
3C.26	Complete tile roof works with anti-rust, including frame support, bolts, welding, steel tube rafle, stiffeners, bracings, connections, joints as required	m ²	121.00		
3C.27	Handrail for stair (ϕ 40mm, H:900mm) as shown in drawing no. ST-CHE-C-005-12	m	6.00		
3C.28	Galvanized steel tube handrail for void (ϕ 40mm, H:1200mm) as shown in drawing no. ST-CHE-C-005-08	m	6.00		
3C.29	Steel platform works (including walkway floor, handrail, stair) for chemical injection system as shown in drawing no. ST-CHE-C-005-03, ST-CHE-C-005-08, ST-CHE-C-005-09, ST-CHE-C-005-13	ls	1.00		

3C.30	Gypsum board ceiling including complete installation, putty, primer and two coats of emulsion painting	m ²	21.00		
3C.31	Gypsum board, water resistant ceiling including complete installation, putty, primer and two coats of emulsion painting	m ²	3.00		
SUBTOTAL FOR BILL-3C (Carried Forward to Grand Summary)					

Name of Bidder _____

Signature of Bidder _____

BILL NR-4C: SLUDGE DRYING BED (NEW STATION)

(Refer to Technical Specification)

Rates in USD

Item Nr	Description	Unit	Quantity	Rate (in \$)	Amount (in \$)
4C	SLUDGE DRYING BED (NEW STATION)				
Civil & Structural Works: Works include ground preparation, excavation, concrete construction, and backfilling around structures, supply and delivery of architectural fittings, surface finishes, building services as shown on the drawings and in the specifications or as directed by the Engineer					
4C.1	Driven pile size 0.3x0.3x6.0m	m	984.00		
4C.2	Excavation for structure to be disposed to the sites specified by the project Manager. Haul not exceeding 1,000m	m ³	1200.00		
4C.3	Structural Backfill (Compact at 90% MMD Modified AASHTO)	m ³	342.90		
4C.4	Compacted Stone size 40x60mm with mortar cement 30% under footing and ground slab	m ³	135.48		
4C.5	Lean concrete works, concrete class E (15Mpa)	m ³	33.87		
4C.6	Concrete class B (30 MPa, with water proof) works including formworks	m ³	345.24		
4C.7	High Yield Steel Deformed Bar(>400N/mm ²)	ton	37.67		
4C.8	Crushed Stone filter Ø40 max, 350mm thick	m ³	186.07		
4C.9	Washed Sand filter 350mm, thick	m ³	186.07		
4C.10	Steel grid cover and completed installation as per detail drawing.	m ²	20.74		
4C.11	Wooden Outlet Stop-log 600mm x100mm x 2865mm for each sludge drying bed basin	sets	8.00		
4C.12	Internal Waterproofing work: Hydroperoxyl painting	m ²	630.00		
4C.13	External Waterproofing work: Bitumen coating	m ²	430.00		
SUBTOTAL FOR BILL-4C (Carried Forward to Grand Summary)					

Name of Bidder _____

Signature of Bidder _____

BILL NR-5C: ADMINISTRATION BUILDING (NEW STATION)

(Refer to Technical Specification)

Rates in USD

Item	Description	Unit	Quantity	Rate (in \$)	Amount (in \$)
5C	ADMINISTRATION BUILDING (NEW STATION)				
Civil & Structural Works: Works include ground preparation, excavation, concrete construction, and backfilling around structures, supply and delivery of architectural fittings, surface finishes, building services as shown on the drawings and in the specifications or as directed by the Engineer					
5C.1	Driven pile size 0.3x0.3x8.0m	m	96.00		
5C.2	Excavation for structure to be disposed to the sites specified by the project Manager. Haul not exceeding 1,000m	m ³	45.08		
5C.3	Earth filling foundation & in building and compaction under floors.	m ³	66.26		
5C.4	Compacted Stone size 40x60mm under footings, beams and under tile floor as shown in the drawing including labor cost.	m ³	23.81		
5C.5	Lean concrete works, Concrete class E (15Mpa)	m ³	2.22		
5C.6	Non-reinforced Concrete slab around building (18N)	m ³	4.48		
5C.7	Concrete class C (25 MPa) ground slab including labor and formworks	m ³	6.05		
5C.8	Concrete class B (30 MPa) including labor and formworks	m ³	16.75		
5C.9	Mild Steel Round Bar (>250N/mm ²)	Kg	50.60		
5C.10	High Yield Steel Deformed Bar(>400N/mm ²)	Kg	2,530.00		
5C.11	200mm thick holly brick walls including cement plaster 20mm thick	m ²	76.65		
5C.12	100mm thick holly brick walls including cement plaster 20mm thick	m ²	43.25		
5C.13	Cement mortar plaster to all exterior walls, columns, beams & soffits (mix with water proofing liquid product)	m ²	91.13		
5C.14	Cement mortar plaster to all interior walls, columns, beams & soffits	m ²	119.90		
5C.15	Exterior emulsion (acrylic) paint to all surfaces, including skim coat, primer & undercoats	m ²	91.13		
5C.16	Interior emulsion (acrylic) painting to walls, including skim coat, primer & undercoats	m ²	119.90		
5C.17	Mortar Decoration trim top and bottom window and other structures, 50 to 100 mm strip	m ²	3.00		

5C.18	Aluminum frame and glass window size (1800x1200) with steel grill using steel Tube ϕ 20mm@100 including 2 coats of oil paint, anti-rust paint and enamel paint and all fittings and complete accessories	sets	3.00		
5C.19	Supply & fix Type(D1) hard wooden door (1000 x 2200mm) including key lock, handle complete accessories	sets	4.00		
5C.20	Supply & lay 600x600mm homogeneous floor tiles including 25mm thk. mortar 1:3 mix laying base, joint and labor cost. (Tiles to be approved by the Engineer).	m ²	50.98		
5C.21	Concrete handle/handrail	m	10.00		
5C.22	Supply and fix Water Closet, EF, tile floor, wall, Lavabo including accessories and completed installation	Ls	1.00		
5C.23	Ceiling including complete installation, Putty, Primer and two coats of emulsion painting. (Ceiling to be approved by the Engineer).	m ²	60.50		
5C.24	Supply & fix roof including tile roof, steel tube rafter, and other miscellaneous equipment	Ls	1.00		
SUBTOTAL FOR BILL-5C (Carried Forward to Grand Summary)					

Name of Bidder _____

Signature of Bidder _____

BILL NR-6C: CLEAR WATER RESERVOIR & DISTRIBUTION PUMP ROOM (NEW STATION)

(Refer to Technical Specification)

Rates in USD

Item Nr	Description	Unit	Quantity	Rate (in \$)	Amount (in \$)
6C	CLEAR WATER RESERVOIR & DISTRIBUTION PUMP ROOM (NEW STATION)				
Civil & Structural Works: Works include ground preparation, excavation, concrete construction, and backfilling around structures, supply and delivery of architectural fittings, surface finishes, building services as shown on the drawings and in the specifications or as directed by the Engineer					
6C.1	Driven pile size 0.3x0.3x8.0m	m	2136.00		
6C.2	Excavation for structure to be disposed to the sites specified by the project Manager. Haul not exceeding 1,000m	m ³	3,377.87		
6C.3	Structural Backfill (Compact at 90% MMD Modified AASHTO)	m ³	459.48		
6C.4	Compacted Stone size 40x60mm with mortar cement 30% under footing and ground slab as shown in the drawing including labor cost.	m ³	97.20		
6C.5	Lean concrete works, Concrete class E (15Mpa) including labor and formworks	m ³	32.40		
6C.6	Concrete class B (30 MPa, with water proof) works including formworks	m ³	660.38		
6C.7	Mild Steel Round Bar (>250N/mm ²)	Kg	102.00		
6C.8	High Yield Steel Deformed Bar(>400N/mm ²)	t	72.64		
6C.9	200mm thick hollow brick walls including cement plaster 20mm thick	m ²	199.48		
6C.10	Cement mortar plaster to all exterior walls, columns, beams & soffits (mix with water proofing liquid product)	m ²	199.48		
6C.11	Cement mortar plaster to all interior walls, columns, beams & soffits	m ²	199.48		
6C.12	Exterior emulsion (acrylic) paint to all surfaces, including skim coat, primer & undercoats	m ²	199.48		
6C.13	Interior emulsion (acrylic) painting to walls, including skim coat, primer & undercoats	m ²	199.48		
6C.14	Mortar Decoration trim top and bottom window and other structures, 50 to 100 mm strip	m ²	0.90		
6C.15	Supply and install of concrete shutter windows	set	6.00		
6C.16	Aluminum frame and double glass door (900 x 2200mm) including key lock, handle complete accessories	set	2.00		

6C.17	Supply & fix Rolling doors (2000 x 3000mm) including key lock, handle complete accessories	set	2.00		
6C.18	Steel grit cover and completed installation for specific locations of the building	m ²	10.98		
6C.19	External Waterproofing work: Bitumen coating	m ²	594.70		
6C.20	Internal Waterproofing work: Hydroperoxyl painting	m ²	1,015.05		
6C.21	Supply and Install Stainless steel Stairs and platforms	ls	1.00		
6C.22	Concrete Ladder including concrete support, steel handle complete accessories	m	17.45		
6C.23	Manhole including ventilation tower complete with protective cowel	nr	1.00		
6C.24	Complete tile roof works with anti-rust, including frame support, bolts, welding, stiffeners, bracings, connections, joints	m ²	238.83		
6C.25	Supply and laying of Grey granite floor tile 300x600mm	m ²	35.00		
6C.26	Supply and floor painting of Epoxy finishes, dark green color	m ²	10.00		
6C.27	Supply and floor painting of Epoxy finishes, grey color	m ²	10.00		
6C.28	Supply and planting grass on top of reservoir	m ²	400.00		
6C.29	Supply and fill fertility soil layer on top of reservoir	m ³	40.00		
6C.30	Supply and laying of Non-woven geotextile layer on top of reservoir	m ²	400.00		
6C.31	Supply and fill Gravel 10x20 mm layer on top of reservoir	m ³	40.00		
6C.32	Supply and laying of Plastic sheet, thk. 1-2 mm layer on top of reservoir	m ²	400.00		
SUBTOTAL FOR BILL NR-6C (Carried Forward to Grand Summary)					

Name of Bidder _____

Signature of Bidder _____

BILL NR-7C: DRAINAGE BASIN (NEW STATION)
(Refer to Technical Specification)

Rates in USD

Item Nr	Description	Unit	Quantity	Rate (in \$)	Amount (in \$)
7C	DRAINAGE BASIN (NEW STATION)				
Civil & Structural Works: Works include ground preparation, excavation, concrete construction, and backfilling around structures, supply and delivery of architectural fittings, surface finishes, building services as shown on the drawings and in the specifications or as directed by the Engineer					
7C.1	Driven pile P1 size 0.3x0.3x8.0m	m	496.00		
7C.2	Driven pile P2 size 0.3x0.3x6.0m	m	84.00		
7C.3	Excavation for structure to be disposed to the sites specified by the project Manager. Haul not exceeding 1,000m	m ³	1,420.59		
7C.4	Structural Backfill (Compact at 90% MMD Modified AASHTO)	m ³	738.71		
7C.5	Compacted Stone size 40x60mm with mortar cement 30% under footing and ground slab	m ³	26.18		
7C.6	Concrete class E (15Mpa), lean concrete	m ³	6.54		
7C.7	Concrete class B (30 MPa, with water proof) works including labor and formworks	m ³	160.72		
7C.8	High Yield Steel Deformed Bar(>400N/mm ²)	Kg	19,286.40		
7C.9	Base Gravel: Base course, t=15cm	m ³	47.10		
7C.10	Supply and install of steel handrail, H=1.0m around basin	m	29.60		
7C.11	Steel grit cover and completed installation	m ²	16.17		
7C.12	Internal Waterproofing work: Hydroperoxyl painting	m ²	355.00		
7C.13	External Waterproofing work: Bitumen coating	m ²	440.00		
7C.14	Supply and installation of Cat Ladder (φ25mm) install fix to concrete wall	pcs	38.00		
SUBTOTAL FOR BILL-7C (Carried Forward to Grand Summary)					

Name of Bidder _____

Signature of Bidder _____

BILL NR-8C: GENERATOR HOUSE (NEW STATION)

(Refer to Technical Specification)

Rates in USD

Item Nr	Description	Unit	Quantity	Rate (in \$)	Amount (in \$)
8C	GENERATOR HOUSE (NEW STATION)				
Civil & Structural Works: Works include ground preparation, excavation, concrete construction, and backfilling around structures, supply and delivery of architectural fittings, surface finishes, building services as shown on the drawings and in the specifications or as directed by the Engineer					
8C.1	Driven pile size 0.3x0.3x6.0m	m	24.00		
8C.2	Excavation for structure to be disposed to the sites specified by the project Manager. Haul not exceeding 1,000m	m ³	17.10		
8C.3	Structural Backfill (Compact at 90% MMD Modified AASHTO)	m ³	3.74		
8C.4	Compacted Stone size 40x60mm with mortar cement 30% under footing and ground slab including labor cost.	m ³	2.60		
8C.5	Lean Concrete works, Concrete class E (15Mpa)	m ³	0.29		
8C.6	Concrete works, Concrete class B (30 MPa) including labor and formworks	m ³	7.89		
8C.7	Mild Steel Round Bar (>250N/mm ²)	Kg	45.00		
8C.8	High Yield Steel Deformed Bar(>400N/mm ²)	Kg	749.00		
8C.9	200mm thick holly brick walls including cement plaster 20mm thick	m ²	47.10		
8C.10	100mm thick holly brick walls including cement plaster 20mm thick	m ²	16.60		
8C.11	Cement mortar plaster to all exterior walls, columns, beams & soffits (mix with water proofing liquid product)	m ²	47.10		
8C.12	Cement mortar plaster to all interior walls, columns, beams & soffits	m ²	80.30		
8C.13	Exterior emulsion (acrylic) paint to all surfaces, including skim coat, primer & undercoats	m ²	47.10		
8C.14	Interior emulsion (acrylic) painting to walls, including skim coat, primer & undercoats	m ²	80.30		
8C.15	Mortar Decoration trim top and bottom window and other structures, 50 to 100 mm strip	m ²	2.80		

8C.16	Aluminum frame and glass door (900 x 2200mm) including key lock, handle complete accessories	unit	1.00		
8C.17	Supply & fix Rolling doors (2000 x 3000mm) including key lock, handle complete accessories	unit	1.00		
8C.18	Supply & fix Rolling doors (3000 x 3000mm) including key lock, handle complete accessories	unit	1.00		
8C.19	Genset fuel tank including holds fitting with tank (3000 litres) capacity.	Unit	1.00		
8C.20	Supply & fix roof including zinc roof, steel tube raffle, and other miscellaneous equipment	Ls	1.00		
SUBTOTAL FOR BILL-8C (Carried Forward to Grand Summary)					

Name of Bidder _____

Signature of Bidder _____

BILL-9C: CIVIL AND LANDSCAPE WORK (NEW STATION)

(Refer to Technical Specification)

Rates in USD

Item Nr	Description	Unit	Quantity	Rate (in \$)	Amount (in \$)
9C	CIVIL AND LANDSCAPE WORK (NEW STATION) Including, construction of access road (internal), Flag poles, Plaque (Sign Board), earth filling, Gate and Fencing, including general preparation, steel structural works, concrete, masonry, Labours and miscellaneous works specified in the Drawings.				
A. Earth fill for Water Treatment Plant					
9C.1	Demolition and removal of all articles, objects and obstructions which are required to be cleared and compaction.	m ²	13,804.00		
9C.2	Earth filling in compound site (Compact at 90% MMD Modified AASHTO)	m ³	15,072.54		
9C.3	Leveling, watering and compaction on top level	m ²	13,804.00		
SUBTOTAL FOR BILL A					
B. Access Road (internal road)					
9C.4	Earth filling in compound site (Compact at 90% MMD Modified AASHTO)	m ³	556.50		
9C.5	Compacted Stone size 40x60mm, 200mm thick with sand including labor and formworks as specified in technical drawing	m ³	371.00		
SUBTOTAL FOR BILL B					
C. Gate and Fencing for Water Treatment Plant					
9C.6	Gate: Galvanize steel Dia. 60mm, 5mm thick, including fitting, welding, connections, joints, wire mesh general preparation, formwork, re-bar arrangement, concrete, key lock as per drawing no. ST-MIS-C-012-05	Ls	1.00		
9C.7	Fence: Galvanize steel Dia. 60mm, 5mm thick, including fitting, welding, connections, joints, wire mesh, barbed wire and general preparation, formwork, re-bar arrangement, concrete, and other miscellaneous equipment as per drawing no. ST-MIS-C-012-05	m	645.00		
SUBTOTAL FOR BILL C					
D. Landscape for Water Treatment Plant					
9C.8	Construction of Flag poles including general preparation, steel structural works, concrete, masonry and miscellaneous works as per drawing no. ST-MIS-C-012-01 & ST-MIS-C-012-02	Ls	1.00		
9C.9	Name Plaque for Stoung Waterworks as per drawing no. ST-MIS-C-012-03 & ST-MIS-C-012-04	Ls	1.00		
9C.10	Concrete Curb for Road and Concrete Curb for Walkway	m	544.00		

9C.11	Tree Planting with each approved type tree of initial size 2 m high & 200 mm girth, Maintain tree till the end of Defects Liability Period.	Ls	1.00		
9C.12	Gardening landscape as per as per drawing no. ST-SLP-C-002-01FLOAT	Ls	1.00		
SUBTOTAL FOR BILL D					
E. Retaining Wall					
9C.13	Construction of Retaining Wall including general preparation, earthworks, lean concrete, stone 40x60 work, formwork, steel structural works, concrete, and miscellaneous works specified as per drawing no. ST-MIS-C-012-07 or directed by the Engineer	m	81.00		
SUBTOTAL FOR BILL E					
PART SUMMARY FOR BILL-9C					
SUBTOTAL FOR BILL A					
SUBTOTAL FOR BILL B					
SUBTOTAL FOR BILL C					
SUBTOTAL FOR BILL D					
SUBTOTAL FOR BILL E					
SUBTOTAL FOR BILL-9C (Carried Forward to Grand Summary)					

Name of Bidder _____

Signature of Bidder _____

BILL 10C: ELECTROMAGNETIC FLOW METER (EXISTING STATION)

(Refer to Technical Specification Chapter)

Rates in USD

Item Nr	Description	Unit	Quantity	Rate (in \$)	Amount (in \$)
10C	ELECTROMAGNETIC FLOW METER (EXISTING STATION)				
Civil & Structural Works: Works include ground preparation, excavation, concrete construction, and backfilling around structures, supply and delivery of architectural fittings, surface finishes, building services as shown on the drawings and in the specifications or as directed by the Engineer					
10C.1	Excavation for structure to be disposed to the sites specified by the project Manager. Haul not exceeding 1,000m	m ³	67.08		
10C.2	Structural Backfill (Compact at 90% MMD Modified AASHTO)	m ³	46.00		
10C.3	Compacted Stone size 40x60mm with mortar cement 30% under footing	m ³	0.81		
10C.4	Lean concrete works, Concrete class E (15Mpa)	m ³	0.41		
10C.5	Concrete works, Concrete class B (30 MPa) including labor and formworks	m ³	8.13		
10C.6	High Yield Steel Deformed Bar(>400N/mm ²)	Kg	1,056.90		
10C.7	Woltmann type water meter ϕ 100mm including chamber and all accessories and fittings – refer to typical drawing no. ST-GN-C-001-15	package	3.00		
10C.8	Woltmann type water meter ϕ 150mm including chamber and all accessories and fittings – refer to typical drawing no. ST-GN-C-001-15	package	1.00		
SUBTOTAL FOR BILL-10C (Carried Forward to Grand Summary)					

Name of Bidder _____

Signature of Bidder _____

BILL-11C: CHEMICAL BUILDING (EXISTING STATION)

(Refer to Technical Specification)

Rates in USD

Item Nr	Description	Unit	Quantity	Rate (in \$)	Amount (in \$)
11C	CHEMICAL BUILDING (EXISTING STATION)				
Civil & Structural Works: Works include ground preparation, piling works, excavation, concrete construction, and backfilling around structures, supply and delivery of architectural fittings, surface finishes, building services as shown on the drawings and in the specifications or as directed by the Engineer					
11C.1	Excavation for structure to be disposed to the sites specified by the project Manager. Haul not exceeding 1,000m	m ³	36.86		
11C.2	Structural Backfill (Compact at 90% MMD Modified AASHTO)	m ³	32.99		
11C.3	Compacted Stone size 40x60mm with mortar cement 30% under footing and ground slab	m ³	4.75		
11C.4	Lean concrete works, Concrete class E (15Mpa)	m ³	1.58		
11C.5	Concrete works, Concrete class B (30 MPa) including labor and formworks	m ³	10.38		
11C.6	Mild Steel Round Bar (>250N/mm ²)	kg	55.00		
11C.7	High Yield Steel Deformed Bar(>400N/mm ²)	kg	1,246.08		
11C.8	200mm thick holly brick walls including cement plaster 20mm thick	m ²	47.24		
11C.9	Cement mortar plaster to all exterior walls, columns, beams & soffits (mix with water proofing liquid product)	m ²	50.00		
11C.10	Cement mortar plaster to all interior walls, columns, beams & soffits (mix with water proofing liquid product)	m ²	50.00		
11C.11	Exterior emulsion (acrylic) paint to all surfaces, including skim coat, primer & undercoats	m ²	50.00		
11C.12	Interior emulsion (acrylic) painting to walls, including skim coat, primer & undercoats	m ²	50.00		
11C.13	Mortar Decoration trim top and bottom window and other structures, 50 to 100 mm strip	m ²	4.06		
11C.14	Aluminum frame and glass window (CW1) with steel grill using steel Tube ϕ 20mm@100 including 2 coats of oil paint, anti-rust paint and enamel paint, and all fittings and complete accessories	unit	5.00		

11C.15	Aluminum frame and double door glass (900 x 2200mm) including key lock, handle complete accessories	unit	1.00		
11C.16	External Waterproofing work: Bitumen coating for Ground slab	m ²	30.00		
11C.17	Ceiling including complete installation, Putty, Primer and two coats of emulsion painting. (Ceiling to be approved by the Engineer).	m ²	21.00		
11C.18	Complete tile roof works with anti-rust, including frame support, bolts, welding, steel tube rafter, stiffeners, bracings, connections, joints	m ²	24.44		
SUBTOTAL FOR BILL-11C (Carried Forward to Grand Summary)					

Name of Bidder _____

Signature of Bidder _____

BILL-12C: PIPED DISTRIBUTION NETWORK

(Refer to Technical Specification)

Rates in USD

Item Nr	Description	Unit	Quantity	Rate (in \$)	Amount (in \$)
12C	PIPED DISTRIBUTION NETWORK				
	Piped Distribution Works: including, supply, installation, testing and commissioning, identifying existing services (electrical cable, TV cable, Telecom, water supply pipe and wastewater collection pipe), excavation trenches, dewatering, joining of pipes, placement of warning tape, soil and sand backfilling and compaction as specified and shown on the drawings and the specifications, inspections and testing and miscellaneous materials for connecting and installation. Piping shall be supported, anchored, or guided by the Engineer to prevent undue line deflection, excessive vibration and to protect piping and connected equipment from excessive loading and expansion stress. The Contractor must also include the cost of 18 locations of road crossing pipeline and necessary tools and equipment to connect Steel Pipeline hang on bridge around 515 meters.				
12C.1	HDPE Pipe ϕ 25mm, PE 100, PN12.5	m	3,000.00		
12C.2	HDPE Pipe ϕ 63mm, PE 100, PN10	m	89,920.00		
12C.3	HDPE Pipe ϕ 110mm, PE 100, PN10	m	59,972.00		
12C.4	HDPE Pipe ϕ 160mm, PE 100, PN10	m	27,270.00		
12C.5	HDPE Pipe ϕ 225mm, PE 100, PN10	m	28,439.00		
12C.6	Push-on joint, DCIP Pipe ϕ 300mm, Class C40 (T-type)	m	6,408.00		
12C.7	Push-on joint, DCIP Pipe ϕ 400mm, Class C30 (T-type)	m	13,970.00		
12C.8	Push-on joint, DCIP Pipe ϕ 500mm, Class C30 (T-type)	m	8,183.00		
12C.9	MS Gate valve ϕ 2" including male threaded adaptors, fittings and chamber (Drained/Washed Out)	set	81.00		
12C.10	RS gate valve ϕ 2" including male threaded adaptors, fittings and chamber	set	76.00		
12C.11	MS Flange Gate valve ϕ 100mm including rubber gaskets, bolts and nuts, valve chamber (Drained/Washed Out)	set	15.00		
12C.12	MS Flange Gate valve ϕ 200mm including rubber gaskets, bolts and nuts, valve chamber (Drained/Washed Out)	set	2.00		
12C.13	RS Flange Gate Valve ϕ 100mm including rubber gaskets, bolts and nuts, valve chamber	set	28.00		
12C.14	RS Flange Gate Valve ϕ 150mm including rubber gaskets, bolts and nuts, valve chamber	set	7.00		
12C.15	RS Flange Gate Valve ϕ 200mm including rubber gaskets, bolts and nuts, valve chamber	set	17.00		
12C.16	RS Flange Gate Valve ϕ 300mm including rubber gaskets, bolts and nuts, valve chamber	set	3.00		
12C.17	RS Flange Gate Valve ϕ 400mm including rubber gaskets, bolts and nuts, valve chamber	set	6.00		
12C.18	RS Flange Gate Valve ϕ 500mm including rubber gaskets, bolts and nuts, valve chamber	set	4.00		
12C.19	HDPE EF Reducing Tee ϕ 110*63mm, SDR17, PN10	Set	26.00		
12C.20	HDPE EF Reducing Tee ϕ 160*63mm, SDR17, PN10	Set	8.00		

12C.21	HDPE EF Reducing Tee ϕ 160*110mm, SDR17, PN10	Set	3.00		
12C.22	HDPE EF Reducing Tee ϕ 225*110mm, SDR17, PN10	Set	13.00		
12C.23	HDPE EF Reducing Tee ϕ 225*160mm, SDR17, PN10	Set	1.00		
12C.24	HDPE EF Equal Tee ϕ 63mm, SDR17, PN10	Set	63.00		
12C.25	HDPE EF Equal Tee ϕ 110mm, SDR17, PN10	Set	28.00		
12C.26	HDPE EF Equal Tee ϕ 160mm, SDR17, PN10	Set	7.00		
12C.27	HDPE EF Equal Tee ϕ 225mm, SDR17, PN10	Set	21.00		
12C.28	HDPE EF Flange Adaptor/Stub Flange ϕ 63mm, SDR17, PN10 including rubber gaskets, bolts and nuts	Set	249.00		
12C.29	HDPE EF Flange Adaptor/Stub Flange ϕ 110mm, SDR17, PN10 including rubber gaskets, bolts and nuts	Set	50.00		
12C.30	HDPE EF Flange Adaptor/Stub Flange ϕ 160mm, SDR17, PN10 including rubber gaskets, bolts and nuts	Set	16.00		
12C.31	HDPE EF Flange Adaptor/Stub Flange ϕ 225mm, SDR17, PN10 including rubber gaskets, bolts and nuts	Set	49.00		
12C.32	HDPE EF Reducer ϕ 110*63mm, SDR17, PN10	Set	39.00		
12C.33	HDPE EF Reducer ϕ 160*63mm, SDR17, PN10	Set	7.00		
12C.34	HDPE EF Reducer ϕ 160*110mm, SDR17, PN10	Set	10.00		
12C.35	HDPE EF Reducer ϕ 225*110mm, SDR17, PN10	Set	18.00		
12C.36	HDPE EF Reducer ϕ 225*160mm, SDR17, PN10	Set	8.00		
12C.37	HDPE EF Elbow 45° ϕ 63mm, SDR17, PN10	Set	6.00		
12C.38	HDPE EF Elbow 45° ϕ 110mm, SDR17, PN10	Set	2.00		
12C.39	HDPE EF Elbow 45° ϕ 225mm, SDR17, PN10	Set	2.00		
12C.40	HDPE EF Elbow 90° ϕ 63mm, SDR17, PN10	Set	15.00		
12C.41	HDPE EF Elbow 90° ϕ 110mm, SDR17, PN10	Set	3.00		
12C.42	HDPE EF Elbow 90° ϕ 225mm, SDR17, PN10	Set	3.00		
12C.43	Double Air relief / Air vacuum valve ϕ 80mm, PN16, including rubber gaskets, bolts and nuts, valve chamber	set	9.00		
12C.44	Double Air relief / Air vacuum valve ϕ 100mm, PN16, including rubber gaskets, bolts and nuts, valve chamber	set	21.00		
12C.45	DCIP Flanged Socket ϕ 300mm, PN10, including Self-Anchoring Joint	Set	11.00		
12C.46	DCIP Flanged Socket ϕ 400mm, PN10, including Self-Anchoring Joint	Set	16.00		
12C.47	DCIP Flanged Socket ϕ 500mm, PN10, including Self-Anchoring Joint	Set	8.00		
12C.48	DCIP Double Flanged Taper ϕ 300*150mm (Concentric-type), PN10, including rubber gaskets, bolts and nuts	Set	1.00		

12C.49	DCIP Double Flanged Taper $\phi 300*200$ mm (Concentric-type), PN10, including rubber gaskets, bolts and nuts	Set	2.00		
12C.50	DCIP Double Flanged Taper $\phi 400*200$ mm (Concentric-type), PN10, including rubber gaskets, bolts and nuts	Set	1.00		
12C.51	DCIP Double Flanged Taper $\phi 400*300$ mm (Concentric-type), PN10, including rubber gaskets, bolts and nuts	Set	2.00		
12C.52	DCIP Double Flanged Taper $\phi 500*400$ mm (Concentric-type), PN10, including rubber gaskets, bolts and nuts	Set	1.00		
12C.53	DCIP Double Flanged Taper $\phi 150*80$ mm, PN10, including rubber gaskets, bolts and nuts	Set	4.00		
12C.54	DCIP All Flanged Level Invert Tee $\phi 300*80$ mm, PN10, including rubber gaskets, bolts and nuts	Set	1.00		
12C.55	DCIP Double Socket Taper $\phi 150*80$ mm, PN10, including rubber gaskets, bolts and nuts	Set	1.00		
12C.56	DCIP Double Socket Taper $\phi 200*150$ mm, PN10, including rubber gaskets, bolts and nuts	Set	3.00		
12C.57	DCIP All Flanged Tee $\phi 300$ mm, PN10, including rubber gaskets, bolts and nuts	Set	2.00		
12C.58	DCIP All Flanged Tee $\phi 400$ mm, PN10, including rubber gaskets, bolts and nuts	Set	1.00		
12C.59	DCIP Double Socket 45° Bend $\phi 500$ mm, PN10, including Self-Anchoring Joint	Set	1.00		
12C.60	DCIP Double Socket 90° Bend $\phi 500$ mm, PN10, including Self-Anchoring Joint	Set	5.00		
12C.61	DCIP Double Socket 11.25° Bend $\phi 300$ mm, PN10, including Self-Anchoring Joint	Set	3.00		
12C.62	DCIP Double Socket 11.25° Bend $\phi 400$ mm, PN10, including Self-Anchoring Joint	Set	8.00		
12C.63	DCIP Double Socket 11.25° Bend $\phi 500$ mm, PN10, including Self-Anchoring Joint	Set	3.00		
12C.64	DCIP Double Socket 22.50° Bend $\phi 300$ mm, PN10, including Self-Anchoring Joint	Set	2.00		
12C.65	DCIP Double Socket 22.50° Bend $\phi 400$ mm, PN10, including Self-Anchoring Joint	Set	8.00		
12C.66	DCIP Double Socket 22.50° Bend $\phi 500$ mm, PN10, including Self-Anchoring Joint	Set	7.00		
12C.67	DCIP Double Socket Level Invert Tee With Flanged Brach $\phi 400*100$ mm, PN10, including rubber gaskets, bolts and nuts	Set	4.00		
12C.68	DCIP Double Socket Level Invert Tee With Flanged Brach $\phi 500*100$ mm, PN10, including rubber gaskets, bolts and nuts	Set	2.00		
12C.69	DCIP Double Socket Tee With Flanged Brach $\phi 400*100$ mm, PN10, including rubber gaskets, bolts and nuts	Set	9.00		
12C.70	DCIP Double Socket Tee With Flanged Brach $\phi 400*150$ mm, PN10, including rubber gaskets, bolts and nuts	Set	2.00		
12C.71	DCIP Double Socket Tee With Flanged Brach $\phi 400*200$ mm, PN10, including rubber gaskets, bolts and nuts	Set	1.00		

12C.72	DCIP Double Socket Tee With Flanged Brach $\phi 300 \times 300$ mm, PN10, including rubber gaskets, bolts and nuts	Set	1.00		
12C.73	Flange Carbon Steel Pipe $\phi 65$ mm, Schedule 40 (for hang on bridge)	m	105.00		
12C.74	Flange Carbon Steel Pipe $\phi 100$ mm, Schedule 40 (for hang on bridge)	m	105.00		
12C.75	Flange Carbon Steel Pipe $\phi 150$ mm, Schedule 40 (for hang on bridge)	m	175.00		
12C.76	Flange Carbon Steel Pipe $\phi 200$ mm, Schedule 40 (for hang on bridge)	m	65.00		
12C.77	Flange Carbon Steel Pipe $\phi 300$ mm, Schedule 40 (for hang on bridge)	m	65.00		
12C.78	Fire Hydrant $\phi 100$ mm including bollards, all accessories and fittings (connect to pipeline $\phi 225$ mm – refer to typical drawing no. ST-GN-C-001-14 & ST-WDN-203-002.3	set	3.00		
12C.79	Fire Hydrant $\phi 100$ mm including bollards, all accessories and fittings (connect to pipeline $\phi 300$ mm – refer to typical drawing no. ST-GN-C-001-14 & ST-WDN-203-002.3	set	2.00		
12C.80	Fire Hydrant $\phi 100$ mm including bollards, all accessories and fittings (connect to pipeline $\phi 400$ mm – refer to typical drawing no. ST-GN-C-001-14 & ST-WDN-203-002.3	set	1.00		
12C.81	Woltmann type water meter $\phi 200$ including chamber and all accessories and fittings – refer to typical drawing no. ST-GN-C-001-16	package	1.00		
12C.82	Woltmann type water meter $\phi 300$ including chamber and all accessories and fittings – refer to typical drawing no. ST-GN-C-001-15	package	1.00		
12C.83	Woltmann type water meter $\phi 400$ including chamber and all accessories and fittings – refer to typical drawing no. ST-GN-C-001-15	package	2.00		
12C.84	Woltmann type water meter $\phi 500$ including chamber and all accessories and fittings – refer to typical drawing no. ST-GN-C-001-15	package	1.00		
12C.85	Water meter connection for households – refer to typical drawing no. ST-GN-C-001-23 & ST-GN-C-001-24	set	6,100.00		
Demolition and surface restoration: the Contractor shall conduct site-specific survey in order to put the cost, and the Contractor is responsible to pay at his own cost for the whole surface demolition and restoration of the project.					
12C.86	Concrete Pavement Demolition	m ²	1,000.00		
12C.87	Pavement Demolition	m ²	4,000.00		
12C.88	Tile Pavement Demolition	m ²	4,500.00		
12C.89	Concrete Pavement Restoration	m ²	1,000.00		
12C.90	Pavement Restoration	m ²	4,000.00		
12C.91	Tile Pavement Restoration	m ²	4,500.00		

SUBTOTAL FOR BILL-12C (Carried Forward to Grand Summary)	
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Name of Bidder _____

Signature of Bidder _____

BILL-G2- SPECIFIED PROVISIONAL SUMS

(Refer to Technical Specification)

Rates in USD

Item Nr	Description	Unit	Quantity	Rate (in \$)	Amount (in \$)
G2	SPECIFIED PROVISIONAL SUMS				
Note: The Provisional Sums given in the Bill of Quantities are for defined work and may be used in whole or in part, or not at all					
G2.1	Electricity supply to all sites	nr	1.00		
G2.2	Water supply to all sites	nr	1.00		
SUBTOTAL FOR BILL-G2 (Carried Forward to Grand Summary)					

Name of Bidder _____

Signature of Bidder _____

BILL-G3 - DAYWORK SCHEDULE

(Refer to Technical Specification)

Rates in USD

Item Nr	Description	Unit	Quantity	Rate (in \$)	Amount (in \$)
G3	DAYWORK SCHEDULE				
<u>Schedule 1: Labour</u>					
G3.1	Unskilled Labourer	days	25.00		
G3.2	Banksman/Slinger	days	25.00		
G3.3	Carpenter	days	25.00		
G3.4	Mason/ Concrete Finisher	days	25.00		
G3.5	Driver: Heavy Duty	days	25.00		
G3.6	Driver: Light Duty	days	25.00		
G3.7	Pipe Fitter	days	25.00		
G3.8	Plant Operator: Heavy	days	25.00		
G3.9	Plant Operator: Light	days	25.00		
G3.10	Steel fixer/ Bar Bender	days	25.00		
G3.11	Welder	days	25.00		
G3.12	Jointer	days	25.00		
G3.13	Painter	days	25.00		
G3.14	Electrician	days	25.00		
G3.15	Mechanical Fitter	days	25.00		
G3.16	Instrumentation Fitter	days	25.00		
G3.17	Plumber	days	25.00		
G3.18	Chainman	days	25.00		
Sub-total of Schedule DW-1 Carried to Part Summary					
<u>Schedule 2: Materials</u>					
G3.19	Aggregate, base course material	m ³	20.00		
G3.20	Aggregate, course (dry)	t	20.00		
G3.21	Aggregate, fine (dry)	t	20.00		
G3.22	Aggregate, sub-base material	m ³	20.00		
G3.23	Asphalt concrete, base course	t	10.00		
G3.24	Bitumen 60/70	t	10.00		
G3.25	Bitumen 40/50	t	10.00		
G3.26	Bituminous asphaltic concrete, base course	t	10.00		
G3.27	Bituminous asphaltic concrete, wearing course	t	10.00		
G3.28	Borrow material	m ³	50.00		
G3.29	Brick, Standard size	nr	4,000.00		
G3.30	Cement; Ordinary Portland	t	3.00		
G3.31	Cement; Sulphate resistant	t	3.00		
G3.32	Concrete, Grade 15/20	m ³	5.00		
G3.33	Concrete, Grade 20/20	m ³	10.00		
G3.34	Concrete, Grade 25/20	m ³	10.00		

G3.35	Concrete, Grade 30/20	m ³	10.00		
G3.36	Concrete, Grade 40/20	m ³	5.00		
G3.37	Formwork, steel	m ²	60.00		
G3.38	Formwork, timber (smooth)	m ²	30.00		
G3.39	Fuel, diesel	ltr	150.00		
G3.40	Fuel, petrol	ltr	60.00		
G3.41	Fuel, kerosene	ltr	60.00		
G3.42	Kerbs, cast in-situ concrete	m	100.00		
G3.43	Kerbs, pre-cast concrete	m	100.00		
G3.44	Masonry block, concrete, 400 x 200 x 100 mm	nr	1,000.00		
G3.45	Paint, emulsion	ltr	12.00		
G3.46	Paint, enamel	ltr	6.00		
G3.47	Paving stones, interlocking precast concrete, 60mm	m ²	625.00		
G3.48	Paving stones, interlocking precast concrete, 80mm	m ²	400.00		
G3.49	Steel Pipe, ND 80mm, Straight Pipe	m	10.00		
G3.50	Steel Pipe, ND 100mm, Straight Pipe	m	10.00		
G3.51	Steel Pipe, ND 150mm, Straight Pipe	m	10.00		
G3.52	Steel Pipe, ND 200mm, Straight Pipe	m	10.00		
G3.53	Steel Pipe, ND 250mm, Straight Pipe	m	10.00		
G3.54	Steel Pipe, ND 300mm, Straight Pipe	m	10.00		
G3.55	Steel Pipe, ND 350mm, Straight Pipe	m	10.00		
G3.56	Steel Pipe, ND 400mm, Straight Pipe	m	10.00		
G3.57	Steel Pipe, ND 500mm, Straight Pipe	m	10.00		
G3.58	Steel Pipe, ND 600mm, Straight Pipe	m	10.00		
G3.59	Steel Pipe, ND 800mm, Straight Pipe	m	10.00		
G3.60	Welded Flange for Steel Pipe, ND 80mm	nr	5.00		
G3.61	Welded Flange for Steel Pipe, ND 100mm	nr	5.00		
G3.62	Welded Flange for Steel Pipe, ND 150mm	nr	5.00		
G3.63	Welded Flange for Steel Pipe, ND 200mm	nr	5.00		
G3.64	Welded Flange for Steel Pipe, ND 250mm	nr	5.00		
G3.65	Welded Flange for Steel Pipe, ND 300mm	nr	5.00		
G3.66	Welded Flange for Steel Pipe, ND 350mm	nr	5.00		
G3.67	Welded Flange for Steel Pipe, ND 400mm	nr	5.00		
G3.68	Welded Flange for Steel Pipe, ND 500mm	nr	5.00		
G3.69	Welded Flange for Steel Pipe, ND 600mm	nr	5.00		
G3.70	Welded Flange for Steel Pipe, ND 800mm	nr	5.00		
G3.71	H-section Steel	t	10.00		
G3.72	Channel Steel	t	10.00		

G3.73	Pipe, HDPE, 63 mm diameter	m	20.00		
G3.74	Pipe, HDPE, 110 mm diameter	m	20.00		
G3.75	Pipe, HDPE, 160 mm diameter	m	20.00		
G3.76	Pipe, HDPE, 225 mm diameter	m	20.00		
G3.77	Reinforcement, high tensile strength steel	t	1.00		
G3.78	Reinforcement, mild steel (not required)	t	0.00		-
G3.79	Sand	m ³	15.00		
G3.80	Wood, hardwood timber	m ³	5.00		
G3.81	Wood, softwood lumber	m ³	15.00		
G3.82	Wood, plywood, marine grade, 20 mm	m ²	15.00		
G3.83	Wood, plywood, standard grade, 20 mm	m ²	30.00		
Sub-total of Schedule DW-2 Carried to Part Summary					
Schedule 3: Plant & Equipment					
Equipment cost for days in service including upkeep and maintenance of equipment excludes operators and fuels.					
G3.84	Air compressor 5000-6000 litres with small tools	days	30.00		
G3.85	Asphalt coring machine, up to 200mm dia.	days	30.00		
G3.86	Asphalt paver	days	30.00		
G3.87	Asphalt/concrete saw	days	30.00		
G3.88	Bulldozer up to 100 HP	days	30.00		
G3.89	Bulldozer with ripper (32tons, Class D8)	days	30.00		
G3.90	Bulldozer (21tons, Class D7)	days	30.00		
G3.91	Bulldozer (15tons, Class D6)	days	30.00		
G3.92	Bucket loader up to 3 m3	days	30.00		
G3.93	Bucket loader over 3 m3	days	30.00		
G3.94	Concrete mixer, 6 m3	days	30.00		
G3.95	Concrete mixer, 9m3	days	30.00		
G3.96	Concrete pump, 50m3/hr	days	30.00		
G3.97	Concrete pump, 70m3/hr	days	30.00		
G3.98	Concrete vibrator (poker/screed) up to Diameter 50mm	days	30.00		
G3.99	Dump truck up to 5 tons	days	30.00		
G3.100	Dump truck from 5 to 10 tons	days	30.00		
G3.101	Dump truck over 10 tons	days	30.00		
G3.102	Excavator up to 0.2 m3, wheeled	days	30.00		
G3.103	Excavator up to 1 m3, wheeled	days	30.00		
G3.104	Forklift up to 5 tons	days	30.00		
G3.105	Generator up to 200 kVA	days	30.00		
G3.106	Grader up to 140 HP	days	30.00		
G3.107	Hiab truck, 6 tons or greater, with lifting arm	days	30.00		
G3.108	Lorry mounted crane, up to 25 tons	days	30.00		
G3.109	Mobile crane, 20 tons	days	30.00		
G3.110	Mobile crane, 45 tons	days	30.00		
G3.111	Pick-up truck, up to 2 tons	days	30.00		

G3.112	Pick-up truck, over 3 tons	days	30.00		
G3.113	Plate compactor	days	30.00		
G3.114	Pneumatic breaker	days	30.00		
G3.115	Pneumatic roller over 10 tons	days	30.00		
G3.116	Portable lighting set with generator	days	30.00		
G3.117	Vibratory roller, random type up to 3 tons	days	30.00		
G3.118	Vibratory roller, random type up to 8 tons	days	30.00		
G3.119	Water pump, 2 inch	days	30.00		
G3.120	Water pump, 4 inch	days	30.00		
G3.121	Welding machine, HDPE electrofusion, 300mm dia.	days	30.00		
G3.122	Welding machine, HDPE butt welding, 300mm dia.	days	30.00		
Sub-total for Schedule DW-3 Carried to Part Summary					
<u>Schedule DW-1: Labour</u>					
	Sub-total for labour				
	Percentage addition for profit and overhead [5%]				
	Total for Labour Carried to Summary				
<u>Schedule DW-2: Materials</u>					
	Sub-total for material				
	Percentage addition for profit and overhead [5%]				
	Total for Labour Carried to Summary				
<u>Schedule DW-3: Plant & Equipment</u>					
	Sub-total for plant & equipment				
	Percentage addition for profit and overhead [5%]				
	Total for Plant & Equipment Carried to Summary				
SUBTOTAL FOR BILL-G3 (DW1+DW2+DW3) (Carried Forward to Grand Summary)					

Name of Bidder _____

Signature of Bidder _____

BILL-MECHANICAL & PLUMBING NR-1M: PIPING SYSTEM INSIDE WTP (NEW STATION)

(Refer to Technical Specification)

Rates in USD

Item Nr	Description	Unit	Quantity	Rate (in \$)	Amount (in \$)
1M	PIPING SYSTEM INSIDE WTP (NEW STATION) Works include supply delivery and installation of mechanical and plumbing equipment as shown on the drawings and in the specifications or as directed by the Engineer				
	Scope includes supply, delivery, installation testing and commissioning of the equipment as specified and shown in the drawings or as directed by the Engineer (including bolts, nuts, gaskets, and other fittings).				
1M.1	Push-on joint DCIP Pipe ϕ 500mm, Class C30 (T-type)	m	140.00		
1M.2	Push-on joint, DCIP Pipe ϕ 300mm, Class C40 (T-type)	m	166.00		
1M.3	Double Flanges Steel Pipe ϕ 400mm, Schedule 40	m	116.00		
1M.4	Double Flanges Steel Pipe ϕ 300mm, Schedule 40	m	142.00		
1M.5	Double Flanges Steel Pipe ϕ 200mm, Schedule 40	m	191.00		
1M.6	Double Flanges Steel Pipe ϕ 100mm, Schedule 40	m	85.00		
1M.7	HDPE Pipe ϕ 160mm, PE 100, PN10	m	130.00		
1M.8	DCIP Double Socket Bend 90° ϕ 500mm including Self-Anchoring Joint	nr	1.00		
1M.9	DCIP Double Socket Bend 90° ϕ 300mm including Self-Anchoring Joint	nr	2.00		
1M.10	Steel Double Flange Bend 90° ϕ 400mm including rubber gaskets, bolts and nuts	nr	3.00		
1M.11	Steel Double Flange Bend 90° ϕ 300mm including rubber gaskets, bolts and nuts	nr	9.00		
1M.12	Steel Double Flange Bend 90° ϕ 200mm including rubber gaskets, bolts and nuts	nr	5.00		
1M.13	Steel Double Flange Bend 90° ϕ 100mm including rubber gaskets, bolts and nuts	nr	6.00		
1M.14	HDPE EF Elbow 90° ϕ 160mm, PE100, PN10	nr	3.00		
1M.15	Steel All Flange Tee ϕ 200mm including rubber gaskets, bolts and nuts	nr	4.00		
1M.16	Steel All Flange Reducing Tee ϕ 200* ϕ 150mm including rubber gaskets, bolts and nuts	nr	1.00		
1M.17	DCIP Double Socket Taper ϕ 500mm* ϕ 300mm including Self-Anchoring Joint	nr	1.00		
1M.18	Flange Gate Valve ϕ 300mm (MS) including rubber gaskets, bolts and nuts	nr	1.00		
1M.19	Flange Gate Valve ϕ 200mm (MS) including rubber gaskets, bolts and nuts	nr	4.00		
1M.20	Flange Gate Valve ϕ 150mm (MS) including rubber gaskets, bolts and nuts	nr	2.00		
1M.21	Flange Gate Valve ϕ 100mm (MS) including rubber gaskets, bolts and nuts	nr	1.00		
SUBTOTAL FOR BILL-MECHANICAL & PLUMBING NR-1M (Carried Forward to Grand Summary)					

Name of Bidder _____

Signature of Bidder _____

**BILL-MECHANICAL & PLUMBING NR-2M: STORMWATER & WATER SUPPLY SYSTEM
INSIDE WTP (NEW STATION)
(Refer to Technical Specification)**

Rates in USD

Item Nr	Description	Unit	Quantity	Rate (in \$)	Amount (in \$)
2M	STORMWATER & WATER SUPPLY SYSTEM INSIDE WTP (NEW STATION) Works include supply delivery and installation of mechanical and plumbing equipment as shown on the drawings and in the specifications or as directed by the Engineer				
	Scope includes supply, delivery, installation testing and commissioning of the equipment as specified and shown in the drawings or as directed by the Engineer				
2M.1	Concrete Pipe DN1000 for stormwater drainage	m	55.00		
2M.2	Concrete Pipe DN800 for stormwater drainage	m	530.00		
2M.3	Concrete Pipe DN600 for stormwater drainage	m	210.00		
2M.4	Concrete Pipe DN400 for stormwater drainage	m	555.00		
2M.5	Manhole 1200mmx1200mm Type A	nr	3.00		
2M.6	Manhole 800mmx800mm Type B	nr	26.00		
2M.7	Manhole 1200mmx1200mm Type C	nr	5.00		
2M.8	Manhole 800mmx800mm Type D	nr	20.00		
2M.9	PVC Pipe Class 8.5 ϕ 100mm	m	395.00		
2M.10	PVC Pipe Class 8.5 Elbow 45° ϕ 100mm	nr	148.00		
2M.11	PVC Pipe Class 8.5 Elbow 90° ϕ 100mm	nr	1.00		
2M.12	PVC Pipe Class 8.5 Y ϕ 100mm	nr	19.00		
2M.13	PVC Floor Drain ϕ 100mm	nr	51.00		
2M.14	PVC Screw Brass Clean Out ϕ 100mm	nr	10.00		
2M.15	HDPE Pipe, PE 100, PN10 ϕ 32mm	m	462.00		
2M.16	HDPE Pipe, PE 100, PN12.5 ϕ 25mm	m	4.00		
2M.17	HDPE Pipe, PE 100, PN16 ϕ 20mm	m	52.00		
2M.18	HDPE Pipe, PE 100, PN16 ϕ 15mm	m	164.00		
2M.19	Plastic Valve Box 200mm x 200mm	nr	20.00		
2M.20	HDPE Compression Elbow 90° ϕ 32mm, SDR11, PN16	nr	25.00		
2M.21	HDPE Compression Elbow 90° ϕ 15mm, SDR11, PN16	nr	54.00		

2M.22	HDPE Compression Elbow 45° ϕ 32mm, SDR11, PN16	nr	4.00		
2M.23	HDPE Compression Elbow 45° ϕ 15mm, SDR11, PN16	nr	6.00		
2M.24	HDPE Compression Tee ϕ 32mm, SDR11, PN16	nr	5.00		
2M.25	HDPE Compression Reducing Tee ϕ 32*25mm, SDR11, PN16	nr	1.00		
2M.26	HDPE Compression Reducing Tee ϕ 32*15mm, SDR11, PN16	nr	18.00		
2M.27	HDPE Compression Reducing Tee ϕ 25*15mm, SDR11, PN16	nr	2.00		
2M.28	HDPE Compression Reducing Tee ϕ 20*15mm, SDR11, PN16	nr	3.00		
2M.29	HDPE Compression Reducing Coupling ϕ 32*25mm, SDR11, PN16	nr	1.00		
2M.30	HDPE Compression Reducing Coupling ϕ 32*20mm, SDR11, PN16	nr	1.00		
2M.31	HDPE Compression Reducing Coupling ϕ 32*15mm, SDR11, PN16	nr	1.00		
2M.32	HDPE Compression Reducing Coupling ϕ 25*20mm, SDR11, PN16	nr	2.00		
2M.33	HDPE Compression Reducing Coupling ϕ 20*15mm, SDR11, PN16	nr	3.00		
2M.34	Concrete Valve Box 300mmx250mm	nr	8.00		
2M.35	Copper Gate Valve ϕ 1" including Double Male Threaded Adaptor	nr	3.00		
SUBTOTAL FOR BILL-MECHANICAL&PLUMBING NR-2M (Carried Forward to Grand Summary)					

Name of Bidder _____

Signature of Bidder _____

**BILL-MECHANICAL & PLUMBING NR-3M: INTAKE STATION (NEW STATION) & RAW
WATER TRANSMISSION PIPELINE**

(Refer to Technical Specification)

Rates in USD

Item Nr	Description	Unit	Quantity	Rate (in \$)	Amount (in \$)
3M.1	INTAKE STATION (NEW STATION)				
	Works include supply delivery and installation, testing and commissioning of mechanical and plumbing equipment as shown on the drawings and in the specifications or as directed by the Engineer				
3M.1.1	Automatic Detachment Type Submersible Motor Capacity: Q= 1.15 m ³ /min @ H= 20 m. 3Ph 400V 50Hz, 7.5kW	set	4.00		
	Submersible Pump Auto-Coupling System including gaskets, Chain, guide pipe, bolts and nuts and other completed accessories	set	6.00		
3M.1.2	Stainless Steel Pipe Bellow flexible joint φ80mm, Reducing Tee φ300*80mm, PN16 including rubber gaskets, bolts and nuts	set	1.00		
3M.1.3	Stainless Steel Pipe Bellow flexible joint φ100mm, Reducing Tee φ300*100mm, Stainless Steel Pipe φ100mm, PN16 including rubber gaskets, bolts and nuts and other completed accessories	set	1.00		
3M.1.4	Stainless Steel Pipe Bellow flexible joint φ150mm, Reducing Tee φ300*150mm, PN16 including rubber gaskets, bolts and nuts	set	6.00		
3M.1.5	Swing Check Valve φ150mm, PN16 including rubber gaskets, bolts and nuts	set	6.00		
3M.1.6	Gear Operator Wafer Butterfly Valve φ80mm, PN16 including rubber gaskets, bolts and nuts and other completed accessories	set	1.00		
3M.1.7	Gear Operator Wafer Butterfly Valve φ100mm, PN16 including rubber gaskets, bolts and nuts and other completed accessories	set	1.00		
3M.1.8	Gear Operator Wafer Butterfly Valve φ150mm, PN16 including rubber gaskets, bolts and nuts and other completed accessories	set	6.00		
3M.1.9	Gear Operator Wafer Butterfly Valve φ300mm, PN16 including rubber gaskets, bolts and nuts and other completed accessories	set	1.00		

3M.1.10	Motorized Control Butterfly Valve ϕ 300mm, PN 16 including rubber gaskets, bolts and nuts	set	3.00		
	Stainless Steel Reducing pipe ϕ 300*400mm, tee ϕ 400*400mm, Air valve ϕ 50mm, PN16 including rubber gaskets, bolts and nuts and other completed accessories	set	1.00		
	Supply and installation of stainless steel safety ladder (round type)	set	8.00		
3M.1.11	Supply and install of Pump Manifold (Carbon Steel Pipe, Schedule 40), connect from submersible motor pumps to outlet chamber, including all various fittings, dismantling joint and other necessary items as shown in drawings no. ST-IWS-C-004.1.2-02, ST-IWS-C-004.1.2-03, ST-IWS-C-004.1.2-04 & ST-IWS-C-004.1.2-05	nr	1.00		
3M.1.12	Supply and install of fish-bone Manifold (Carbon Steel Pipe, Schedule 40) for the purpose of maintenance, including all various fittings, dismantling joints and other necessary items as shown in drawings no. ST-IWS-C-004.1.2-03, ST-IWS-C-004.1.2-04 & ST-IWS-C-004.1.2-05	nr	1.00		
3M.1.13	Supply and installation of Stainless Steel Gate/Knife gate valve 700mm x 700mm (with screen protection cover the gate valve) including transport, operating gear, finishing and all labor, equipment, tools and incidentals necessary to install the Steel Gate/Knife gate valves as shown in drawings no. ST-IWS-C-004.1.2-03 & ST-IWS-C-004.1.2-04	Nr	3.00		
	Supply and install of Pipe Agitator (Stainless Steel Pipe, ϕ 80mm, PN16), connect from outlet chamber to bottom, including all various fittings, dismantling joint and other necessary items as shown in drawings no. ST-IWS-C-004.1.2-02, ST-IWS-C-004.1.2-03, ST-IWS-C-004.1.2-04 & ST-IWS-C-004.1.2-05	Nr	1.00		
3M.1.14	Pressure Transmitter Range 5.0kg/cm ²	nr	1.00		
3M.1.15	Electromagnetic Flowmeter(D300mm) complete with valves and by-pass pipes	set	1.00		
3M.1.16	Supply and installation of lifting hoist with chain hoist, 2-ton capacity	set	1.00		

RAW WATER TRANSMISSION PIPELINE					
3M.2	Works include supply delivery and installation, testing and commissioning of mechanical and plumbing equipment as shown on the drawings and in the specifications or as directed by the Engineer				
3M.2.1	Raw water transmission Push-on joint, DCIP Pipe ϕ 400mm, Class C30 (T-Type), including soil excavation, connection and installation from Intake Station to WTP station	m	2,600.00		
3M.2.2	DCIP Double Socket 90° Bend ϕ 400 including Self-Anchoring Joint and other completed accessories	set	6.00		
3M.2.3	DCIP Double Socket 45° Bend ϕ 400 including Self-Anchoring Joint and other completed accessories	set	6.00		
3M.2.4	DCIP Double Socket 11.25° Bend ϕ 400 including Self-Anchoring Joint and other completed accessories	set	1.00		
3M.2.5	DCIP Flange Socket ϕ 400 including Self-Anchoring Joint and other completed accessories	set	4.00		
3M.2.6	DCIP Double Socket Level Invert Tee With Flanged Brach ϕ 400*100 including Self-Anchoring Joint and other completed accessories	set	2.00		
3M.2.7	MS Flange Gate valve ϕ 100mm including rubber gaskets, bolts and nuts, valve chamber (Drained/Washed Out)	set	2.00		
3M.2.8	Double Air relief (Automatic Vacuum Type) valve ϕ 100mm including rubber gaskets, bolts and nuts, valve chamber	set	2.00		
SUBTOTAL FOR BILL-MECHANICAL&PLUMBING NR-3M (Carried Forward to Grand Summary)					

Name of Bidder _____

Signature of Bidder _____

BILL-MECHANICAL & PLUMBING NR-4M: CHEMICAL BUILDING (NEW STATION)

(Refer to Technical Specification)

Rates in USD

Item Nr	Description	Unit	Quantity	Rate (in \$)	Amount (in \$)
4M	CHEMICAL BUILDING (NEW STATION)				
	Works include supply delivery and installation of mechanical and plumbing equipment as shown on the drawings and in the specifications or as directed by the Engineer				
	Scope includes supply, delivery, installation testing and commissioning of the equipment as specified and shown in the drawings or as directed by the Engineer				
A	SEWAGE PIPE SYSTEM				
4M.1	PVC Pipe Class 8.5 ϕ 100mm	m	16.00		
4M.2	PVC Pipe Class 8.5 ϕ 80mm	m	45.00		
4M.3	PVC Pipe Class 8.5 ϕ 55mm	m	41.00		
4M.4	PVC Pipe Class 8.5 ϕ 40mm	m	14.00		
4M.5	PVC Pipe Class 8.5 ϕ 35mm	m	7.00		
4M.6	PVC Y Class 8.5 ϕ 100mm	nr	2.00		
4M.7	PVC Y Class 8.5 ϕ 80mm	nr	5.00		
4M.8	PVC Reducing Y Class 8.5 ϕ 80*55mm	nr	3.00		
4M.9	PVC Reducing Y Class 8.5 ϕ 80*40mm	nr	2.00		
4M.10	PVC Y Class 8.5 ϕ 55mm	nr	2.00		
4M.11	PVC Reducing Tee Class 8.5 ϕ 100*55mm	nr	1.00		
4M.12	PVC Reducing Tee Class 8.5 ϕ 55*35mm	nr	1.00		
4M.13	PVC Tee Class 8.5 ϕ 100mm	nr	2.00		
4M.14	PVC Tee Class 8.5 ϕ 55mm	nr	3.00		
4M.15	PVC Tee Class 8.5 ϕ 40mm	nr	2.00		
4M.16	PVC TY Class 8.5 ϕ 100mm	nr	1.00		
4M.17	PVC Reducing TY Class 8.5 DN ϕ 80*55mm	nr	1.00		
4M.18	PVC Elbow 45° Class 8.5 ϕ 100mm	nr	7.00		
4M.19	PVC Elbow 45° Class 8.5 ϕ 80mm	nr	18.00		
4M.20	PVC Elbow 45° Class 8.5 ϕ 55mm	nr	9.00		
4M.21	PVC Elbow 45° Class 8.5 ϕ 40mm	nr	4.00		
4M.22	PVC Elbow 90° Class 8.5 ϕ 55mm	nr	17.00		

4M.23	PVC Elbow 90° Class 8.5 ϕ 35mm	nr	5.00		
4M.24	PVC Reducing Socket Class 8.5 DN ϕ 100*55mm	nr	1.00		
4M.25	PVC Reducing Socket Class 8.5 DN ϕ 80*55mm	nr	1.00		
4M.26	PVC Reducing Socket Class 8.5 DN ϕ 55*35mm	nr	1.00		
4M.27	PVC Reducing Socket Class 8.5 DN ϕ 40*35mm	nr	2.00		
4M.28	PVC Screw Brass Clean Out ϕ 80mm	nr	4.00		
4M.29	PVC Vent Cap ϕ 55mm	nr	2.00		
4M.30	PVC U-Trap ϕ 80mm	nr	1.00		
4M.31	Kitchen Drain ϕ 80mm	nr	1.00		
4M.32	Floor Drain ϕ 80mm	nr	1.00		
4M.33	Floor Drain ϕ 55mm	nr	4.00		
B	COLD WATER PIPE SYSTEM				
4M.34	PPR-80, SDR6, PN 16, Pipe ϕ 32mm	m	34.00		
4M.35	PPR-80, SDR6, PN 16, Pipe ϕ 25mm	m	22.00		
4M.36	PPR-80, SDR6, PN 16, Pipe ϕ 20mm	m	28.00		
4M.37	Copper Gate Valve ϕ 1" including male unions	nr	4.00		
4M.38	Copper Check Valve ϕ 1" including male unions	nr	1.00		
4M.39	Copper Gate Valve ϕ 3/4" including male unions	nr	2.00		
4M.40	Class C Water Meter ϕ 1" including male unions	nr	1.00		
4M.41	PPR ϕ 32mm Elbow 90°, PN 16	nr	13.00		
4M.42	PPR ϕ 25mm Elbow 90°, PN 16	nr	17.00		
4M.43	PPR ϕ 20mm Elbow 90°, PN 16	nr	6.00		
4M.44	PPR ϕ 32mm Equal Tee, PN 16	nr	2.00		
4M.45	PPR ϕ 25mm Equal Tee, PN 16	nr	3.00		
4M.46	PPR ϕ 32*25mm Reducing Tee, PN 16	nr	3.00		
4M.47	PPR ϕ 32*20mm Reducing Tee, PN 16	nr	1.00		
4M.48	PPR ϕ 32*20mm Reducer Socket, PN 16	nr	2.00		
4M.49	PPR ϕ 25*20mm Reducer Socket, PN 16	nr	1.00		

4M.50	Hose Bibb ϕ 1/2" including Brass Faucet Sockets	nr	1.00		
4M.51	PPR ϕ 25mm Elbow 90°, PN 16 including metal female threats	nr	4.00		
4M.52	PPR ϕ 20mm Elbow 90°, PN 16 including metal female threats	nr	3.00		
4M.53	Type: Poly-Aluminum Chloride PAC-Dosing pump Diaphragm Metering Type Pump (VFD) Capacity: 1.3l/min \times 2.0kg/cm ² PAC Supply Ejector 25A 3Ph 400V 50Hz, 0.2kW	nr	2.00		
4M.54	PAC Dosing Device Batch reactor Dissolving Tank: Vertical Cylindrical PE tank, 2m ³ (D1.4m \times H1.85m) Agitator: Vertical-axis (2 stages), 4 Pitched Blade Turbine Impeller 3Ph 400V 50Hz, 0.75kW	nr	2.00		
4M.55	PAC Bulk Bag (25kg/bag) per month	nr	60.00		
4M.56	LIME Dosing Pump Mono Flex Pump (VFD) Capacity: 0.4L/min \times 2.0kg/cm ² LIME Supply Ejector 25A 3Ph 400V 50Hz, 0.2kW	nr	2.00		
4M.57	LIME Dosing Device Dissolving Tank: Vertical Cylindrical PE tank, 1.0m ³ (D1.1m \times H1.5m) Agitator: Vertical-axis (2 stages), 4 Pitched Blade Turbine Impeller 3Ph 400V 50Hz, 0.75kW	nr	2.00		
4M.58	LIME Bulk Bag (25kg/bag) per month	nr	35.00		
4M.59	Pre Ca (OCI) ₂ Dosing Pump Diaphragm Metering Type Pump (VFD) 0.5L/min \times 2.0kg/cm ² Ca (OCI) ₂ Supply Ejector 32A 3Ph 400V 50Hz, 0.2Kw	nr	2.00		
4M.60	Post Ca (OCI) ₂ Dosing Pump Diaphragm Metering Type Pump (VFD) 0.25L/min \times 2.0kg/cm ² Ca (OCI) ₂ Supply Ejector 20A 3Ph 400V 50Hz, 0.2kW	nr	2.00		
4M.61	Ca (OCI) ₂ Dosing Device Dissolving Tank: Vertical Cylindrical PE tank, 1.5m ³ (D1.25m \times H1.5m) Agitator: Vertical-axis (2 stages), 4 Pitched Blade Turbine Impeller 3Ph 400V 50Hz, 0.2kW	nr	2.00		

4M.62	Ca (OCI)2 Bulk Bag (25kg/bag) per month	nr	55.00		
4M.63	PVC Pipe Class 13.5 ϕ 90mm	m	10.00		
4M.64	PVC Pipe Class 13.5 ϕ 25mm	m	89.00		
4M.65	PVC Pipe Class 13.5 ϕ 20mm	m	4.00		
4M.66	PVC Pipe Class 13.5 ϕ 18mm	m	63.00		
4M.67	PVC Tee Class 8.5 ϕ 25mm	nr	20.00		
4M.68	PVC Tee Class 8.5 ϕ 18mm	nr	27.00		
4M.69	PVC Reducing Tee Class 8.5 ϕ 80*55mm	nr	6.00		
4M.70	PVC Reducing Tee Class 8.5 ϕ 25*18mm	nr	16.00		
4M.71	PVC Reducing Tee Class 8.5 ϕ 20*18mm	nr	8.00		
4M.72	PVC Elbow 90° Class 8.5 ϕ 25mm	nr	58.00		
4M.73	PVC Elbow 90° Class 8.5 ϕ 20mm	nr	23.00		
4M.74	PVC Elbow 90° Class 8.5 ϕ 18mm	nr	38.00		
4M.75	PVC Elbow 45° Class 8.5 ϕ 80mm	nr	2.00		
4M.76	PVC Elbow 45° Class 8.5 ϕ 25mm	nr	2.00		
4M.77	PVC Reducing Socket Class 8.5 ϕ 55*25mm	nr	6.00		
4M.78	PVC Reducing Socket Class 8.5 ϕ 25*18mm	nr	3.00		
4M.79	PVC End Cap Class 8.5 ϕ 80mm	nr	1.00		
4M.80	PVC End Cap Class 8.5 ϕ 25mm	nr	8.00		
4M.81	Copper Ball Valve ϕ 1" 1/4 including Double Male Threaded Adaptor	nr	2.00		
4M.82	Copper Ball Valve ϕ 1" including Double Male Threaded Adaptor	nr	27.00		
4M.83	Copper Ball Valve ϕ 1/2" including Double Male Threaded Adaptor	nr	18.00		
4M.84	Back Pressure Regulator ϕ 1/2" including all accessories	nr	6.00		
4M.85	Hose Connector ϕ 1/2" including all accessories	nr	6.00		
4M.86	Check Valve ϕ 1" including Double Male Threaded Adaptor	nr	2.00		
4M.87	PVC Flexible Pipe ϕ 1" 1/4 Class 13.5	nr	2.00		
4M.88	Flexible Pipe ϕ 25 1" Class 13.5	nr	2.00		
4M.89	Safety Valve ϕ 1/2" including double male threaded adaptor	nr	6.00		
4M.90	Calibration Column ϕ 1/2" including double male threaded adaptor	nr	6.00		

4M.91	Metering Pump ϕ 1/2" including all accessories	nr	6.00		
4M.92	Motorized Hoist 0.5Ton including all accessories	nr	1.00		
C	PLUMBING SERVICE				
4M.93	Exhaust Fan with Air Flow: 38 l/s With Auto Shutter ϕ 196	nr	1.00		
4M.94	Exhaust Fan with Air Flow: 8 l/s	nr	1.00		
4M.95	Exhaust Fan with Air Flow: 14 l/s With Auto Shutter ϕ 196	nr	1.00		
4M.96	Exhaust Fan with Air Flow: 44 l/s With Auto Shutter ϕ 246	nr	1.00		
4M.97	Exhaust Fan with Air Flow: 32 l/s With Auto Shutter ϕ 196	nr	1.00		
4M.98	Exhaust Fan with Air Flow: 82 l/s With Auto Shutter ϕ 246	nr	1.00		
4M.99	Exhaust Fan with Air Flow: 9 l/s With Auto Shutter ϕ 196	nr	1.00		
4M.100	Exhaust Fan with Air Flow: 84 l/s With Auto Shutter ϕ 246	nr	1.00		
4M.101	Ceiling Fan with Air Flow: 8 l/s	nr	1.00		
4M.102	Air Conditioning 2.0 HP including fixing supports	nr	2.00		
4M.103	Copper Pipe ϕ 6.35mm for air conditioning	m	18.00		
4M.104	Copper Pipe ϕ 12.7mm for air conditioning	m	18.00		
4M.105	Closed Cell Insulation ϕ 6.35 thk1 9mm for air conditioning pipe	m	18.00		
4M.106	Closed Cell Insulation ϕ 12.7 thk1 9mm for air conditioning pipe	m	18.00		
4M.107	Electrical Flexible Conduit for air conditioning	m	18.00		
4M.108	PVC Pipe Class 8.5 ϕ 20mm for air conditioning	m	20.00		
4M.109	PVC Elbow 90° Class 8.5 ϕ 20mm for air conditioning	nr	10.00		
4M.110	Fire Extinguisher 9kg (ABC)	nr	6.00		
4M.111	Exhaust Air Louver 150mmx150mm	nr	1.00		
4M.112	Flexible w/o insulation ϕ 100mm	m	1.00		
4M.113	Galvanize Steel Sheet No. 18	m	2.00		
SUBTOTAL FOR BILL-MECHANICAL&PLUMBING NR-4M (Carried Forward to Grand Summary)					

Name of Bidder _____

Signature of Bidder _____

BILL-MECHANICAL & PLUMBING NR-5M: WATER TREATMENT PLANT (NEW STATION)

(Refer to Technical Specification)

Rates in USD

Item Nr	Description	Unit	Quantity	Rate (in \$)	Amount (in \$)
5M	WATER TREATMENT PLANT BUILDING (NEW STATION)				
	Works include supply delivery and installation of mechanical and plumbing equipment as shown on the drawings and in the specifications or as directed by the Engineer				
	Scope includes supply, delivery, installation testing and commissioning of the equipment as specified and shown in the drawings or as directed by the Engineer				
A	MECHANICAL SERVICE				
5M.1	Backwashing drain Valve for Rapid sand filter Motorized butterfly valve (Open/Close) DN 400mm 3Ph 400V 50Hz, 0.75kW (Includes MCC and control components)	set	4.00		
5M.2	Influent/Filtered Water/Backwashing Valve for Rapid sand filter Motorized butterfly valve (Open/Close) DN 300mm 3Ph 400V 50Hz, 0.2kW (Includes MCC and control components)	set	12.00		
5M.3	Backwashing Air Valve for Rapid sand filter Motorized butterfly valve (Open/Close) DN 100mm 3Ph 400V 50Hz, 0.2kW (Includes MCC and control components)	set	4.00		
5M.4	Drain Valve for Rapid sand filter Motorized butterfly valve (Open/Close) DN 150mm 3Ph 400V 50Hz, 0.2kW(Includes MCC and control component)	set	4.00		
5M.5	Submersible Motor Pump (auto coupling type) With Control Panel Q= 0.1m ³ /min @ H= 10m, 3Ph 400V 50Hz, 1.5kW	nr	2.00		
5M.6	Quick discharge connection (QDC)	nr	2.00		
5M.7	Air blower for Rapid sand filter Rotary Roots Blower with Control Panel Capacity: Q=11.5m ³ /min x 5000mmAq, 3Ph 400V 50Hz, 15kW (Includes Blower Silencer components)	set	2.00		
5M.8	Water Filter Through (Stainless Steel, Class 304), size 2600x400x450	nr	8.00		
5M.9	Flange Check Valve ϕ 100mm, PN16, including rubber gaskets, bolts and nuts	nr	2.00		
5M.10	Flange Ball Valve ϕ 100mm, PN16, including rubber gaskets, bolts and nuts	nr	2.00		
5M.11	Flange Butterfly Valve ϕ 300mm, PN16, including rubber gaskets, bolts and nuts	nr	3.00		

5M.12	Flange Gate Valve ϕ 250mm, PN16, including rubber gaskets, bolts and nuts	nr	1.00		
5M.13	Flange Gate Valve ϕ 100mm including rubber gaskets, bolts and nuts (for sedimentation basin drained)	nr	30.00		
5M.14	Flange Check Valve ϕ 150mm, PN16, including rubber gaskets, bolts and nuts	nr	1.00		
5M.15	Flange Check Valve ϕ 2", PN16, including rubber gaskets, bolts and nuts	nr	2.00		
5M.16	Flange Gate Valve ϕ 2" including rubber gaskets, bolts and nuts	nr	2.00		
5M.17	Flange Gate Valve ϕ 100mm, including rubber gaskets, bolts and nuts (for checking sludge)	nr	28.00		
5M.18	Self-anchored dismantling joint ϕ 250mm including all accessories	nr	1.00		
5M.19	Self-anchored dismantling joint ϕ 150mm including all accessories	nr	1.00		
5M.20	Flange Carbon Steel Pipe ϕ 400mm, Schedule 40 (backwashing water)	m	4.00		
5M.21	Flange Carbon Steel Pipe ϕ 300mm, Schedule 40 (filtered water to clear water reservoir)	m	89.00		
5M.22	Flange Carbon Steel Pipe ϕ 250mm, Schedule 40	m	25.00		
5M.23	PVC Pipe Class 13.5 ϕ 200mm	m	8.00		
5M.24	PVC Perforated Pipe Class 13.5 ϕ 100mm	m	635.00		
5M.25	Flange Carbon Steel Pipe ϕ 100mm, Schedule 40 (for Drain)	m	20.00		
5M.26	Flange Carbon Steel Pipe ϕ 100mm, Schedule 40 (Air Scour)	m	92.00		
5M.27	Carbon Steel Flange Elbow 90° ϕ 400mm, Schedule 40, including rubber gaskets, bolts and nuts	nr	1.00		
5M.28	Carbon Steel Flange Elbow 90° ϕ 300mm, Schedule 40, including rubber gaskets, bolts and nuts	nr	9.00		
5M.29	Carbon Steel Flange Elbow 90° ϕ 250mm, Schedule 40, including rubber gaskets, bolts and nuts	nr	3.00		
5M.30	Carbon Steel Flange Elbow 90° ϕ 100mm, Schedule 40, including rubber gaskets, bolts and nuts	nr	1.00		
5M.31	Carbon Steel Flange Tee ϕ 300mm, Schedule 40, including rubber gaskets, bolts and nuts	nr	10.00		
5M.32	Carbon Steel Flange Tee ϕ 100mm, Schedule 40, including rubber gaskets, bolts and nuts	nr	14.00		
5M.33	PVC Tee Class 13.5 ϕ 100mm	nr	36.00		

5M.34	Carbon Steel Plenum $\phi 300 \times 500$ mm, Schedule 40, single flange including rubber gaskets, bolts and nuts	nr	4.00		
5M.35	Carbon Steel Plenum $\phi 100 \times 150$ mm, Schedule 40, single flange including rubber gaskets, bolts and nuts	nr	8.00		
B	PLUMBING SERVICE				
5M.36	Exhaust Fan with Air Flow: 225 l/s	nr	3.00		
5M.37	Air Conditioning 2.0 HP including fixing supports	nr	2.00		
5M.38	Copper Pipe $\phi 6.35$ for air conditioning	m	18.00		
5M.39	Copper Pipe $\phi 12.7$ for air conditioning	m	18.00		
5M.40	Closed Cell Insulation $\phi 6.35$ thk 1.9mm	m	18.00		
5M.41	Closed Cell Insulation $\phi 12.7$ thk 1.9mm	m	18.00		
5M.42	Electrical Flexible Conduit $\phi 10$ mm	m	18.00		
5M.43	PVC Pipe Class 8.5 $\phi 20$ mm	m	20.00		
5M.44	PVC Elbow 90° Class 8.5 $\phi 20$ mm	nr	10.00		
5M.45	Fire Extinguisher 9kg (ABC)	nr	3.00		
SUBTOTAL FOR BILL-MECHANICAL&PLUMBING NR-5M (Carried Forward to Grand Summary)					

Name of Bidder _____

Signature of Bidder _____

**BILL-MECHANICAL & PLUMBING NR-6M: CLEAR WATER RESERVOIR & PUMP ROOM
(NEW STATION)**

(Refer to Technical Specification)

Rates in USD

Item Nr	Description	Unit	Quantity	Rate (in \$)	Amount (in \$)
6M	CLEAR WATER RESERVOIR & PUMP ROOM (NEW STATION)				
	Works include supply delivery and installation of mechanical and plumbing equipment as shown on the drawings and in the specifications or as directed by the Engineer				
	Scope includes supply, delivery, installation testing and commissioning of the equipment as specified and shown in the drawings or as directed by the Engineer				
A	MECHANICAL SERVICE				
6M.1	Distribution Booster Pump(VFD) Horizontal Single Suction Volute Pump Capacity: Q= 2.3 m ³ /min @ H= 60m, 3Ph 400V 50Hz, 45kW	nr	4.00		
6M.2	Backwashing Water Pump for Rapid sand filter(VFD) Horizontal Single Suction Volute Pump Capacity: Q= 4.6m ³ /min @ H= 8m, 3Ph 400V 50Hz, 15kW	nr	3.00		
6M.3	Submersible Motor Pump (auto coupling type) With Control Panel Capacity: Q= 0.1m ³ /min @ H= 10m, 3Ph 400V 50Hz, 1.5kW	set	2.00		
6M.4	Maintenance Crane (Overhead Crane, 2 ton)	set	1.00		
6M.5	Flange Carbon Steel Pipe ϕ 500mm, Schedule 40 (outlet pipe from clear water reservoir)	m	27.00		
6M.6	Flange Carbon Steel Pipe ϕ 400mm, Schedule 40 (from filtration basin to clear water reservoir)	m	27.00		
6M.7	Flange Carbon Steel Pipe ϕ 350mm, Schedule 40 (discharged piped from pump to piped network)	m	24.00		
6M.8	Flange Carbon Steel Pipe ϕ 300mm, Schedule 40 (from Backwash pump to filtration basin)	m	62.00		
6M.9	Flange Carbon Steel Pipe ϕ 100mm, Schedule 40 (for drain)	m	35.00		
6M.10	HDPE Pipe ϕ 63mm, PE 100, PN10 (for water supply inside new station)	m	36.00		
6M.11	PVC Pipe Class 13.5 ϕ 18mm	m	8.00		
6M.12	Flange Carbon Steel Eccentric Reducer ϕ 200mm, Schedule 40, including rubber gaskets, bolts and nuts	nr	7.00		
6M.13	Flange Carbon Steel Concentric Reducer ϕ 200mm, Schedule 40, including rubber gaskets, bolts and nuts	nr	7.00		
6M.14	Flange Gate Valve ϕ 500mm, PN16, including rubber gaskets, bolts and nuts	nr	2.00		
6M.15	Flange Butterfly Valve ϕ 400mm, PN16, including rubber gaskets, bolts and nuts	nr	2.00		
6M.16	Flange Butterfly Valve ϕ 300mm, PN16, including rubber gaskets, bolts and nuts	nr	8.00		
6M.17	Flange Gate Valve ϕ 300mm, PN16, including rubber gaskets, bolts and nuts	nr	6.00		

6M.18	Gate Valve ϕ 2" including male threaded adaptors (for water supply inside new station)	nr	3.00		
6M.19	Check Valve ϕ 2" including male threaded adaptors (for water supply inside new station)	nr	2.00		
6M.20	Pressure Reducing Valve ϕ 2" including male threaded adaptors (for water supply inside new station)	nr	1.00		
6M.21	Flange Check Valve ϕ 250mm, PN16, including rubber gaskets, bolts and nuts	nr	3.00		
6M.22	Flange Check Valve ϕ 200mm, PN16, including rubber gaskets, bolts and nuts	nr	3.00		
6M.23	Flange Butterfly Valve ϕ 250mm, PN16, including rubber gaskets, bolts and nuts	nr	3.00		
6M.24	Flange Butterfly Valve ϕ 200mm, PN16, including rubber gaskets, bolts and nuts	nr	3.00		
6M.25	Flange Pressure Relief Valve ϕ 150mm, PN16, including rubber gaskets, bolts and nuts	nr	2.00		
6M.26	Flange Gate Valve ϕ 100mm, PN16, including rubber gaskets, bolts and nuts	nr	2.00		
6M.27	Self-anchored dismantling joint ϕ 500mm including rubber gaskets, bolts and nuts	nr	6.00		
6M.28	Self-anchored dismantling joint ϕ 300mm including rubber gaskets, bolts and nuts	nr	2.00		
6M.29	Self-anchored dismantling joint ϕ 200mm including rubber gaskets, bolts and nuts	nr	12.00		
6M.30	Self-anchored dismantling joint ϕ 100mm including rubber gaskets, bolts and nuts	nr	4.00		
6M.31	Pipe Blind Flange ϕ 200mm including rubber gaskets, bolts and nuts	nr	1.00		
6M.32	Pipe Blind Flange ϕ 100mm including rubber gaskets, bolts and nuts	nr	3.00		
6M.33	HDPE EF Stub Flange ϕ 110mm	nr	3.00		
6M.34	Carbon Steel Flange Tee ϕ 500mm, Schedule 40, including rubber gaskets, bolts and nuts	nr	2.00		
6M.35	Carbon Steel Flange Tee ϕ 400mm, Schedule 40, including rubber gaskets, bolts and nuts	nr	1.00		
6M.36	Carbon Steel Flange Reducing Tee ϕ 500*200mm, Schedule 40, including rubber gaskets, bolts and nuts	nr	9.00		
6M.37	Carbon Steel Flange Tee ϕ 200mm, Schedule 40, including rubber gaskets, bolts and nuts	nr	3.00		
6M.38	HDPE Compression Tee ϕ 63mm, SDR11, PN16	nr	7.00		
6M.39	Carbon Steel Flange Elbow 90° ϕ 500mm, Schedule 40, including rubber gaskets, bolts and nuts	nr	7.00		
6M.40	Carbon Steel Flange Elbow 90° ϕ 300mm, Schedule 40, including rubber gaskets, bolts and nuts	nr	16.00		
6M.41	Carbon Steel Flange Elbow 90° ϕ 200mm, Schedule 40, including rubber gaskets, bolts and nuts	nr	4.00		
6M.42	HDPE Compression Elbow 90° ϕ 63mm, SDR11, PN16	nr	12.00		
6M.43	HDPE Compression Elbow 90° ϕ 20mm, SDR11, PN16	nr	1.00		

6M.44	Pressure Transmitter Range 5.0kg/cm2	nos	2.00		
6M.45	Flowmeter ϕ 350 Electromagnetic. Flowmeter complete with valves and by-pass pipes including concrete chamber (clear water storage to water distribution network)	nr	2.00		
6M.46	Class C Water Meter ϕ 2" including male unions	nr	1.00		
6M.47	Tapping Collar with threaded nozzle ϕ 300*50mm, PN16, including saddle and brackets (stainless steel 304), bolts and nuts	nr	1.00		
6M.48	Tapping Collar with threaded nozzle ϕ 350*30mm, PN16, including saddle and brackets (stainless steel 304), bolts and nuts	nr	2.00		
6M.49	HDPE Compression Male Adaptor ϕ 32mm, SDR11, PN16	nr	2.00		
6M.50	HDPE Compression Reducing Coupling ϕ 32*25mm, SDR11, PN16	nr	1.00		
6M.51	HDPE Compression Reducing Coupling ϕ 32*20mm, SDR11, PN16	nr	1.00		
6M.52	Chain	nr	2.00		
6M.53	Cat Ladder	nr	2.00		
B	PLUMBING SERVICE				
6M.54	Exhaust Fan with air flow: 2014 l/s	nr	1.00		
6M.55	Exhaust Fan with air flow: 270 l/s	nr	1.00		
6M.56	Air Conditioning 2.0 HP including fixed supports	nr	2.00		
6M.57	Copper Pipe ϕ 6.35 for air conditioning	m	30.00		
6M.58	Copper Pipe ϕ 12.7 for air conditioning	m	30.00		
6M.59	Closed Cell Insulation ϕ 6.35 thk1.9mm	m	30.00		
6M.60	Closed Cell Insulation ϕ 12.7 thk1.9mm	m	30.00		
6M.61	Electrical Flexible Conduit ϕ 10mm	m	30.00		
6M.62	PVC Pipe Class 8.5 ϕ 20mm	m	20.00		
6M.63	PVC Elbow 90° Class 8.5 ϕ 20mm	nr	12.00		
6M.64	Fire Extinguisher 9kg (ABC)	nr	2.00		
SUBTOTAL FOR BILL-MECHANICAL&PLUMBING NR-6M (Carried Forward to Grand Summary)					

Name of Bidder _____

Signature of Bidder _____

BILL-MECHANICAL & PLUMBING NR-7M: DRAINAGE BASIN (NEW STATION)

(Refer to Technical Specification)

Rates in USD

Item Nr	Description	Unit	Quantity	Rate (in \$)	Amount (in \$)
7M	DRAINAGE BASIN (NEW STATION)				
	Works include supply delivery and installation of mechanical and plumbing equipment as shown on the drawings and in the specifications or as directed by the Engineer				
	Scope includes supply, delivery, installation testing and commissioning of the equipment as specified and shown in the drawings or as directed by the Engineer				
A	PLUMBING SERVICE				
7M.1	Drainage basin pump (To River or R.W) With Control Panel Automatic Detachment Type Submersible Motor Pump Capacity: Q= 0.3 m ³ /min @ H= 15m 3Ph 400V 50Hz, 3.7kW	nr	2.00		
7M.2	Drainage basin pump (To Sludge pit) With Control Panel Automatic Detachment Type Submersible Motor Pump Capacity: Q= 0.3 m ³ /min @ H= 6m 3Ph 400V 50Hz, 1.5kW	nr	2.00		
7M.3	Flange Carbon Steel Pipe ϕ 400mm, Schedule 40 (inlet pipe from filtration basin)	m	4.00		
7M.4	Flange Carbon Steel Pipe ϕ 200mm, Schedule 40 (inlet pipe from sedimentation basin)	m	4.00		
7M.5	Flange Carbon Steel Pipe ϕ 100mm, Schedule 40 (inlet pipe from sludge drying bed and filtration basin)	m	8.00		
7M.6	HDPE Pipe, PE 100, PN10 ϕ 225mm (from drainage to river/drainage system)	m	16.00		
7M.7	HDPE Pipe, PE 100, PN10 ϕ 160mm (from drainage to river/drainage system)	m	4.00		
7M.8	HDPE Pipe, PE 100, PN10 ϕ 110mm (from drainage to river/drainage system)	m	32.00		
7M.9	HDPE Butt Fusion Stub End ϕ 225mm, SDR17, PN10 including steel flange, rubber gaskets, bolts and nuts	nr	16.00		
7M.10	HDPE Butt Fusion Stub End ϕ 110mm, SDR17, PN10 including steel flange, rubber gaskets, bolts and nuts	nr	24.00		
7M.11	Self-anchored dismantling joint ϕ 200mm including rubber gaskets, bolts and nuts	nr	3.00		
7M.12	Self-anchored dismantling joint ϕ 100mm including rubber gaskets, bolts and nuts	nr	4.00		
7M.13	Flange Gate Valve ϕ 400mm, PN16, including rubber gaskets, bolts and nuts	nr	1.00		

7M.14	Flange Gate Valve ϕ 200mm, PN16, including rubber gaskets, bolts and nuts	nr	3.00		
7M.15	Flange Gate Valve ϕ 100mm, PN16, including rubber gaskets, bolts and nuts	nr	6.00		
7M.16	Flange Check Valve ϕ 100mm, PN16, including rubber gaskets, bolts and nuts	nr	4.00		
7M.17	HDPE Butt Fusion Reducing Tee ϕ 225*110mm, SDR17, PN10 including steel flange, rubber gaskets, bolts and nuts	nr	2.00		
7M.18	HDPE Butt Fusion Elbow 90° ϕ 225mm, SDR17, PN10 including steel flange, rubber gaskets, bolts and nuts	nr	2.00		
7M.19	HDPE Butt Fusion Elbow 90° ϕ 110mm, SDR17, PN10 including steel flange, rubber gaskets, bolts and nuts	nr	4.00		
7M.20	HDPE Butt Fusion Duck-foot Elbow 90° ϕ 110mm, SDR17, PN10 including steel flange, rubber gaskets, bolts and nuts	nr	4.00		
7M.21	HDPE Butt Fusion Reducer ϕ 225*160mm, SDR17, PN10 including steel flange, rubber gaskets, bolts and nuts	nr	1.00		
7M.22	HDPE Butt Fusion Reducer ϕ 225*110mm, SDR17, PN10 including steel flange, rubber gaskets, bolts and nuts	nr	2.00		
7M.23	Chain for lifting pumps	nr	4.00		
7M.24	Supply and install of ϕ 32mm ladder (stainless steel, class 304)	nr	2.00		
7M.27	Stainless Steel 304 Slide penstock 1000mm x 1000mm with manual control arm	set	2.00		
7M.28	Supply and Install lifting beam for travelling trolley hoist for a capacity of 2000kg including all embedding and securing to structure.	nr	1.00		
SUBTOTAL FOR BILL-MECHANICAL&PLUMBING NR-7M (Carried Forward to Grand Summary)					

Name of Bidder _____

Signature of Bidder _____

BILL-MECHANICAL & PLUMBING NR-8M: SLUDGE DRYING BED (NEW STATION)

(Refer to Technical Specification)

Rates in USD

Item Nr	Description	Unit	Quantity	Rate (in \$)	Amount (in \$)
8M	SLUDGE DRYING BED (NEW STATION)				
	Works include supply delivery and installation of mechanical and plumbing equipment as shown on the drawings and in the specifications or as directed by the Engineer				
	Scope includes supply, delivery, installation testing and commissioning of the equipment as specified and shown in the drawings or as directed by the Engineer				
A	PLUMBING SERVICE				
8M.1	Flange Carbon Steel Pipe ϕ 200mm, Schedule 40 (inlet pipe from drainage basin)	m	45.00		
8M.2	PVC Perforated Pipe Class 13.5 ϕ 100mm	m	48.00		
8M.3	PVC Pipe Class 13.5 ϕ 100mm	m	15.00		
8M.4	PVC Pipe Class 8.5 ϕ 100mm	m	12.00		
8M.5	PVC Pipe Class 13.5 Elbow 45° ϕ 100mm	nr	4.00		
8M.6	PVC Pipe Class 13.5 Elbow 90° ϕ 100mm	nr	2.00		
8M.7	Flange Gate Valve ϕ 200mm, PN16, including rubber gaskets, bolts and nuts	nr	4.00		
8M.8	Carbon Steel Flange Elbow 90° ϕ 200mm, Schedule 40, including rubber gaskets, bolts and nuts	nr	8.00		
8M.9	Carbon Steel Flange Tee ϕ 200mm, Schedule 40, including rubber gaskets, bolts and nuts	nr	4.00		
8M.10	Carbon Steel Blind Flange ϕ 200mm, Schedule 40, including rubber gaskets, bolts and nuts	nr	1.00		
8M.11	Carbon Steel Plenum ϕ 200*400mm, Schedule 40, single flange including rubber gaskets, bolts and nuts	nr	4.00		
SUBTOTAL FOR BILL-MECHANICAL&PLUMBING NR-8M (Carried Forward to Grand Summary)					

Name of Bidder _____

Signature of Bidder _____

BILL-MECHANICAL & PLUMBING NR-9M: GENERATOR HOUSE (NEW STATION)

(Refer to Technical Specification)

Rates in USD

Item Nr	Description	Unit	Quantity	Rate (in \$)	Amount (in \$)
9M	GENERATOR HOUSE (NEW STATION) Works include supply delivery and installation of mechanical and plumbing equipment as shown on the drawings and in the specifications or as directed by the Engineer				
	Scope includes supply, delivery, installation testing and commissioning of the equipment as specified and shown in the drawings or as directed by the Engineer				
A	MECHANICAL SERVICE				
9M.1	Exhaust Fan with Air Flow: 44 l/s With Auto Shutter ϕ 246	nr	1.00		
9M.2	Allow for Support and Accessories	lot	1.00		
SUBTOTAL FOR BILL-MECHANICAL&PLUMBING NR-9M (Carried Forward to Grand Summary)					

Name of Bidder _____

Signature of Bidder _____

BILL-MECHANICAL & PLUMBING NR-10M: ADMINISTRATION BUILDING (NEW STATION)

(Refer to Technical Specification)

Rates in USD

Item Nr	Description	Unit	Quantity	Rate (in \$)	Amount (in \$)
10M	ADMINISTRATION BUILDING (NEW STATION)				
	Works include supply delivery and installation of mechanical and plumbing equipment as shown on the drawings and in the specifications or as directed by the Engineer				
	Scope includes supply, delivery, installation testing and commissioning of the equipment as specified and shown in the drawings or as directed by the Engineer				
A	SEWAGE PIPE SYSTEM				
10M.1	PVC Pipe Class 8.5 ϕ 100mm	m	7.00		
10M.2	PVC Pipe Class 8.5 ϕ 80mm	m	8.00		
10M.3	PVC Pipe Class 8.5 ϕ 55mm	m	16.00		
10M.4	PVC Pipe Class 8.5 ϕ 40mm	m	2.00		
10M.5	PVC Pipe Class 8.5 ϕ 35mm	m	4.00		
10M.6	PVC Y Class 8.5 ϕ 100mm	nr	2.00		
10M.7	PVC Y Class 8.5 ϕ 80mm	nr	2.00		
10M.8	PVC Reducing Y Class 8.5 ϕ 80*55mm	nr	2.00		
10M.9	PVC Reducing Y Class 8.5 ϕ 80*40mm	nr	2.00		
10M.10	PVC Tee Class 8.5 ϕ 100mm	nr	2.00		
10M.11	PVC Reducing Tee Class 8.5 ϕ 100*55mm	nr	2.00		
10M.12	PVC Tee Class 8.5 ϕ 50mm	nr	2.00		
10M.13	PVC Reducing Tee Class 8.5 ϕ 55*35mm	nr	1.00		
10M.14	PVC Tee Class 8.5 ϕ 40mm	nr	2.00		
10M.15	PVC Elbow 90° Class 8.5 ϕ 55mm	nr	8.00		
10M.16	PVC Elbow 90° Class 8.5 ϕ 35mm	nr	5.00		
10M.17	PVC Elbow 45° Class 8.5 ϕ 100mm	nr	8.00		
10M.18	PVC Elbow 45° Class 8.5 ϕ 80mm	nr	4.00		
10M.19	PVC Elbow 45° Class 8.5 ϕ 55mm	nr	6.00		
10M.20	PVC Elbow 45° Class 8.5 ϕ 40mm	nr	8.00		

10M.21	PVC Reducing Socket Class 8.5 DN φ80*55mm	nr	1.00		
10M.22	PVC Reducing Socket Class 8.5 DN φ55*35mm	nr	1.00		
10M.23	PVC Reducing Socket Class 8.5 DN φ40*35mm	nr	2.00		
10M.24	PVC Screw Brass Clean Out φ100mm	nr	1.00		
10M.25	PVC Screw Brass Clean Out φ80mm	nr	2.00		
10M.26	PVC Vent Cap φ55mm	nr	1.00		
10M.27	PVC U-Trap φ80mm	nr	3.00		
10M.28	Kitchen Drain φ80mm	nr	2.00		
10M.29	Floor Drain φ55mm	nr	1.00		
B	COLD WATER PIPE SYSTEM				
10M.30	PPR-80, SDR6, PN 16, Pipe φ25mm	m	8.00		
10M.31	PPR-80, SDR6, PN 16, Pipe φ20mm	m	10.00		
10M.32	PPR-80, SDR6, PN 16, Pipe φ15mm	m	2.00		
10M.33	Copper Gate Valve φ1" including male unions	nr	2.00		
10M.34	Copper Check Valve φ1" including male unions	nr	1.00		
10M.35	Copper Gate Valve φ3/4" including male unions	nr	2.00		
10M.36	Class C Water Meter φ1" including male unions	nr	1.00		
10M.37	PPR φ25mm Elbow 90°, PN 16	nr	5.00		
10M.38	PPR φ20mm Elbow 90°, PN 16	nr	4.00		
10M.39	PPR φ15mm Elbow 90°, PN 16	nr	1.00		
10M.40	PPR φ20mm Elbow 90°, PN 16 including metal female threats	nr	1.00		
10M.41	PPR φ15mm Elbow 90°, PN 16 including metal female threats	nr	2.00		
10M.42	PPR φ25*20mm Reducing Tee, PN 16	nr	1.00		
10M.43	PPR φ20*15mm Reducing Tee, PN 16	nr	1.00		
10M.44	PPR φ20mm Equal Tee, PN 16 including metal female threats	nr	3.00		
10M.45	PPR φ25*20mm Reducing Socket, PN 16	nr	1.00		
10M.46	PPR φ20*15mm Reducing Socket, PN 17	nr	1.00		

C	MECHANICAL SERVICE				
10M.47	Exhaust Fan with Air Flow: 6 l/s	nr	2.00		
10M.48	Exhaust Fan with Air Flow: 15 l/s With Auto Shutter ϕ 196	nr	1.00		
10M.49	Exhaust Fan with Air Flow: 38 l/s With Auto Shutter ϕ 196	nr	1.00		
10M.50	Exhaust Fan with Air Flow: 48 l/s With Auto Shutter ϕ 246	nr	1.00		
10M.51	Exhaust Air Grille 150mmx150mm	nr	2.00		
10M.52	Fresh Air Grille 300mmx200mm	nr	2.00		
10M.53	Air Conditioning 1.5 HP including fixing supports	nr	2.00		
10M.54	Copper Pipe ϕ 6.35mm for air conditioning	m	10.00		
10M.55	Copper Pipe ϕ 9.52mm for air conditioning	m	10.00		
10M.56	Closed Cell Insulation ϕ 6.35mm thk 1.9mm	m	10.00		
10M.57	Closed Cell Insulation ϕ 9.52mm thk 1.9mm	m	10.00		
10M.58	Flexible w/o Insulation ϕ 100mm	m	2.00		
10M.59	Electrical Flexible Conduit for air conditioning	m	10.00		
10M.60	PVC Pipe Class 8.5 ϕ 20mm for air conditioning	m	16.00		
10M.61	Galvanize Steel Sheet No. 18	m ²	2.00		
10M.62	PVC Elbow 90° Class 8.5 ϕ 20mm for air conditioning	nr	10.00		
10M.63	Fire Extinguisher 6.8kg (ABC)	nr	2.00		
SUBTOTAL FOR BILL-MECHANICAL&PLUMBING NR-10M (Carried Forward to Grand Summary)					

Name of Bidder _____

Signature of Bidder _____

BILL-MECHANICAL & PLUMBING NR-11M: CHEMICAL BUILDING (EXISTING STATION)

(Refer to Technical Specification)

Rates in USD

Item Nr	Description	Unit	Quantity	Rate (in \$)	Amount (in \$)
11M	CHEMICAL BUILDING (EXISTING STATION)				
	Works include supply delivery and installation of mechanical and plumbing equipment as shown on the drawings and in the specifications or as directed by the Engineer				
	Scope includes supply, delivery, installation testing and commissioning of the equipment as specified and shown in the drawings or as directed by the Engineer				
A	SEWAGE PIPE SYSTEM				
11M.1	PVC Pipe Class 8.5 ϕ 55mm	m	20.00		
11M.2	PVC Y Class 8.5 ϕ 55mm	nr	1.00		
11M.3	PVC Reducing Y Class 8.5 ϕ 55*35mm	nr	1.00		
11M.4	PVC Reducing Tee Class 8.5 ϕ 55mm	nr	2.00		
11M.5	PVC Elbow 45° Class 8.5 ϕ 55mm	nr	2.00		
11M.6	PVC Socket Class 8.5 ϕ 55mm	nr	2.00		
11M.7	PVC Screw Brass Clean Out ϕ 55mm	nr	1.00		
11M.8	PVC Vent Cap ϕ 55mm	nr	1.00		
11M.9	PVC U-Trap ϕ 55mm	nr	1.00		
11M.10	Floor Drain ϕ 55mm	nr	1.00		
B	COLD WATER PIPE SYSTEM				
11M.11	PPR-80, SDR6, PN 16, Pipe ϕ 25mm	m	12.00		
11M.12	PPR-80, SDR6, PN 16, Pipe ϕ 20mm	m	4.00		
11M.13	Copper Gate Valve ϕ 1" including male unions	nr	1.00		
11M.14	Copper Check Valve ϕ 1" including male unions	nr	1.00		
11M.15	Copper Gate Valve ϕ 3/4" including male unions	nr	1.00		
11M.16	Class C Water Meter ϕ 1" including male unions	nr	1.00		
11M.17	PPR ϕ 25mm Elbow 90°, PN 16	nr	4.00		
11M.18	PPR ϕ 20mm Elbow 90°, PN 16	nr	3.00		
11M.19	PPR ϕ 25mm Tee, PN 16	nr	1.00		
11M.20	PPR ϕ 25*20mm Reducing Tee, PN 16	nr	1.00		
11M.21	PPR ϕ 25*20mm Reducer Socket, PN 16	nr	1.00		
11M.22	Hose Bibb ϕ 15mm	nr	1.00		
11M.23	PPR ϕ 20mm Elbow 90°, PN 16 with metal female thread	nr	4.00		
11M.24	Type: Poly-Aluminum Chloride PAC-Dosing pump Diaphragm Metering Type Pump (VFD) Capacity: 1.3l/min \times 2.0kg/cm ² PAC Supply Ejector 25A 3Ph 400V 50Hz, 0.2kW	nr	3.00		
11M.25	PAC Dosing Device Batch reactor Dissolving Tank: Vertical Cylindrical PE tank, 2m ³ (D1.6m \times H1.5m)	nr	2.00		

	Agitator: Vertical-axis (2 stages), 4 Pitched Blade Turbine Impeller 3Ph 400V 50Hz, 0.75kW				
11M.26	PAC Bulk Bag (25kg/bag) per month	nr	60.00		
11M.27	LIME Dosing Pump Mono Flex Pump (VFD) Capacity: 0.4L/min×2.0kg/cm ² LIME Supply Ejector 25A 3Ph 400V 50Hz, 0.2kW	nr	3.00		
11M.28	LIME Dosing Device Dissolving Tank: Vertical Cylindrical PE tank, 1.0m ³ (D1.1m × H1.5m) Agitator: Vertical-axis (2 stages), 4 Pitched Blade Turbine Impeller 3Ph 400V 50Hz, 0.75kW	nr	2.00		
11M.29	LIME Bulk Bag (25kg/bag) per month	nr	35.00		
11M.30	Pre Ca (OCI)2 Dosing Pump Diaphragm Metering Type Pump (VFD) 0.5L/min×2.0kg/cm ² Ca (OCI)2 Supply Ejector 32A 3Ph 400V 50Hz, 0.2kW	nr	1.00		
11M.31	Post Ca (OCI)2 Dosing Pump Diaphragm Metering Type Pump (VFD) 0.25L/min×2.0kg/cm ² Ca (OCI)2 Supply Ejector 20A 3Ph 400V 50Hz, 0.2kW	nr	4.00		
11M.32	Ca (OCI)2 Dosing Device Dissolving Tank: Vertical Cylindrical PE tank, 1.5m ³ (D1.1m × H1.6m) Agitator: Vertical-axis (2 stages), 4 Pitched Blade Turbine Impeller 3Ph 400V 50Hz, 0.2kW	nr	2.00		
11M.33	Ca (OCI)2 Bulk Bag (25kg/bag) per month	nr	55.00		
11M.34	PVC Pipe Class 13.5 φ80	m	10.00		
11M.35	PVC Pipe Class 13.5 φ25	m	90.00		
11M.36	PVC Pipe Class 13.5 φ20	m	4.00		
11M.37	PVC Pipe Class 13.5 φ15	m	65.00		
11M.38	PVC Reducing Tee Class 8.5 φ80*55mm	nr	6.00		
11M.39	PVC Reducing Tee Class 13.5 φ25	nr	20.00		
11M.40	PVC Reducing Tee Class 13.5 φ25*φ20mm	nr	1.00		
11M.41	PVC Reducing Tee Class 13.5 φ25*φ15mm	nr	16.00		
11M.42	PVC Reducing Tee Class 13.5 φ20*φ15mm	nr	8.00		
11M.43	PVC Reducing Tee Class 13.5 φ15mm	nr	27.00		
11M.44	PVC Elbow 90° Class 13.5 φ25mm	nr	58.00		

11M.45	PVC Elbow 90° Class 13.5 ϕ 20mm	nr	23.00		
11M.46	PVC Elbow 90° Class 13.5 ϕ 15mm	nr	38.00		
11M.47	PVC Elbow 45° Class 8.5 ϕ 80mm	nr	2.00		
11M.48	PVC Elbow 45° Class 13.5 ϕ 25mm	nr	2.00		
11M.49	PVC Reducing Socket Class 8.5 ϕ 55*25mm	nr	6.00		
11M.50	PVC Reducing Socket Class 13.5 ϕ 25* ϕ 15mm	nr	3.00		
11M.51	PVC End Cap Class 13.5 ϕ 25mm	nr	8.00		
11M.52	PVC End Cap Class 8.5 ϕ 80mm	nr	1.00		
11M.53	Copper Ball Valve ϕ 1" including Double Male Threaded Adaptor	nr	2.00		
11M.54	Copper Ball Valve ϕ 3/4" including Double Male Threaded Adaptor	nr	27.00		
11M.55	Copper Ball Valve ϕ 1/2" including Double Male Threaded Adaptor	nr	18.00		
11M.56	Back Pressure Regulator ϕ 1/2" including all accessories	nr	7.00		
11M.57	Hose Connector ϕ 1/2" including all accessories	nr	7.00		
11M.58	Check Valve ϕ 1" including Double Male Threaded Adaptor	nr	3.00		
11M.59	PVC Flexible Pipe ϕ 1" 1/4 Class 13.5	nr	3.00		
11M.60	Flexible Pipe ϕ 25 1" Class 13.5	nr	3.00		
11M.61	Safety Valve ϕ 1/2" including double male threaded adaptor	nr	6.00		
11M.62	Calibration Column ϕ 1/2" including double male threaded adaptor	nr	6.00		
11M.63	Metering Pump ϕ 1/2" including all accessories	nr	6.00		
C	MECHANICAL SERVICE				
11M.64	Exhaust Fan with Air Flow: 90 l/s With Auto Shutter ϕ 246	nr	1.00		
11M.65	Wall Fan	nr	2.00		
11M.66	Fire Extinguisher 9kg (ABC)	nr	6.00		
11M.67	Exhaust Air Louver 150mmx150mm	nr	1.00		
SUBTOTAL FOR BILL-MECHANICAL&PLUMBING NR-11M (Carried Forward to Grand Summary)					

Name of Bidder _____

Signature of Bidder _____

BILL-ELECTRICAL NR-1E: GENERAL ELECTRICAL WORKS (NEW STATION)
(Refer to Technical Specification)

Rates in USD

Item Nr	Description	Unit	Quantity	Rate (in \$)	Amount (in \$)
1E.1	GENERAL ELECTRICAL WORKS (NEW STATION)				
	Works include supply delivery and installation of electrical equipment as shown on the drawings and in the specifications or as directed by the Engineer.				
	Scope includes supply, delivery, installation testing and commissioning of the equipment as specified and shown in the drawings or as directed by the Engineer.				
I	Low Voltage System				
I.A	MV Station				
1E.1	WTP facility Transformer (Oil Type) Capacity: 22.0kV/0.40-0.22kV, 50Hz, 300 kVA	set	1.00		
1E.2	Intake Pump facility Transformer (Oil Type) Capacity: 22.0kV/0.40-0.22kV, 50Hz, 50 kVA	set	1.00		
1E.3	Electrical Transmission Line Pole H=12m	set	76.00		
1E.4	Fitting & Accessories	lot	1.00		
1E.5	Testing & Commissioning	lot	1.00		
I.B	Generator				
1E.6	Emergency generator (Diesel Oil) With Control Panel Capacity: 3Ph 400V 50Hz, 250 Kw	set	1.00		
1E.7	Fitting & Accessories	lot	1.00		
1E.8	Testing & Commissioning	lot	1.00		
I.C	Cable Containment				
1E.9	Pipe. HDPE: DN110	m	165.00		
1E.10	Pipe. HDPE: DN160	m	440.00		
1E.11	Pipe. HDPE: DN32	m	400.00		
1E.12	Supply of Electrical & Telecom Manholes 800mm x 800mm x H1200mm including excavation and installation	pcs	23.00		
1E.13	Excavation Work for Electrical & Telecom cable laying	m	700.00		
1E.14	Pipe. HDPE Fitting & Accessories	lot	1.00		
I.D	Power Cable				
1E.15	2 x 4 x 1C x 240mm ² Cu/XLPE/PVC + E. 120mm ² Cu/PVC	m	195.00		
1E.16	4 x 1C x 70mm ² Cu/XLPE/PVC + E. 35mm ² Cu/PVC	m	2,700.00		
1E.17	4 x 1C x 16mm ² Cu/XLPE/PVC + E. 10mm ² Cu/PVC	m	170.00		
1E.18	3 x 1C x 70mm ² Cu/XLPE/PVC + E. 35mm ² Cu/PVC	m	45.00		
1E.19	3 x 1C x 25mm ² Cu/XLPE/PVC + E. 16mm ² Cu/PVC	m	45.00		

1E.20	4 x 1C x 4mm ² Cu/XLPE/PVC + E. 4mm ² Cu/PVC	m	40.00		
1E.21	4 x 1C x 10mm ² Cu/XLPE/PVC + E. 10mm ² Cu/PVC	m	40.00		
1E.22	4 x 1C x 10mm ² Cu/XLPE/PVC + E. 10mm ² Cu/PVC	m	40.00		
1E.23	4 x 1C x 10mm ² Cu/XLPE/PVC + E. 10mm ² Cu/PVC	m	40.00		
1E.24	4 x 1C x 16mm ² Cu/XLPE/PVC + E. 10mm ² Cu/PVC	m	295.00		
1E.25	4 x 1C x 25mm ² Cu/XLPE/PVC + E. 16mm ² Cu/PVC	m	130.00		
1E.26	4 x 1C x 25mm ² Cu/XLPE/PVC + E. 16mm ² Cu/PVC	m	50.00		
1E.27	4 x 1C x 10mm ² Cu/XLPE/PVC + E. 10mm ² Cu/PVC	m	50.00		
1E.28	4 x 1C x 6mm ² Cu/XLPE/PVC + E. 6mm ² Cu/PVC	m	950.00		
1E.29	Fitting & Accessories	lot	1.00		
1E	Lighting Fixture				
1E.30	Street Light Single Arm with Pole H=8m	pcs	23.00		
1E.31	Fitting & Accessories	lot	1.00		
1F	Lightning & Grounding System				
1E.32	Air Terminal	pcs	3.00		
1E.33	Flash Counter	pcs	3.00		
1E.34	Concrete Earth Pit	pcs	3.00		
1E.35	Earth Rod	pcs	9.00		
1E.36	Earth Rod Coupling	pcs	9.00		
1E.37	Copper Down Conductor 70mm ²	m	160.00		
1E.38	Earth Bar	pcs	3.00		
1E.39	Exothermic Welding Powder 70mm ² x2way	pcs	6.00		
1E.40	Exothermic Welding Powder 70mm ² x3way	pcs	3.00		
1E.41	Galvanized Lightning Pole H=15m	lot	3.00		
1E.42	Fitting & Accessories	lot	3.00		
1E.43	Testing & Commissioning	lot	3.00		
SUBTOTAL FOR BILL-ELECTRICAL NR-1E (Carried Forward to Grand Summary)					

Name of Bidder _____

Signature of Bidder _____

BILL-ELECTRICAL NR-2E: INTAKE PUMP STATION (NEW STATION)
(Refer to Technical Specification)

Rates in USD

Item Nr	Description	Unit	Quantity	Rate (in \$)	Amount (in \$)
2E	INTAKE PUMP STATION (NEW STATION)				
	Works include supply delivery and installation of electrical equipment as shown on the drawings and in the specifications or as directed by the Engineer				
	Scope includes supply, delivery, installation testing and commissioning of the equipment as specified and shown in the drawings or as directed by the Engineer				
I	Low Voltage System				
I.A	Electrical Distribution Board				
2E.1	Control Panel [LP-M101]	set	1.00		
2E.2	Lighting & Receptacle Panel [LP-101]	set	1.00		
2E.3	Maintenance Box [WP-101]	set	1.00		
2E.4	Accessory, DB and Circuit Breaker Fitting	lot	1.00		
I.B	Cable Containment				
2E.5	Cable Tray 150mm x 50mm x 1.2mm	m	7.00		
2E.6	Pipe. uPVC Conduit: DN20	m	35.00		
2E.7	Pipe. uPVC Conduit: DN25	m	25.00		
2E.8	Pipe. uPVC Flexible: DN20	m	5.00		
2E.9	Pipe. uPVC Flexible: DN25	m	5.00		
2E.10	Pipe. uPVC Flexible: DN32	m	60.00		
2E.11	Pipe. uPVC Flexible: DN32	m	15.00		
2E.12	Pipe. uPVC Fitting & Accessories	lot	1.00		
I.C	Power Cable				
2E.13	4 x 1C x 35mm ² Cu/XLPE/PVC + E. 16mm ² Cu/PVC	m	80.00		
2E.14	4 x 1C x 6mm ² Cu/PVC + E. 6mm ² Cu/PVC	m	25.00		
2E.15	2 x 1C x 2.5mm ² Cu/PVC + E. 2.5mm ² Cu/PVC	m	60.00		
2E.16	Fitting & Accessories	lot	1.00		
I.D	Lighting Fixture				
2E.17	Fluorescent Lighting 1x18W 6500K	pcs	4.00		
2E.18	Emergency Light	pcs	1.00		

2E.19	Flood Light	pcs	2.00		
2E.20	Fitting & Accessories	lot	1.00		
I.E	Lightning & Grounding System				
2E.21	Air Terminal	pcs	1.00		
2E.22	Flash Counter	pcs	1.00		
2E.23	Concrete Earth Pit	pcs	1.00		
2E.24	Earth Rod	pcs	3.00		
2E.25	Earth Rod Coupling	pcs	3.00		
2E.26	Copper Down Conductor	m	30.00		
2E.27	Earth Bar	pcs	1.00		
2E.28	Exothermic Welding Powder 70mm2x2way	pcs	2.00		
2E.29	Exothermic Welding Powder 70mm2x3way	pcs	1.00		
2E.30	Galvanized Lightning Pole H=15m	lot	1.00		
2E.31	Fitting & Accessories	lot	1.00		
2E.32	Testing & Commissioning	lot	1.00		
I.F	Lightning & Grounding System				
2E.33	1Gang - 2Way Switch	pcs	2.00		
2E.34	Fitting & Accessories	lot	1.00		
SUBTOTAL FOR BILL-ELECTRICAL NR-2E.1 (Carried Forward to Grand Summary)					

Name of Bidder _____

Signature of Bidder _____

BILL-ELECTRICAL NR-3E: CHEMICAL BUILDING (NEW STATION)
(Refer to Technical Specification)

Rates in USD

Item Nr	Description	Unit	Quantity	Rate (in \$)	Amount (in \$)
3E	CHEMICAL BUILDING (NEW STATION) Works include supply delivery and installation of electrical equipment as shown on the drawings and in the specifications or as directed by the Engineer				
	Scope includes supply, delivery, installation testing and commissioning of the equipment as specified and shown in the drawings or as directed by the Engineer				
I	Low Voltage System				
I.A	Electrical Distribution Board				
3E.1	Control Panel [RCS-400] (included in SCADA)	set	0.00		
3E.2	Lighting & Receptacle Panel [LP-400]	set	1.00		
3E.3	Maintenance Box [WP-400]	set	1.00		
3E.4	Accessory, DB and Circuit Breaker Fitting	lot	1.00		
I.B	Cable Containment				
3E.5	Cable Tray 150mm x 50mm x 1.2mm	m	25.00		
3E.6	Pipe. uPVC Conduit: DN20	m	250.00		
3E.7	Pipe. uPVC Conduit: DN25	m	70.00		
3E.8	Pipe. uPVC Flexible: DN20	m	15.00		
3E.9	Pipe. uPVC Flexible: DN25	m	10.00		
3E.10	Pipe. uPVC Fitting & Accessories	lot	1.00		
I.C	Power Cable				
3E.11	4 x 1C x 6mm ² Cu/XLPE/PVC + E. 6mm ² Cu/PVC	m	70.00		
3E.12	3 x 1C x 4mm ² Cu/XLPE/PVC + E. 4mm ² Cu/PVC	m	200.00		
3E.13	2 x 1C x 2.5mm ² Cu/PVC + E. 2.5mm ² Cu/PVC	m	325.00		
3E.14	Fitting & Accessories	lot	1.00		
I.D	Lighting Fixture				
3E.15	Single Recessed Round Downlight 9W, 3000K	pcs	49.00		
3E.16	Emergency Light	pcs	10.00		
3E.17	Fitting & Accessories	lot	1.00		
I.E	Switch, Socket & Isolator				
3E.18	1Gang - 1Way Switch	pcs	7.00		

3E.19	2Gang - 1Way Switch	pcs	6.00		
3E.20	3Gang - 1Way Switch	pcs	1.00		
3E.21	Single Wall Socket	pcs	15.00		
3E.22	Isolator 1P20A	pcs	2.00		
3E.23	Fitting & Accessories	lot	1.00		
II	Extra Low Voltage System				
II.A	CCTV System				
3E.24	5MP Fix Bullet Network Camera	pcs	1.00		
3E.25	Pipe. uPVC Conduit: DN25	m	30.00		
3E.26	Pipe. uPVC Flexible: DN25	m	2.00		
3E.27	CCTV. Fitting & Accessories	lot	1.00		
3E.28	CCTV. Testing & Commissioning	lot	1.00		
II.B	Fire Alarm System				
3E.29	Addressable Smoke Detector	set	11.00		
3E.30	Detector Base	set	6.00		
3E.31	Addressable Manual Call Point	set	4.00		
3E.32	Conventional Fire Alarm Bell	set	1.00		
3E.33	NAC module	set	1.00		
3E.34	Relay High Voltage Module	set	1.00		
3E.35	1Pair x 1.5mm ² Fire Resistant Cable, 500m/Box	m	120.00		
3E.36	1Pair x 2.5mm ² Fire Resistant Cable, 500m/Box	m	50.00		
3E.37	uPVC Conduit Ø25mm [White]	m	100.00		
3E.38	Pipe. uPVC Flexible: DN25	m	15.00		
3E.39	Fire Alarm. Fitting & Accessories	lot	1.00		
3E.40	Fire Alarm. Testing & Commissioning	lot	1.00		
II.C	Network System				
3E.41	Ceiling Mount Access Point	Set	1.00		
3E.42	Pipe. uPVC Conduit: DN25	m	30.00		

3E.43	Pipe. uPVC Flexible: DN25	m	2.00		
3E.44	Network. Fitting & Accessories	lot	1.00		
3E.45	Network. Testing & Commissioning	lot	1.00		
SUBTOTAL FOR BILL-ELECTRICAL NR-3E (Carried Forward to Grand Summary)					

Name of Bidder _____

Signature of Bidder _____

BILL-ELECTRICAL NR-4E: WATER TREATMENT PLANT (NEW STATION)
(Refer to Technical Specification)

Rates in USD

Item Nr	Description	Unit	Quantity	Rate (in \$)	Amount (in \$)
4E	WATER TREATMENT PLANT BUILDING (NEW STATION)				
	Works include supply delivery and installation of electrical equipment as shown on the drawings and in the specifications or as directed by the Engineer				
	Scope includes supply, delivery, installation testing and commissioning of the equipment as specified and shown in the drawings or as directed by the Engineer				
I	Low Voltage System				
I.A	Electrical Distribution Board				
4E.1	Control Panel [MCC-200] - Rapid Sand Filter Valve Power Supply - Air Blower Control for Filter - Filter Control Console Power Supply - Other Power Supply	set	1.00		
4E.2	Lighting & Receptacle Panel [LP-200]	set	1.00		
4E.3	Maintenance Box [WP-200]	set	1.00		
4E.4	Filter Control Console [FCC-1&2] (included in SCADA)	set	1.00		
4E.5	Filter Control Console [FCC-2&4] (included in SCADA)	set	1.00		
4E.6	Accessory, DB and Circuit Breaker Fitting	lot	1.00		
I.B	Cable Containment				
4E.7	Cable Tray 250mm x 50mm x 1.2mm	m	150.00		
4E.8	Cable Tray 150mm x 50mm x 1.2mm	m	75.00		
4E.9	Pipe. uPVC Conduit: DN20	m	300.00		
4E.10	Pipe. uPVC Conduit: DN25	m	80.00		
4E.11	Pipe. uPVC Flexible: DN20	m	50.00		
4E.12	Pipe. uPVC Flexible: DN25	m	15.00		
4E.13	Pipe. uPVC Fitting & Accessories	lot	1.00		
I.C	Power Cable				
4E.14	2 x 1C x 35mm ² Cu/XLPE/PVC + E. 16mm ² Cu/PVC	m	50.00		
4E.15	3 x 1C x 25mm ² Cu/XLPE/PVC + E. 16mm ² Cu/PVC	m	45.00		
4E.16	3 x 1C x 10mm ² Cu/XLPE/PVC + E. 10mm ² Cu/PVC	m	35.00		
4E.17	3 x 1C x 4mm ² Cu/XLPE/PVC + E. 4mm ² Cu/PVC	m	425.00		
4E.18	2 x 1C x 2.5mm ² Cu/PVC + E. 2.5mm ² Cu/PVC	m	500.00		
4E.19	12 x 1C x 1.5mm ² Cu/PVC - [Valve Control Cable]	m	500.00		
4E.20	Fitting & Accessories	lot	1.00		
I.D	Lighting Fixture				
4E.21	Fluorescent Lighting 1 x 18W 6500K	pcs	25.00		
4E.22	Emergency Light	pcs	10.00		

4E.23	Flood Light with Pole H=5m	pcs	4.00		
4E.24	Fitting & Accessories	lot	1.00		
I.E	Grounding System				
4E.25	Concrete Earth Pit	pcs	1.00		
4E.26	Earth Rod	pcs	3.00		
4E.27	Earth Rod Coupling	pcs	3.00		
4E.28	Copper Down Conductor	m	30.00		
4E.29	Earth Bar	pcs	1.00		
4E.30	Exothermic Welding Powder 70mm2x2way	pcs	2.00		
4E.31	Exothermic Welding Powder 70mm2x3way	pcs	1.00		
4E.32	Fitting & Accessories	lot	1.00		
4E.33	Testing & Commissioning	lot	1.00		
I.F	Switch, Socket & Isolator				
4E.34	1Gang - 1Way Switch	pcs	1.00		
4E.35	2Gang - 1Way Switch	pcs	6.00		
4E.36	Single Wall Socket	pcs	11.00		
4E.37	Isolator 1P20A	pcs	2.00		
4E.38	Fitting & Accessories	lot	1.00		
II	Extra Low Voltage System				
II.A	CCTV System				
4E.39	5MP Fix Bullet Network Camera	pcs	2.00		
4E.40	5MP Speed Dome Outdoor Camera With Pole H=5m	pcs	1.00		
4E.41	Pipe. uPVC Conduit: DN25	m	60.00		
4E.42	Pipe. uPVC Flexible: DN25	m	8.00		
4E.43	CCTV. Fitting & Accessories	lot	1.00		
4E.44	CCTV. Testing & Commissioning	lot	1.00		
II.B	Fire Alarm System				
4E.45	Addressable Smoke Detector	set	4.00		
4E.46	Detector Base	set	4.00		
4E.47	Addressable Manual Call Point	set	3.00		
4E.48	Conventional Fire Alarm Bell	set	3.00		
4E.49	NAC module	set	1.00		
4E.50	Relay High Voltage Module	set	1.00		
4E.51	1Pair x 1.5mm2 Fire Resistant Cable, 500m/Box	m	80.00		
4E.52	1Pair x 2.5mm2 Fire Resistant Cable, 500m/Box	m	50.00		
4E.53	uPVC Conduit Ø25mm [White]	m	50.00		
4E.54	Pipe. uPVC Flexible: DN25	m	5.00		
4E.55	Fire Alarm. Fitting & Accessories	lot	1.00		
4E.56	Fire Alarm. Testing & Commissioning	lot	1.00		
SUBTOTAL FOR BILL-ELECTRICAL NR-4E (Carried Forward to Grand Summary)					

Name of Bidder _____

Signature of Bidder _____

BILL-ELECTRICAL NR-5E: CLEAR WATER RESERVOIR & PUMP ROOM (NEW STATION)

(Refer to Technical Specification)

Rates in USD

Item Nr	Description	Unit	Quantity	Rate (in \$)	Amount (in \$)
5E	CLEAR WATER RESERVOIR & PUMP ROOM BUILDING (NEW STATION)				
	Works include supply delivery and installation of electrical equipment as shown on the drawings and in the specifications or as directed by the Engineer				
	Scope includes supply, delivery, installation testing and commissioning of the equipment as specified and shown in the drawings or as directed by the Engineer				
I	Low Voltage System				
I.A	Electrical Distribution Board				
5E.1	Control Panel [MCC-100] - Main MCCB & ATS Switchgear - Raw Water Intake Pump Power Supply (Future) - Booster Pump (VFD) Control - Backwashing Water Pump Control(VFD) - Chemical Dosing System Power Supply - Rapid Sand Filter System Power Supply - Drainage Basin Power Supply - ADMIN & Operation BDG Power Supply - LAB & Warehouse BDG Power Supply - Other Power Supply	set	1.00		
5E.2	Lighting & Receptacle Panel [LP-300]	set	1.00		
5E.3	Maintenance Box [WP-300]	set	1.00		
5E.4	Accessory, DB and Circuit Breaker Fitting	lot	1.00		
I.B	Cable Containment				
5E.5	Cable Tray 300mm x 50mm x 1.2mm	m	45.00		
5E.6	Cable Tray 100mm x 50mm x 1.2mm	m	40.00		
5E.7	Pipe. uPVC Conduit: DN20	m	150.00		
5E.8	Pipe. uPVC Conduit: DN25	m	50.00		
5E.9	Pipe. uPVC Flexible: DN20	m	25.00		
5E.10	Pipe. uPVC Flexible: DN25	m	25.00		

5E.11	Pipe. uPVC Fitting & Accessories	lot	1.00		
I.C	Power Cable				
5E.12	2 x 1C x 2.5mm ² Cu/PVC + E. 2.5mm ² Cu/PVC	m	200.00		
5E.13	Fitting & Accessories	lot	1.00		
I.D	Lighting Fixture				
5E.14	Single Recessed Round Downlight 9W, 3000K	pcs	3.00		
5E.15	LED fluorescent Light 1 x 18W, 6500K	pcs	11.00		
5E.16	LED fluorescent Light 2 x 18W, 6500K	pcs	4.00		
5E.17	Emergency Light	pcs	5.00		
5E.18	Fitting & Accessories	lot	1.00		
I.E	Grounding System				
5E.19	Concrete Earth Pit	pcs	1.00		
5E.20	Earth Rod	pcs	3.00		
5E.21	Earth Rod Coupling	pcs	3.00		
5E.22	Copper Down Conductor	m	30.00		
5E.23	Earth Bar	pcs	1.00		
5E.24	Exothermic Welding Powder 70mm ² x2way	pcs	2.00		
5E.25	Exothermic Welding Powder 70mm ² x3way	pcs	1.00		
5E.26	Fitting & Accessories	lot	1.00		
5E.27	Testing & Commissioning	lot	1.00		
I.F	Switch, Socket & Isolator				
5E.28	1Gang - 1Way Switch	pcs	1.00		
5E.29	2Gang - 1Way Switch	pcs	1.00		
5E.30	3Gang - 1Way Switch	pcs	1.00		
5E.31	Single Wall Socket	pcs	5.00		
5E.32	Single Lan Network Outlet	pcs	2.00		
5E.33	Isolator 1P20A	pcs	2.00		
5E.34	Fitting & Accessories	lot	1.00		

II		Extra Low Voltage System			
II.A		CCTV System			
5E.35	5MP Fix Bullet Network Camera	pcs	2.00		
5E.36	Pipe. uPVC Conduit: DN25	m	40.00		
5E.37	Pipe. uPVC Flexible: DN25	m	2.00		
5E.38	CCTV. Fitting & Accessories	lot	1.00		
5E.39	CCTV. Testing & Commissioning	lot	1.00		
II.B		Fire Alarm System			
5E.40	Addressable Smoke Detector	set	5.00		
5E.41	Detector Base	set	5.00		
5E.42	Addressable Manual Call Point	set	7.00		
5E.43	Conventional Fire Alarm Bell	set	7.00		
5E.44	NAC module	set	1.00		
5E.45	Relay High Voltage Module	set	1.00		
5E.46	1Pair x 1.5mm ² Fire Resistant Cable, 500m/Box	m	1.00		
5E.47	1Pair x 2.5mm ² Fire Resistant Cable, 500m/Box	m	1.00		
5E.48	uPVC Conduit Ø25mm [White]	m	125.00		
5E.49	Pipe. uPVC Flexible: DN25	m	75.00		
5E.50	Fire Alarm. Fitting & Accessories	lot	1.00		
5E.51	Fire Alarm. Testing & Commissioning	lot	1.00		
SUBTOTAL FOR BILL-ELECTRICAL NR-5E (Carried Forward to Grand Summary)					

Name of Bidder _____

Signature of Bidder _____

BILL-ELECTRICAL NR-6E: DRAINAGE BASIN (NEW STATION)
(Refer to Technical Specification)

Rates in USD

Item Nr	Description	Unit	Quantity	Rate (in \$)	Amount (in \$)
6E	DRAINAGE BASIN (NEW STATION)				
	Works include supply delivery and installation of electrical equipment as shown on the drawings and in the specifications or as directed by the Engineer				
	Scope includes supply, delivery, installation testing and commissioning of the equipment as specified and shown in the drawings or as directed by the Engineer				
I	Low Voltage System				
I.A	Electrical Distribution Board				
6E.1	Control Panel [LP-M601] Drainage basin pump (To River or R.W)	set	1.00		
6E.2	Control Panel [LP-M602] Drainage basin pump (To Sludge pit)	set	1.00		
6E.3	Accessory, DB and Circuit Breaker Fitting	lot	1.00		
I.B	Cable Containment				
6E.4	Pipe. uPVC Flexible: DN20	m	25.00		
6E.5	Pipe. uPVC Flexible: DN25	m	25.00		
6E.6	Pipe. uPVC Fitting & Accessories	lot	1.00		
I.C	Power Cable				
6E.7	2 x 1C x 2.5mm ² Cu/PVC + E. 2.5mm ² Cu/PVC	m	50.00		
6E.8	Fitting & Accessories	lot	1.00		
I.D	Lighting Fixture				
6E.9	Street Light Singel Arm H=8m	pcs	1.00		
6E.10	Fitting & Accessories	lot	1.00		
SUBTOTAL FOR BILL-ELECTRICAL NR-6E (Carried Forward to Grand Summary)					

Name of Bidder _____

Signature of Bidder _____

BILL-ELECTRICAL NR-7E: SLUDGE DRYING BED (NEW STATION)

(Refer to Technical Specification)

Rates in USD

Item Nr	Description	Unit	Quantity	Rate (in \$)	Amount (in \$)
7E	SLUDGE DRYING BED (NEW STATION)				
	Works include supply delivery and installation of electrical equipment as shown on the drawings and in the specifications or as directed by the Engineer				
	Scope includes supply, delivery, installation testing and commissioning of the equipment as specified and shown in the drawings or as directed by the Engineer				
I	Low Voltage System				
I.A	Cable Containment				
7E.1	Pipe. uPVC Conduit: DN25	m	50.00		
7E.2	Pipe. uPVC Flexible: DN25	m	25.00		
7E.3	Pipe. uPVC Fitting & Accessories	lot	1.00		
I.B	Power Cable				
7E.4	2 x 1C x 2.5mm ² Cu/PVC + E. 2.5mm ² Cu/PVC	m	150.00		
7E.5	Fitting & Accessories	lot	1.00		
I.C	Lighting Fixture				
7E.6	Street Light Singel Arm H=8m	pcs	1.00		
7E.7	Fitting & Accessories	lot	1.00		
SUBTOTAL FOR BILL-ELECTRICAL NR-7E (Carried Forward to Grand Summary)					

Name of Bidder _____

Signature of Bidder _____

BILL-ELECTRICAL NR-8E: GENERATOR HOUSE (NEW STATION)
(Refer to Technical Specification)

Rates in USD

Item Nr	Description	Unit	Quantity	Rate (in \$)	Amount (in \$)
8E	GENERATOR HOUSE (NEW STATION)				
	Works include supply delivery and installation of electrical equipment as shown on the drawings and in the specifications or as directed by the Engineer				
	Scope includes supply, delivery, installation testing and commissioning of the equipment as specified and shown in the drawings or as directed by the Engineer				
I	Low Voltage System				
I.A	Electrical Distribution Board				
8E.1	Lighting & Receptacle Panel [LP-500]	set	1.00		
8E.2	Accessory, DB and Circuit Breaker Fitting	lot	1.00		
I.B	Cable Containment				
8E.3	Pipe. uPVC Conduit: DN20	m	20.00		
8E.4	Pipe. uPVC Conduit: DN25	m	10.00		
8E.5	Pipe. uPVC Flexible: DN20	m	3.00		
8E.6	Pipe. uPVC Flexible: DN25	m	2.00		
8E.7	Pipe. uPVC Fitting & Accessories	lot	1.00		
I.C	Power Cable				
8E.8	2 x 1C x 2.5mm ² Cu/PVC + E. 2.5mm ² Cu/PVC	m	40.00		
8E.9	Fitting & Accessories	lot	1.00		
I.D	Lighting Fixture				
8E.10	Single Recessed Round Downlight 9W, 3000K	pcs	2.00		
8E.11	LED fluorescent Light 2x18W, 6500K	pcs	1.00		
8E.12	Emergency Light	pcs	1.00		
8E.13	Fitting & Accessories	lot	1.00		
I.E	Grounding System				
8E.14	Concrete Earth Pit	pcs	1.00		
8E.15	Earth Rod	pcs	3.00		
8E.16	Earth Rod Coupling	pcs	3.00		
8E.17	Copper Down Conductor	m	30.00		
8E.18	Earth Bar	pcs	1.00		

8E.19	Exothermic Welding Powder 70mm2x2way	pcs	2.00		
8E.20	Exothermic Welding Powder 70mm2x3way	pcs	1.00		
8E.21	Fitting & Accessories	lot	1.00		
8E.22	Testing & Commissioning	lot	1.00		
I.F	Switch, Socket & Isolator				
8E.23	1Gang - 1Way Switch	pcs	2.00		
8E.24	Fitting & Accessories	lot	1.00		
II	Extra Low Voltage System				
II.A	Fire Alarm System				
8E.25	Addressable Smoke Detector	set	2.00		
8E.26	Detector Base	set	2.00		
8E.27	Addressable Manual Call Point	set	1.00		
8E.28	Conventional Fire Alarm Bell	set	1.00		
8E.29	NAC module	set	1.00		
8E.30	Relay High Voltage Module	set	1.00		
8E.31	1Pair x 1.5mm ² Fire Resistant Cable, 500m/Box	m	25.00		
8E.32	1Pair x 2.5mm ² Fire Resistant Cable, 500m/Box	m	10.00		
8E.33	uPVC Conduit Ø25mm [White]	m	25.00		
8E.34	Pipe. uPVC Flexible: DN25	m	2.00		
8E.35	Fire Alarm. Fitting & Accessories	lot	1.00		
8E.36	Fire Alarm. Testing & Commissioning	lot	1.00		
SUBTOTAL FOR BILL-ELECTRICAL NR-8E (Carried Forward to Grand Summary)					

Name of Bidder _____

Signature of Bidder _____

BILL-ELECTRICAL NR-9E: ADMINISTRATION BUILDING (NEW STATION)
(Refer to Technical Specification)

Rates in USD

Item Nr	Description	Unit	Quantity	Rate (in \$)	Amount (in \$)
9E	ADMINISTRATION BUILDING (NEW STATION)				
	Works include supply delivery and installation of electrical equipment as shown on the drawings and in the specifications or as directed by the Engineer				
	Scope includes supply, delivery, installation testing and commissioning of the equipment as specified and shown in the drawings or as directed by the Engineer				
I	Low Voltage System				
I.A	Electrical Distribution Board				
9E.1	Lighting & Receptacle Panel [LP-410]	set	1.00		
9E.2	Accessory, DB and Circuit Breaker Fitting	lot	1.00		
I.B	Cable Containment				
9E.3	Pipe. uPVC Conduit: DN20	m	150.00		
9E.4	Pipe. uPVC Conduit: DN25	m	50.00		
9E.5	Pipe. uPVC Flexible: DN20	m	25.00		
9E.6	Pipe. uPVC Flexible: DN25	m	25.00		
9E.7	Pipe. uPVC Fitting & Accessories	lot	1.00		
I.C	Power Cable				
9E.8	2 x 1C x 2.5mm ² Cu/PVC + E. 2.5mm ² Cu/PVC	m	220.00		
9E.9	Fitting & Accessories	lot	1.00		
I.D	Lighting Fixture				
9E.10	Single Recessed Round Downlight 9W, 3000K	pcs	3.00		
9E.11	LED fluorescent Light 1x18W, 6500K	pcs	8.00		
9E.12	Emergency Light	pcs	3.00		
9E.13	Fitting & Accessories	lot	1.00		
I.E	Switch, Socket & Isolator				
9E.14	1Gang - 1Way Switch	pcs	1.00		
9E.15	2Gang - 1Way Switch	pcs	1.00		
9E.16	3Gang - 1Way Switch	pcs	1.00		
9E.17	Single Wall Socket	pcs	12.00		
9E.18	Single Lan Network Outlet	pcs	8.00		

9E.19	Isolator 1P20A	pcs	2.00		
9E.20	Fitting & Accessories	lot	1.00		
II	Extra Low Voltage System				
II.A	CCTV System				
9E.21	Monitor. LED 54"	set	1.00		
9E.22	DVR 8 Channel	set	1.00		
9E.23	HDD 6T	set	1.00		
9E.24	HDMI Cable Length 5m	set	1.00		
9E.25	Patch Cord Length 2m	set	16.00		
9E.26	UTP Cat.6 Cable 305m/Roll	m	150.00		
9E.27	Pipe. uPVC Conduit: DN25	m	80.00		
9E.28	Pipe. uPVC Flexible: DN25	m	20.00		
9E.29	CCTV. Fitting & Accessories	lot	1.00		
9E.30	CCTV. Testing & Commissioning	lot	1.00		
II.B	Fire Alarm System				
9E.31	Addressable Fire Alarm Control Panel 2 Loops	set	1.00		
9E.32	Sealed Rechargeable Battery 12V, 18AH	set	1.00		
9E.33	Addressable Smoke Detector	set	5.00		
9E.34	Detector Base	set	5.00		
9E.35	Addressable Manual Call Point	set	1.00		
9E.36	Conventional Fire Alarm Bell	set	1.00		
9E.37	NAC module	set	1.00		
9E.38	Relay High Voltage Module	set	1.00		
9E.39	1Pair x 1.5mm2 Fire Resistant Cable, 500m/Box	m	40.00		
9E.40	1Pair x 2.5mm2 Fire Resistant Cable, 500m/Box	m	5.00		
9E.41	uPVC Conduit Ø25mm [White]	m	30.00		
9E.42	Pipe. uPVC Flexible: DN25	m	5.00		
9E.43	Fire Alarm. Fitting & Accessories	lot	1.00		

9E.44	Fire Alarm. Testing & Commissioning	lot	1.00		
II.C	Network System				
9E.45	Router Board	set	1.00		
9E.46	PoE Managed Switch 16 Ports	set	1.00		
9E.47	Wall Rack 6U W600xD500mm	set	1.00		
9E.48	Patch Panel 1U 24 Ports	set	1.00		
9E.49	UTP Cat.6 Cable 305m/Roll	m	80.00		
9E.50	Pipe. uPVC Conduit: DN25	m	40.00		
9E.51	Pipe. uPVC Flexible: DN25	m	10.00		
9E.52	Network. Fitting & Accessories	lot	1.00		
9E.53	Network. Testing & Commissioning	lot	1.00		
SUBTOTAL FOR BILL-ELECTRICAL NR-9E (Carried Forward to Grand Summary)					

Name of Bidder _____

Signature of Bidder _____

BILL-ELECTRICAL NR-10E: CHEMICAL BUILDING (EXISTING STATION)
(Refer to Technical Specification)

Rates in USD

Item Nr	Description	Unit	Quantity	Rate (in \$)	Amount (in \$)
10E	CHEMICAL BUILDING (EXISTING STATION)				
	Works include supply delivery and installation of electrical equipment as shown on the drawings and in the specifications or as directed by the Engineer				
	Scope includes supply, delivery, installation testing and commissioning of the equipment as specified and shown in the drawings or as directed by the Engineer				
I	Low Voltage System				
I.A	Electrical Distribution Board				
10E.1	Lighting & Receptacle Panel [LP-303]	set	1.00		
10E.2	Maintenance Box [WP-301]	set	1.00		
10E.3	Accessory, DB and Circuit Breaker Fitting	lot	1.00		
I.B	Cable Containment				
10E.4	Cable Tray 150mm x 50mm x 1.2mm	m	10.00		
10E.5	Pipe. uPVC Conduit: DN20	m	60.00		
10E.6	Pipe. uPVC Conduit: DN25	m	50.00		
10E.7	Pipe. uPVC Flexible: DN20	m	15.00		
10E.8	Pipe. uPVC Flexible: DN25	m	10.00		
10E.9	Pipe. uPVC Fitting & Accessories	lot	1.00		
I.C	Power Cable				
10E.10	4 x 1C x 16mm ² Cu/XLPE/PVC + E. 10mm ² Cu/PVC	m	200.00		
10E.11	4 x 1C x 6mm ² Cu/XLPE/PVC + E. 6mm ² Cu/PVC	m	20.00		
10E.12	3 x 1C x 4mm ² Cu/XLPE/PVC + E. 4mm ² Cu/PVC	m	60.00		
10E.13	2 x 1C x 2.5mm ² Cu/PVC + E. 2.5mm ² Cu/PVC	m	50.00		
10E.14	Fitting & Accessories	lot	1.00		
I.D	Lighting Fixture				
10E.15	Single Recessed Round Downlight 9W, 3000K	pcs	8.00		
10E.16	Emergency Light	pcs	4.00		
10E.17	Fitting & Accessories	lot	1.00		
I.E	Switch, Socket & Isolator				

10E.18	2Gang - 1Way Switch	pcs	1.00		
10E.19	Single Wall Socket	pcs	9.00		
10E.20	Fitting & Accessories	lot	1.00		
II	Extra Low Voltage System				
II.A	CCTV System				
10E.21	5MP Fix Bullet Network Camera	pcs	1.00		
10E.22	Pipe. uPVC Conduit: DN25	m	30.00		
10E.23	Pipe. uPVC Flexible: DN25	m	2.00		
10E.24	CCTV. Fitting & Accessories	lot	1.00		
10E.25	CCTV. Testing & Commissioning	lot	1.00		
II.B	Fire Alarm System				
10E.24	Addressable Smoke Detector	set	3.00		
10E.25	Detector Base	set	1.00		
10E.26	Addressable Manual Call Point	set	1.00		
10E.27	Conventional Fire Alarm Bell	set	1.00		
10E.28	NAC module	set	1.00		
10E.29	Relay High Voltage Module	set	1.00		
10E.30	1Pair x 1.5mm ² Fire Resistant Cable, 500m/Box	m	60.00		
10E.31	1Pair x 2.5mm ² Fire Resistant Cable, 500m/Box	m	30.00		
10E.32	uPVC Conduit Ø25mm [White]	m	60.00		
10E.33	Pipe. uPVC Flexible: DN25	m	4.00		
10E.34	Fire Alarm. Fitting & Accessories	lot	1.00		
10E.35	Fire Alarm. Testing & Commissioning	lot	1.00		
SUBTOTAL FOR BILL-ELECTRICAL NR-10E (Carried Forward to Grand Summary)					

Name of Bidder _____

Signature of Bidder _____

BILL-1-SCA: SCADA WORKS FOR NEW STATION

(Refer to Technical Specification)

Rates in USD

Item Nr	Description	Unit	Quantity	Rate (in \$)	Amount (in \$)
1-SCA	SCADA WORKS				
	Works: including, supply, installation, testing and commissioning of the SCADA system.				
A	SCADA (NEW STATION)				
A.1	SCADA SYSTEM				
A.1.1	Central Control Room (1 set)				
1-SCA.1	HMI Application Programming		1	set	Ls
	HMI SCADA Software Package	SCADA Pak Unlimited Developer	1	set	
	Work Station	CPU : Intel TM i7(4Core), HDD : 1TB x 2EA, MEM : 16	1	Number	
	Window	Window 10 Professional 64bit	1	Number	
		Anti-Virus Included	1	Number	
	Office	Office 2010 Professional min/Excel Required	1	Number	
	Ethernet Switch	100/100Mbps, 8Port	1	Number	
	LTE mobile transmitter	LTE wireless communication	1	Number	
	LED Monitor	LED, 32"	2	Numbers	
	Desk and Chair		1	set	
	Printer	A4 Raser Color Type & Desk	1	set	
	Uninterruptable Power Supply	3kVA, 1hour Backup Battery Included	1	Number	
	19" RACK PNL	600*1200*600	1	Number	
	Optical Fiber wavelength converter	Fiber Optic to UTP	1	Number	
	Optical Fiber distribution Box (FDF)	8PORT	1	Number	
Note book	core i7 processor, SSD 1.0TB	1	set		
			1.00		

A.2		REMOTE CONTROL PANEL (PLC)							
A.2.1		Lake Intake Pump Station I/O List (RCS-110) - 1 set							
1-SCA.2	CPU	I/O 6144 Points, 512kbyte,	1	Number	Ls	1.00			
	Power Module	Free Voltage, DC 5V	1	Number					
	Base Module	8 Slot	1	Number					
	Data Communication Module	Ethernet/IP	1	Number					
	Data Communication Module	RS-232 2ch or, 422 2ch, or RS-232, 422 each 1ch	1	Number					
	AI Module	4~20mA 8Channel Input	1	Number					
	AO Module	4~20mA 8Channel Output	1	Number					
	DI Module	DC 24V 16 Points Input	1	Number					
	DO Module	DC 24V 16 Points Relay Output	1	Number					
	Dummy Module		3	Numbers					
	Digital Indicator	4DIGIT (Level 1, Pressure 1)	2	Numbers					
	Signal Distributor	4 ~ 20mA	2	Numbers					
	Ethernet Switch	100/100Mbps, 8Port		Number					
	Optical Fiber wavelength converter	Fiber Optic to UTP	1	Number					
	Optical Fiber distribution Box (FDF)	8PORT	1	Number					
	PLC Programming	Data Communication (RS-485/RS-232C)	1	P					
		Analog Point(AI/AO)	2	P					
		Digital Point(DI/DO)	15	P					
	Uninterruptable Power Supply	3kVA, 1hour Backup Battery Included	1	Number					
	Electric Power Digital Meter		1	Number					
Pump Control(VFD)	3PH 400V 7.5 kW x 4	1	set						
	MCCB, MCC, L/R, On/Off PB W/Lamp								
	Motor Protection Relay								
TM/TC Enclosure	Indoor STEEL 2.3T more, 1200Wx600Dx2150H	1	Number(s) of Panel						
Other auxiliary facilities		1	set						
Fabrication Labor Cost		1	set						

A.2.2		Sand Filter System (RCS-200) - 1 set							
1-SCA.3	CPU	I/O 6144 Points, 512kbyte,	1	Number	Ls	1.00			
	Power Module	Free Voltage, DC 5V	2	Numbers					
	Base Module	12 Slot	2	Numbers					
	Data Communication Module	Ethernet/IP	1	Number					
	Data Communication Module	RS-232 2ch or, 422 2ch, or RS-232, 422 each 1ch	2	Numbers					
	AI Module	4~20mA 8Channel Input	2	Numbers					
	AO Module	4~20mA 8Channel Output	2	Number					
	DI Module	DC 24V 16 Points Input	10	Numbers					
	DO Module	DC 24V 16 Points Relay Output	7	Numbers					
	Dummy Module		4	Numbers					
	Touch Screen	12" TFT Color	1	Number					
	Touch Screen Programming	HMI Application Programming	1	set					
	Digital Indicator	4DIGIT	1	Number					
	Signal Distributor	4 ~ 20mA	1	Number					
	HUB	4PORT	1	Number					
	Optical Fiber wavelength converter	Fiber Optic to UTP	1	Number					
	Optical Fiber distribution Box(FDF)	8PORT	1	Number					
	PLC Programming	Data Communication (RS-485/RS-232C)	4	P					
		Analog Point(AI/AO)	10	P					
		Digital Point(DI/DO)	260	P					
Uninterruptable Power Supply	3kVA, 1hour Backup Battery Included	1	Number						
TM/TC Enclosure	Indoor STEEL 2.3T more, 600Wx600Dx2150H	1	Number(s) of Panel						
Other auxiliary facilities		1	set						
Fabrication Labor Cost		1	set						
A.2.3		Filter Control Console (2 sets)							
1-SCA.4	DC Power Supply	DC 24V	1	Number	Ls	1.00			
	Digital Indicator	4DIGIT (Level)	2	Number					
		6 Valve/Filter	1	set					

	Motor Valve Control	L/R, OPN/STP/CLS						
	Air Blower Control	L/R, On/Off PB W/Lamp	1	set				
	Backwashing Water Pump Control	L/R, On/Off PB W/Lamp	1	set				
	Rapid Sand Filter Status	30Wx30H, LED Type	1	g				
	Panel Enclosure	Indoor STEEL 2.3T more, 1800Wx700Dx1300H	1	Number(s) of Panel				
	Other auxiliary facilities		1	set				
	Fabrication Labor Cost		1	set				
A.2.4	Clear Water Reservoir (RCS-300) (1 set)							
1-SCA.5	CPU	I/O 6144 Points, 512kbyte,	1	Number	Ls	1.00		
	Power Module	Free Voltage, DC 5V	1	Number				
	Base	12 Slot	1	Number				
	Data Communication Module	Ethernet/IP	1	Number				
	Data Communication Module	RS-232 2ch or, 422 2ch, or RS-232, 422 each 1ch	2	Numbers				
	AI Module	4~20mA 8Channel Input	1	Number				
	AO Module	4~20mA 8Channel Output	1	Number				
	DI Module	DC 24V 16 Points Input	2	Numbers				
	DO Module	DC 24V 16 Points Relay Output	1	Number				
	Dummy Module		4	Numbers				
	Touch Screen	12" TFT Color	1	Number				
	Touch Screen Programming	HMI Application Programming	1	set				
	Digital Indicator	4DIGIT	2	Number				
	Signal Distributor	4 ~ 20mA	3	Numbers				
	HUB	4PORT	1	Number				
	Optical Fiber wavelength converter	Fiber Optic to UTP	1	Number				
	Optical Fiber distribution Box(FDF)	8PORT	1	Number				
	PLC Programming	Data Communication(RS-485/RS-232C)	3	P				
Analog Point(AI/AO)		6	P					

		Digital Point(DI/DO)	30	P				
	Uninterruptable Power Supply	3kVA, 1hour Backup Battery Included	1	Number				
	TM/TC Enclosure	Indoor STEEL 2.3T more, 600Wx600Dx2150H	1	Number(s) of Panel				
	Other auxiliary facilities		1	set				
	Fabrication Labor Cost		1	set				
A.2.5	Chemical Dosing System (RCS-400) - (1 set)							
1-SCA.6	CPU	I/O 6144 Points, 512kbyte,	1	Number	Ls	1.00		
	Power Module	Free Voltage, DC 5V	1	Number				
	Base Module	12 Slot	2	Numbers				
	Data Communication Module	Ethernet/IP	1	Number				
	Data Communication Module	RS-232 2ch or, 422 2ch, or RS-232, 422 each 1ch	3	Numbers				
	AI Module	4~20mA 8Channel Input	1	Number				
	AO Module	4~20mA 8Channel Output	1	Number				
	DI Module	DC 24V 16 Points Input	2	Numbers				
	DO Module	DC 24V 16 Points Relay Output	1	Number				
	Dummy Module		7	Numbers				
	Touch Screen	12" TFT Color	1	Number				
	Touch Screen Programming	HMI Application Programming	1	set				
	Digital Indicator	4DIGIT	1	Number				
	Signal Distributor	4 ~ 20mA	1	Number				
	HUB	4PORT	1	Number				
	Optical Fiber wavelength converter	Fiber Optic to UTP	1	Number				
	Optical Fiber distribution Box(FDF)	8PORT	1	Number				
	PLC Programming	Data Communication (RS-485/RS-232C)	4	P				
	PLC Programming	Analog Point(AI/AO)	4	P				
	PLC Programming	Digital Point(DI/DO)	25	P				
Electric Power Digital Meter		1	Number					
Agitator Control	3PH 400V 0.75 kW x 6(Agitator)	1	set					

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		MCCB, MCC, L/R, On/Off PB W/Lamp						
		Motor Protection Relay						
	Uninterruptable Power Supply	3kVA, 1hour Backup Battery Included	1	Number				
	Chemical Dosing Pump Control	3PH 400V 0.2 kW x 2(VFD Pump) PAC Dosing CONTROL	1	set				
		3PH 400V 0.2 kW x 2(VFD Pump)Lime Dosing control	1	set				
		3PH 400V 0.2 kW x 4(VFD Pump)Chlorine Dosing control	1	set				
		VFD & Data Communication						
		MCCB, MCC, L/R, On/Off PB W/Lamp						
	TM/TC Enclosure	Indoor STEEL 2.3T more, 1200Wx600Dx2150H	1	Number(s) of Panel				
	Other auxiliary facilities		1	set				
	Fabrication Labor Cost		1	set				
A.3	MAINTENACE SPARE PARTS							
1-SCA.7	CPU	I/O 6144 Points, 512kbyte,	2	Numbers	Ls	1.00		
	Power Module	Free Voltage, DC 5V	2	Numbers				
	Data Communication Module	Ethernet/IP	2	Numbers				
	Data Communication Module	RS-232 2ch or, 485 2ch, or RS-232, 485 each 1ch	2	Numbers				
	AI Module	4~20mA 8Channel Input	1	Number				
	AO Module	4~20mA 8Channel Output	1	Number				
	DI Module	DC 24V 16 Points Input	2	Numbers				
	DO Module	DC 24V 16 Points Relay Output	2	Numbers				
A.4	MAINTENACE TOOLS							
1-SCA.8	Milliamp Calibrator(mV, V, mA)		1	Set	Ls	1.00		
	Analogue and Digital Multi- meter		2	Sets				
	Tools Box		2	Sets				
	Soldering iron, solder, solder		2	Sets				

	flux and de-soldering pump							
	Screw Driver(+ /-)		3	EA				
	Insulated side-cutting and diagonal pliers		3	EA				
	Insulated needle-nose pliers		2	Sets				
	Wire stripper and crimping tool		2	Numbers				
B	FIELD INSTRUMENTS (1 set)							
1-SCA.9	Intake Pump Well	Ultrasonic Level, Beam : 5°, Range: 0.3 ~ 12m, ±0.20%	2	Numbers	Ls	1.00		
	Diaphragm Pressure, IP67, 4-20mA, LCD Display		2	Numbers				
	Intake Pump Flow	Electromagnetic Flow, 350A	1	Number				
	Intake Pump Pressure	Diaphragm Pressure, IP67, 4-20mA, LCD Display	1	Number				
	Receiving Well Influent	Electromagnetic Flow, 350A	1	Number				
	Rapid sand filter	Ultrasonic Level, Beam : 5°, Range: 0.3 ~ 12m, ±0.20%	4	Numbers				
	Clear Water Reservoir	Ultrasonic Level, Beam : 5°, Range : 0.3 ~ 12m, ±0.20%	2	Numbers				
	Booster Pump Flow	Electromagnetic Flow, 350A	1	Number				
	Backwash Pump Flow	Electromagnetic Flow, 300A	1	Number				
	Booster Pump Pressure	Diaphragm Pressure, IP67, 4-20mA, LCD Display	2	Numbers				
	Installation Material	On-site Transmitter Panel	4	sets				
C	PACKING AND SHIPPING COST (1 set)							
1-SCA.10	Cargo Transport	(Suwon~Busan)	1	set	Ls	1.00		
	Cargo packaging		1	set				
	Ocean freight charge	Korea Busan~Phnom Penh, Cambodia / 40FT,LSS INCLUDED	3	sets				
D	ON-SITE INSTALLATION COST							
1-SCA.11	Equipment usage fee		1	set	Ls	1.00		
	Air grade		3	Person				

	cost of stay	Daily expenses, rent, interpreter, etc.	30	DAY				
	Dispatch labor cost	2PERSON*30DAY / hardware technician	90	M/D				
E	ON-SITE COMMISSIONING COST							
1- SCA.12	Air grade		3	Person	Ls	1.00		
	cost of stay	Daily expenses, rent, interpreter, etc.	30	DAY				
	Dispatch labor cost	3PERSON*30DAY / Hardware Engineer, Software Engineer	90	M/D				
SUB-TOTAL 1-SCA FOR NEW STATION								

Name of Bidder _____

Signature of Bidder _____

BILL-2-SCA: SCADA WORKS FOR EXISTING STATION**(Refer to Technical Specification)**

Rates in USD

Item Nr	Description		Unit	Unit	Quantity	Rate (in \$)	Amount (in \$)
2-SCA	SCADA WORKS						
	Works: including, supply, installation, testing and commissioning of the SCADA system.						
A	SCADA (EXISTING STATION)						
A.1	LOCAL CONTROL PANEL (PLC)						
A.1.1	Chemical Dosing System Control Panel (1 set)						
2-SCA.1	CPU	I/O 6144 Points, 512kbyte,	1	Number	Ls	1.00	
	Power Module	Free Voltage, DC 5V	1	Number			
	Base Module	12 Slot	2	Numbers			
	Data Communication Module	Ethernet/IP		Number			
	Data Communication Module	RS-232 2ch or, 422 2ch, or RS-232, 422 each 1ch	3	Numbers			
	AI Module	4~20mA 8Channel Input	2	Number			
	AO Module	4~20mA 8Channel Output	1	Number			
	DI Module	DC 24V 16 Points Input	2	Numbers			
	DO Module	DC 24V 16 Points Relay Output	1	Number			
	Dummy Module		7	Numbers			
	Touch Screen	12" TFT Color	1	Number			
	Touch Screen Programming	HMI Application Programming	1	set			
	Digital Indicator	4DIGIT	1	Number			
	Signal Distributor	4 ~ 20mA	1	Number			
	HUB	4PORT	1	Number			
	Optical Fiber wavelength converter	Fiber Optic to UTP	1	Number			
	Optical Fiber distribution Box(FDF)	8PORT	1	Number			
PLC Programming	Data Communication (RS-485/RS-232C)	4	P				
PLC Programming	Analog Point(AI/AO)	4	P				
PLC Programming	Digital Point(DI/DO)	25	P				

	Electric Power Digital Meter		1	Number				
	Agitator Control	3PH 400V 0.75 kW x 6	1	set	Ls	1.00		
		MCCB, MCC, L/R, On/Off PB W/Lamp						
		Motor Protection Relay						
	Chemical Dosing Pump Control	3PH 400V 0.2 kW x 8	1	set				
		VFD & Data Communication						
		MCCB, MCC, L/R, On/Off PB W/Lamp						
	TM/TC Enclosure	Indoor STEEL 2.3T more, 1200Wx600Dx2150 H	1	Number (s) of Panel				
	Other auxiliary facilities		1	set				
	Fabrication Labor Cost		1	set				
A.2	MAINTENACE TOOLS AND SPARE PARTS (1 set)							
2-SCA. 2	CPU	I/O 6144 Points, 512kbyte,	1	Number				
	Power Module	Free Voltage, DC 5V	1	Number				
	Data Communication Module	RS-232 2ch or, 422 2ch, or RS-232, 422 each 1ch	1	Number				
	AI Module	4~20mA 8Channel Input	1	Number				
	AO Module	4~20mA 8Channel Output	1	Number				
	DI Module	DC 24V 16 Points Input	1	Number				
	DO Module	DC 24V 16 Points Relay Output	1	Number				
B	FIELD INSTRUMENTS (1 set)							
2-SCA. 3	Receiving Well Influent	Electromagnetic Flow, 100A	4	Numbers				
		Electromagnetic Flow, 150A	1	Number				
	Installation Material	On-site Transmitter Panel	3	set				
C	PACKING AND SHIPPING COST (1 set)							
2-SCA. 4	Cargo Transport	(Suwon~Busan)	1	set				
	Cargo packaging		1	set				
	Ocean freight charge	Korea Suwon~Phnom Penh, Cambodia / 40FT,LSS inclusion	3	set				

D		ON-SITE INSTALLATION COST					
2- SCA. 5	Equipment usage fee		1	set	Ls	1.00	
	Air grade		3	Person			
	cost of stay	Daily expenses, rent, interpreter, etc.	20	DAY			
	Dispatch labor cost	2PERSON*30DAY / hardware technician	60	M/D			
E		ON-SITE COMMISSIONING COST					
2- SCA. 6	Air grade		3	Person	Ls	1.00	
	cost of stay	Daily expenses, rent, interpreter, etc.	20	DAY			
	Dispatch labor cost	3PERSON*20DAY / Hardware Engineer, Software Engineer	60	M/D			
SUB-TOTAL 2-SCA FOR EXISTING STATION							

Name of Bidder _____

Signature of Bidder _____

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BILL-3-SCA: SCADA WORKS FOR DISTRICT METERED AREA FLOW METER

(Refer to Technical Specification)

Rates in USD

Item Nr	Description		Unit	Unit	Quantity	Rate (in \$)	Amount (in \$)
3-SCA	SCADA WORKS						
	Works: including, supply, installation, testing and commissioning of the SCADA system.						
A	SCADA (DMA)						
A.1	SCADA SYSTEM						
A.1.1	CENTRAL CONTROL ROOM (1 set)						
3-SCA.1	HMI Application Programming		1	set	Ls	1.00	
	HMI SCADA Software Package	SCADA Pak Unlimited Developer	1	set			
	Work Station	CPU : Intel TM i7(4Core), HDD : 1TB x 2EA, MEM : 16	1	Number			
	Window	Window 10 Professional 64bit	1	Number			
		Vaccine Included	1	Number			
	Office	Office 2010 Professional min/Excel Required	1	Number			
	Ethernet Switch	100/100Mbps, 8Port	1	Number			
	LTE mobile transmitter	LTE wireless communication	1	Number			
	LED Monitor	LED, 32"	2	Numbers			
	Desk and Chair		1	set			
Printer	A4 Raser Color Type & Desk	1	set				
B	FIELD INSTRUMENTS (1 set)						
3-SCA.2	Water meter (DN 300mm)	Woltmann type	1	set	Ls	1.00	
		w/Strainer					
		Pressure transmitter : 0~10Bar, 4~20mA/2 line					
		Communication Module : Cyber Sensor V2					
		2-wire, Pulse output					
		Internal lithium battery/12 years					
	Water meter(DN 400mm)	Woltmann type	2	set			
w/Strainer							
Pressure transmitter : 0~10Bar, 4~20mA/2 line							

		Communication Module : Cyber Sensor V2							
		2-wire, Pulse output							
		Internal lithium battery/12 years							
	Water meter(DN 500mm)	Woltmann type	1	set					
		w/Strainer							
		Pressure transmitter : 0~10Bar, 4~20mA/2 line							
		Communication Module : Cyber Sensor V2							
		2-wire, Pulse output							
		Internal lithium battery/12 years							
	Data Logger/Remote reading of interconnection meters								
		SOFREL LS42	3	set					
		Powered by an internal lithium battery							
		3G / 4G communication W/External Antenna							
		4DI, 2AI (for4~20mA sensors)							
		IP68(certified for 100 days under 1 meter of water)							
		Local archiving capacity 100,000 data point							
		USIM 3G/4G							
		Starter KIT							
	PCWin2 Software	Location : 5 Site			1	set			
		Hardware Protection Key(USB)							
		Software Pack DMA 50]							
C ON-SITE INSTALLATION COST									
3-SCA.3	Equipment usage fee		1	set	Ls	1.00			
	Air grade		2	Person					
	cost of stay	Daily expenses, rent, interpreter, etc.	20	DAY					

	Dispatch labor cost	2PERSON*20DAY / hardware technician	40	M/D				
SUB-TOTAL 3-SCA FOR DISTRICT METERED AREA FLOW METER								

Name of Bidder _____

Signature of Bidder _____

Daywork Schedule

[Note to the Employer:

- (i) *A “Daywork Schedule” is commonly found in contracts where the likely incidence of unforeseen work cannot be covered by definitive descriptions and approximate quantities in the Bill of Quantities. The preferred alternative is to value the additional work in accordance with the Conditions of Contract. A Daywork Schedule normally has the disadvantage of not being competitive among bidders, who may therefore load the rates assigned to some or all the items. If a Daywork Schedule is to be included at all in the bidding documents, it is preferable to include nominal quantities against the items most likely to be used, and to carry the sum of the extended amounts forward into the Bid Summary in order to make the basic Schedule of Daywork Rates competitive.*
- (ii) *The total amount assigned to such competitive daywork is normally 3–5 percent of the estimated base Contract Price and is regarded as a Provisional Sum for contingencies to be expended under the direction and at the discretion of the Engineer.]*

General

1. Reference should be made to Sub-Clause 13.5 of the General Conditions. Work shall not be executed on a daywork basis except by written order of the Engineer. Bidders shall enter basic rates for daywork items in the Schedules, which rates shall apply to any quantity of daywork ordered by the Engineer. Nominal quantities have been indicated against each item of daywork, and the extended total for Daywork shall be carried forward as a Provisional Sum to the Summary Total Bid Amount. Unless otherwise adjusted, payments for daywork shall be subject to price adjustment in accordance with the provisions in the Conditions of Contract.

Daywork Labour

2. In calculating payments due to the Contractor for the execution of daywork, the hours for labour will be reckoned from the time of arrival of the labour at the job site to execute the particular item of daywork to the time of return to the original place of departure, but excluding meal breaks and rest periods. Only the time of classes of labour directly doing work ordered by the Engineer and for which they are competent to perform will be measured. The time of gangers (charge hands) actually doing work with the gangs will also be measured but not the time of foremen or other supervisory personnel.
3. The Contractor shall be entitled to payment in respect of the total time that labour is employed on daywork, calculated at the basic rates entered by the Contractor in the **Schedule of Daywork Rates: 1. Labour**, together with an additional percentage payment on basic rates representing the Contractor’s profit, overheads, etc., as described below:
 - (a) The basic rates for labour shall cover all direct costs to the Contractor, including (but not limited to) the amount of wages paid to such labour, transportation time, overtime, subsistence allowances, and any sums paid to or on behalf of such labour for social benefits in accordance with [country of Borrower] law. The basic rates will be payable in local currency only.

- (b) The additional percentage payment to be quoted by the bidder and applied to costs incurred under (a) above shall be deemed to cover the Contractor's profit, overheads, superintendence, liabilities, and insurances and allowances to labour, timekeeping, and clerical and office work, the use of consumable stores, water, lighting, and power; the use and repair of stagings, scaffolding, workshops, and stores, portable power tools, manual plant, and tools; supervision by the Contractor's staff, foremen, and other supervisory personnel; and charges incidental to the foregoing. Payments under this item shall be made in the following currency proportions:
- (i) foreign: ___ percent (to be stated by bidder).³
 - (ii) local: _____ percent (to be stated by bidder).

[Note to the Employer:

This method of indicating profit and overheads separately facilitates the addition of further items of daywork, if needed, the basic costs of which can then be checked more easily. An alternative is to make Daywork rates all-inclusive of the Contractor's overhead and profit, etc., in which case this paragraph and the relevant Daywork Schedule should be modified accordingly.]

Daywork Materials

4. The Contractor shall be entitled to payment in respect of materials used for daywork (except for materials for which the cost is included in the percentage addition to labour costs as detailed heretofore), at the basic rates entered by the Contractor in the **Schedule of Daywork Rates: 2. Materials**, together with an additional percentage payment on the basic rates to cover overhead charges and profit, as follows:
- (a) the basic rates for materials shall be calculated on the basis of the invoiced price, freight, insurance, handling expenses, damage, losses, etc., and shall provide for delivery to store for stockpiling at the Site. The basic rates shall be stated in local currency, but payment will be made in the currency or currencies expended upon presentation of supporting documentation.
 - (b) the additional percentage payment shall be quoted by the bidder and applied to the equivalent local currency payments made under (a) above. Payments under this item will be made in the following currency proportions:
 - (i) foreign: ___ percent (to be stated by the bidder);⁴
 - (ii) local: _____ percent (to be stated by the bidder);
 - (c) the cost of hauling materials for use on work ordered to be carried out as daywork from the store or stockpile on the Site to the place where it is to be used will be paid in accordance with the terms for Labour and Construction in this schedule.

³ The bidder shall state the percentage in a common foreign currency equivalent required for payment and the exchange rates and official sources used.

⁴ The bidder shall state the percentage in a single foreign currency equivalent and the exchange rates and official sources used.

Daywork Contractor's Equipment

5. The Contractor shall be entitled to payments in respect of Contractor's Equipment already on Site and employed on daywork at the basic rental rates entered by the Contractor in the **Schedule of Daywork Rates: 3. Contractor's Equipment**. Said rates shall be deemed to include due and complete allowance for depreciation, interest, indemnity, and insurance, repairs, maintenance, supplies, fuel, lubricants, and other consumables, and all overhead, profit, and administrative costs related to the use of such equipment. [*Note to the Employer: This is an example of wording to include overhead and profit, etc., in the daywork rates. A separate percentage addition could be used as for labour and materials.*] The cost of drivers, operators, and assistants will be paid for separately as described under the section on Daywork Labour. [*Note to the Employer: An alternative, sometimes adopted for administrative convenience, is to include the cost of drivers, operators, and assistants in the basic rates for Contractor's Equipment. The last sentence of this paragraph 5 should then be modified accordingly.*]
6. In calculating the payment due to the Contractor for Contractor's Equipment employed on daywork, only the actual number of working hours will be eligible for payment, except that where applicable and agreed with the Engineer, the travelling time from the part of the Site where the Contractor's Equipment was located when ordered by the Engineer to be employed on daywork and the time for return journey thereto shall be included for payment.
7. The basic rental rates for Contractor's Equipment employed on daywork shall be stated in local currency, but payments to the Contractor will be made in currency proportions, as follows:
 - (a) foreign: _____ percent (to be stated by the bidder).⁵
 - (b) local: _____ percent (to be stated by the bidder).

⁵ The bidder shall state the percentage in a single foreign currency equivalent and the exchange rates and official sources used.

Section V – Eligible Countries

Eligibility for the Provision of Goods, Works, and Non Consulting Services in Bank-Financed Procurement

In reference to ITB 4.8 and 5.1, for the information of the Bidders, at the present time firms, goods and services from the following countries are excluded from this Bidding process:

Under ITB 4.8 (a) and 5.1: **None.**

Under ITB 4.8 (b) and 5.1: **None.**

Section VI – Fraud and Corruption

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

The Bank requires that Borrowers (including beneficiaries of Bank financing); bidders (applicants/proposers), consultants, contractors, and suppliers; any sub-contractors, sub-consultants, 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.

To this end, the Bank:

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:

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

acts intended to materially impede the exercise of the Bank’s inspection and audit rights provided for under paragraph 2.2 e. below.

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, sub-contractors, 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;

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;

Pursuant to the Banks 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;

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.

PART 2 – Works' Requirements

Section VII - Works’ Requirements

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Scope of Works

1. General Description of the Scope

Construction, supply, testing and commissioning of existing and new water treatment facilities for Stoung-Tang Krasang Water Utility located in Stoung district, Kampong Thom province, in the Kingdom of Cambodia. The service coverage area will be 6 communes including Kampong Che Tboung, Kampong Chen Cheung, Trea, Msa Krang, Samprouch and Banteay Stoung and about 72 villages located across the national and provincial roads.

The contractor shall plan and manage the construction site and the existing treatment facilities will remain in operation during the construction and that disturbance to the operation should be kept to a minimum.

The contractor shall provide onsite training to the Stoung-Tang Krasang Water Utility' staff on the Operation and Maintenance during the 90-day testing and commissioning of the new water treatment plant, distribution pump station, intake pump station, pipeline, clear water reservoir, chemical injection and other facilities as required by the project or the Engineer.

2. Scope of Works

The Contractor is responsible to prepare his own estimate and construction method statement based on the proposal. The Contractor has overall responsibility for all construction services, supply, material, equipment, tools and labor as necessary or reasonably inferable to complete the Project in accordance with the Employers' Requirement and the term of the Contract.

The Employer provides the Detailed Engineering Design such as layouts, drawings, specifications for electro-mechanical equipment for the new and existing Stoung-Tang Krasang Water Utility, the Contractor is responsible for producing Construction Drawing or Shop Drawings at his own cost.

The Contractor will be considered the best if found technically and financially responsive, but only to the extent that they comply with the requirement set out in the Section 6-Employer's Requirements and other relevant documents, e.g., the Specifications in Volume II.

The Works to be undertaken in these Contracts include the following:

- a. The topographic survey and geotechnical investigations on Existing WTP site, New Intake Station site, new WTP site, main road profile for water distribution network, raw water analysis and other surveys are available on the request to Project Management Unit (PMU).

For new WTP site:

- b. The construction, testing and commissioning of intake chamber pump station system using raw water from 30 September Dam. The capacity of the intake shall be 5,060 m³/d. The major components of the intake system shall comprise of (i) 3 Inlet water gate valves (knife gate valve) 700mm x 700mm attached to intake chamber with civil works where the six (6) submersible pumps with guiderails are mounted, (ii) DN 400mm DCIP Pipe from intake station to WTP inlet (length approx. 2,600m), (iii) pipes,

- flowmeter and valves assembly and manhole, (iv) electric hoisting and small crane, (v) water level measurement and alarm system, (vi) discharge pipe assembly DN300mm (vii) Air Valve system, (viii) VFD Control pumping system which shall include four (4) pumps and mechanical and electrical works, and (ix) Remote Control Panel (PLC).
- c. Supply and construction laying and commissioning of the transmission main that will convey raw water from the proposed intake in the 30 September Dam to the proposed water treatment plant. The transmission main shall include air release/vacuum valves, isolation butterfly valves, blow-off valves and other appurtenances. The indicative distance from the intake to the treatment plant is approximately 2,600m.
 - d. Construction and installation of transformer separate from WTP transformer transmission cable(s) for electricity for the respective electrical load and for data transfer connecting the intake facility.
 - e. Supply and construction, testing and commissioning of water treatment plant (WTP) with a capacity of 5,060 m³/day. The components of the WTP shall comprise of static mixer weird type prior (i) hydraulic mixing system, (ii) flocculation basin, (iii) clarifier, (iv) filtration system, (v) treated (clear) water reservoir (vi) disinfection system, (vii) drainage basin, (viii) sludge drying bed, (ix) plant support system (which includes plant water supply, plant drainage system, chemical feed system), (x) electrical and control system, (xi) power transformation system, (xii) support facilities which include chemical dosage facility. improvement and interconnection to existing powerhouse/gen-set control, yard lights, footpath, and portable (i.e. fire extinguishers class A-B-C) firefighting system;
 - f. Construction, testing and commissioning of underground treated/clear water reservoir at the treatment plant with a capacity of 1,778 m³ and has connecting outlet to distribution network and connection from new treated water reservoir with electromagnetic flow meters.
 - g. Supply and installation and commissioning of new distribution (emergency) pumping station which shall comprise of four (4) VFD pump units (3-duty + 1-standby), Pressure relief valve with by-pass pipes could serve to distribution network. The pumping station shall be provided with flowmeter assembly to monitor the flow.
 - h. Improvement, supply and installation and interconnection including wire cables and automatic transfer switches to the new (1) standby power generating sets with load capacity sufficient to operate the pumping units and other operation-critical equipment at the water treatment plant and the intake station during power outage.
 - i. Installing electrical power supply for WTP and intake starting from the transformer and all other appurtenant electrical equipment.
 - j. Construction of two (2) floors building for chemical room, chemical storage, warehouse, workshop and laboratory including all facilities;
 - k. Construction of one (1) floor building for administration and operation rooms including all facilities;
 - l. Construction of a generator house including all facilities;
 - m. Construction of a new drainage basin and a new sludge drying bed and installation of all facilities;
 - n. Connecting Electric Power Supply from Electricite Du Cambodge (EDC) for the new water treatment facilities and intake station.

- o. The Contractor shall provide on-the-job training for the operator's personnel (Stoung-Tang Krasang Water Utility) for operating and maintaining the new Water Treatment Plant. For this, the Contractor shall employ suitable and experienced personnel for a period of 90-days covering both wet and dry season and different scenarios of operation (low water, high water, O&M of all major parts, safety, etc. effective from final commissioning.
- p. The above scope shall include but not necessarily be limited to the following:
 - co-ordination of the work with all necessary authorities;
 - any and all necessary works encompassing process, civil, structural, mechanical, electrical, etc. and other "non-construction" activities;
 - testing, commissioning and handover of documentation such as (i) Operation and Maintenance Manuals, (ii) Standard Operating Procedures, and (iii) training manuals;
 - obtaining all necessary permits and pay the required fees according to the regulations of the Royal Government of Cambodia for construction of a water treatment plant.

For existing WTP site:

- Construction of one (1) floor building for chemical storage and injection rooms including all facilities;
- Construction of four (4) electromagnetic flow meters at intake pipe line and supply pipe line;

For water distribution network:

- a. Installation of all pipelines for water distribution network within the service area including all fittings, fire hydrants, district meter area (DMAs), pipe bridge crossing etc.

For all water works facilities including DMA, existing WTP and new WTP:

- Installation of Supervisory Control Data Acquisition (SCADA) system of the water works facilities including district meter area (DMAs), existing WTP, new WTP and others for staff of water work automatically to run the facilities.

Specification

1. Work Warranty

Contractor warrants to Owner that the Work shall be properly constructed including operations of all materials and equipment furnished as part of the construction, shall be new unless otherwise specified in the Contract Documents, of good quality, in conformance with the Contract Documents and free of defects in materials and workmanship.

Nothing in this warranty is intended to limit any manufacturer's warranty which provides Owner with greater warranty rights than set forth in the Contract Documents. The Contractor shall provide Owner with all manufacturers' warranties upon Substantial Completion.

2. Performance Specifications for Raw Water Intake

2.1 Background

30 September Dam is the main source of raw water. Based on the interview with those households who live near the 30 September Dam never drought, even during dry season. The lowest water level is 14.44m which is 1.50m different from the lowest point of the dam. The Contractor shall take account of variations in the discharge and water level of 30 September Dam during the construction implementation as part of the monitoring of intake. The raw water intake is located almost 2,600m away from the location of the proposed WTP.

2.2 Raw Water Intake

The capacity of the intake shall be 5,060 m³/d. The intake system shall abstract water from 30 September Dam using three (3) Stainless Steel Gate/Knife gate valve to the intake tank or chamber. The submersible (sewage) pumps and the controls shall be protected by a simple roof cover. Once the water level in the dam is rising, a sensor will alarm - alerting the operator to be ready for the next level of operation. The operator will press the button to activate the ON or OFF electrical switch to commence pumping of raw water to the WTP. This will be the routine scenario in getting the raw water from 30 September Dam.

The Contractor shall provide a complete electrical and control system for the intake site in accordance with the Technical Specifications.

Upon commencement of work, the contractor should monitor the dam water level and record it covering both dry and wet season to establish initial low and high-water level.

3. Performance Specifications for Raw Water Transmission Main

3.1 Raw Water Transmission Line

Transmission main will convey the raw water from the intake to the WTP 5,060m³/day capacity. Raw water is transferred to the intake chamber through three (3) Stainless Steel Gate/Knife gate valves, and the submersible pump and DN300 pump main piping consist of an electromagnetic flowmeter, pressure transmitter, bottom cleaning agitator, and air valve and the raw water transmission pipeline is a DN 400 DCIP pipe, Class C40, withdraw water from intake pump station to WTP headworks.

3.2 Appurtenances

The appurtenances for the raw water transmission main shall include air release/vacuum valve and other appurtenances necessary as indicated on the drawings for the correct functionality of the main.

4. Performance Specifications for Water Treatment Plant

4.1 Raw Water Quality

The initial water quality test for physical and chemical, heavy metal tests performed by government laboratories are presented in Table 2.1 of this section.

The following are some of the water quality assumptions used in preparing the design:

- The raw water source is 30 September Dam.
- The catchment area receives domestic, commercial, agricultural and industrial effluents linked to human settlement and agriculture.
- Total dissolved solids, hardness and sulfates of the water are below the Cambodian Drinking Water Standards eliminating the need for water softening.
- Turbidity of the water is known to vary from less than 10 NTU during the dry season to more than 1,000 NTU during the wet season. To ascertain the NTU value during rainy season, the Contractor as part of his work should monitor the water quality during dry and rainy season and submit results to the Employer.

The Contractor shall carry out sufficient water quality tests to ensure that the treated water from the proposed WTP will meet the Cambodian Drinking Water Standards, and the water quality data will be used in the training.

A water quality sampling plan shall be submitted and approved by the Employer. Full water quality profiles on raw water shall be carried out at a laboratory approved by the Employer. The Contractor may use field test kits for general water quality testing and trials.

4.2 Target Treated Water Quality

The WTP shall meet the Cambodian Drinking Water Standards or best engineering practice on water quality standards. Tabulated below are the parameters to be met by the WTP:

Table 1.1 - Potable Water Quality Standard and Monitoring Schedule

PARAMETER	UNIT	MAX. CONTAMINANTS LIMIT	EXCEPTIONAL CASE	MONITORING SCHEDULE		
				DAILY	QUARTERLY	ANNUALLY
Chlorine (waste Cl)	mg/l	0.2-2.0	Use Chlorine for treatment	√		
Cr	mg/l	0.05				√
Cu	mg/l	1	For pipe made of Cu			√
F	mg/l	1.5	For underground water			√

PARAMETER	UNIT	MAX. CONTAMINANTS LIMIT	EXCEPTIONAL CASE	MONITORING SCHEDULE		
				DAILY	QUARTERLY	ANNUALLY
Hardness (CaCO ₃)	mg/l	300	For underground water		√	
Fe	mg/l	0.3	For underground water		√	
Pb	mg/l	0.01				√
Mn	mg/l	0.1			√	
Mercury (Hg)	mg/l	0.001				√
NO ₃	mg/l	50			√	
NO ₂	mg/l	3			√	
Na	mg/l	250				√
(SO ₄) ²⁻	mg/l	250			√	
Zn	mg/l	3				√
Color	TCU	5			√	
pH	n/a	6.5-8.5			√	
TDS or EC	mg/l	800			√	
Turbidity	NTU/FTU	1			√	
Taste	n/a	acceptable			√	

The daily output for treated water of the WTP must meet the above quality parameters, to be confirmed during the pre-testing and commissioning. The Contractor must demonstrate the performance of the WTP by fulfilling these standards. If Maximum Contaminants Limit values are not fulfilled, redo the test will be repeated until proper calibration is achieved.

4.3 Plant Capacity

The WTP shall have a capacity of 5,060 m³/day. This design capacity of the WTP is design for 10-year horizon, which equal to Daily Maximum Demand plus 10% of water production requirements of Stoung service areas for year 2033.

4.4 Water Treatment Operation

30 September Dam water from the intake is pumped into the inlet chambers where a coagulant is dosed. The pre-dosing treatment of coagulant by poly aluminum chloride (PAC). Water will then enter a hydraulic flocculator and then to the sedimentation tank.

From the sedimentation tank, water will be filtered through rapid sand filters. The sand filters will be backwashed with air followed by water from the clear water tank. Filtered water entering the clear water tank will be chlorinated using powdered calcium hypochlorite.

Washed water created in backwashing the filters shall be diverted by gravity into the drainage basin where settled water shall be regularly decanted and will be disposed to the inlet chamber of WTP or direct to the river or drainage system. The accumulated sludge at the bottom of the drainage basin, flocculation and sedimentation tanks shall be periodically pumped into nearby sludge drying beds. The stabilized sludge at the drying beds shall be harvested and collected and disposed into a secure land area.

4.5 Unit Processes

Inlet receiving well and Chemical Mixing

Coagulant(s) will be hydraulically mixed at the inlet to the WTP. The coagulant shall be added using a properly designed metering pump. The Contractor shall carry out jar tests to provide design data for the coagulant dosing system as part of the training and testing and commissioning.

Flocculation

The overall objective of coagulation-flocculation is to form particles large enough to be removed by subsequent settling or filtration processes. Such particles include colloids, clays, suspended solids, bacteria and other microorganisms. Coagulation is the process in which chemicals are added to water, making the forces tending to keep particles apart weak. This must be accomplished with rapid mixing. Flocculation on the other hand is the agglomeration of the destabilized colloids to form settleable and filterable solids. This is accomplished in a flocculating basin with slow mixing.

On-line addition of the coagulant along the inlet using open channel static mixer to ensure good dispersion of PAC will be used, that has very low solubility maybe recommended while the subsequent mixing will be effected in the pump discharge outlet through hydraulic mixing.

Flocculation will be done through hydraulic mixing in parallel flocculation tanks, the baffle flocculators with mixing speed of the second flocculator lower than the mixing speed of the first flocculator to help produce larger flocs. Enough hydraulic time must be provided prior to clarification. The recommended detention time for flocculation is 25.5 minutes. No paddles will be used but simply a baffled and circulating regime mode of the flocculation tanks will be implemented. Regular flushing of drain valves at the bottom tank should be implemented at least every 4-hours to avoid buildup of sludge/sediments.

Sedimentation

Rectangular basins are proposed for this project. These basins are generally designed to be long and narrow with a length to width ratio of 3:1 to 5:1. Basin widths are often selected considering the mechanical requirement of sludge collection mechanism. Depths are selected to provide a required detention time or may be selected to limit flow-through velocities and the potential re-suspension of the settled floc. The actual surface area is determined using appropriate surface overflow rate or SLR 0.9-1.8 m³/hr-m². The inlet and outlet zones are property designed to maximize the efficiency of a settling basin.

Filtration

Filtration is the passage of water through porous medium to remove suspended solids. Two most common classifications of filters are slow sand and rapid sand techniques. For this project, the latter is recommended. Filter system design considerations include filter media, filter rates, depth, physical configurations, and under-drain system. Most common filter media are natural silica sand, garnet sand or ilmenite, crushed anthracite coal, and granular activated carbon. The media variables, which may be controlled in the design, include bed composition, depth, and grain size distribution.

The Contractor shall provide rapid sand filtration systems and the systems shall consist of beds of specifically graded sand and gravel, drain systems, and backwashing equipment as shown on the Drawings and in the Specifications. Filter sand grading and depths, backwash quantities, and other characteristics shall be sized in accordance with the requirements.

Filter floor systems shall consist of precast reinforced concrete slabs mounted on suitable support beam system and fitted with nozzles. Filter floor slabs shall be shaped and sized suitable to support static and dynamic loads. The slab system shall be provided with a suitable mechanical/physical sealing system to prevent water leakage during backwashing.

Backwashing control shall be semi-automatic or a combination of an electric control valve with manual type (actuators), linked to the Control room.

Disinfection

Calcium hypochlorite powder made up as a 1-3% solution shall be used for disinfection. In the basic drawings, a day tank is included with metering pumps to dose the chlorine solution at the designated injection point.

4.6 Sludge Handling, Treatment and Disposal

Filter Backwash Treatment

Backwash water generated from cleaning the filters will be held in drainage basin. The clarified backwash water will be returned to the headworks of the plant before the pre-chlorination step. The sludge from the backwash drainage basin will be directed (pumped) to the sludge drying beds.

Sludge Drying Beds

Accumulated sludge from the coagulation and flocculation chambers and from the sedimentation tanks shall be taken from the bottom sump and then will gravitate in the sludge drying beds. The sludge that settles at the bottom of the wash recovery tank shall also be pumped into the sludge drying beds and further disposed to the landfill. Clearwater from drying beds will be pumped to the raw water receiving well at the WTP.

4.7 Storage System

New underground clear water reservoir shall serve as storage facility and its capacity shall include equalizing storage, standby storage, fire suppression storage, and storage used for treatment process. It has been designed in such way, that one chamber can be taken out of service for maintenance or other activities without disruption of water supply services. The capacity of clear water reservoir is fixed at 1,778 m³.

4.8 Plant Support System

Plant Water Supply System

The Contractor shall provide a complete potable water supply system for drinking water, staff amenities, laboratory, chemical dilution, cleaning, toilets, lavatories, essential process requirements, firefighting and all other applications. The Contractor shall obtain water from the treated water reservoir and distribute potable water around the site in a reticulation network as shown on the Drawings.

A pressure and flow control valve shall be installed at the outlet pipe of the pumping station and water shall be diverted to individual elevated water tanks of the buildings. Pipeline materials made from high density polyethylene (HDPE) shall be used. The elevated tanks shall be of stainless-steel materials.

Plant Drainage System

Drainage system around the plant shall be constructed in order to avoid flooding in the area. Manholes shall be installed at the designated place for ease of maintenance. Plastic polyvinyl chloride (PVC) or Concrete pipes shall be used as the conveyance system.

Plant Sanitation System

Sanitary wastes from toilets and gray waters from the bathing and washing areas shall terminate in sealed and leak free septic tanks. The septic tanks shall be made from reinforced concrete with minimum of three compartments. The effluent water shall be conveyed to municipality sewerage system.

Chemical Coagulant Feeding System (for both Existing and New Stations)

The chemicals to be used in treating the raw water are poly-aluminum chloride (PAC) and calcium hypochlorite. These water treatment chemicals should be high grade food additives or those approved by the Environmental Protection Agency(EPA) or World Health Organization (WHO) for the treatment of drinking water.

The Contractor shall provide a complete chemical coagulant feeding system using the chemicals described above to support the rapid mix and flocculation processes.

Electrical and Control System and Instrumentation (for both Existing and New Stations)

The Contractor shall provide a complete electrical and control system for the WTP site in accordance with the Technical Specifications. The power supply to the WTP site may be taken from the existing line (to be verified on site).

The Contractor is responsible for determining the exact location of the existing power line.

Generator System

The PWW has sufficient emergency power supply system to secure 24hours electricity supply for WTP and intake sites.

The existing emergency generator will be improved and shall be provided with local control panels and supply and installation of an automatic transfer switch (ATS), complete with safety electrical controls and switches designed in accordance with the Electric Power Technical Standards of the Kingdom of Cambodia.

4.9 Building Facilities

Chlorine and Chemical Storage Building

The Contractor shall construct a chlorine injection room with an area of 112 m² as shown in the drawing. Minimum two sets of safety equipment for operating staff of the chlorine facility shall be provided in the operations building, including respiratory protection.

4.10 Roads

The Contractor shall provide and improve temporary roads (98% compacted M30 gravel) to ensure a free flow of vehicles, particularly water tankers, sludge haulers, repair trucks around the WTP during the implementation work at the site.

4.11 Gates and Fence

The Contractor shall provide temporary construction fence around the entire perimeter of the WTP site in accordance with the Cambodian Construction Specifications. Vehicular gate at entrance roadway, adjacent personnel gate with gate restraints, chains and locks, and signages prohibiting entry and warning of hazards shall be provided.

4.12 Firefighting System

The Contractor shall provide a complete fire protection for the WTP such as smoke detector and alarm system and portable fire extinguisher in the WTP, control room, and chemical dosing house, and related facilities in accordance with international standards. One fire hydrant will be provided within the compound.

5. Performance Specifications for Distribution System

5.1 Background

Treated water from the new clear water reservoir of the WTP shall be distributed to the service area by direct pumping.

5.2 Pipe Network

Limited distribution pipe will be included in the Work such as discharge from the Pump Station to distribution area and synchronize to existing distribution pipelines.

5.3 Pumping System

Three (3) pumps for filters backwashing in the pump room are separated from distribution pumping system for the distribution network shall be constructed within in the Pump Station by the Contractor. Sump pumps are also shall be installed inside Pump Station and Clear Water Reservoir.

All pumping system shall be provided at least the basic set of spare parts:

- 1-set for all Pumping Station Spare parts such as packing glands and or gasket, impellers, bearing and shaft seals etc.

5.4 Principal Flow Meters

Installation and placing of electromagnetic flow meters shall comply with technical guidelines and manuals for the supplied meter. Where a reliable power supply is given (i.e. the WTP and river intake), electro-magnetic flow meters shall be installed.

5.5 Air Vacuum/ Air Release Valves

Air valve types shall be used as combination air and vacuum valves. The location of the valves shall be as shown on the Drawings to avoid accumulation of air along the pipe, particularly in summits or as the approval by the Engineer. The air vacuum valve shall be installed properly to avoid vacuum during flushing or draining.

5.6 Thrust Blocks

Thrust blocks shall be provided on pipelines at all elbows and bends of more than 111/20 in the horizontal plane and at all dead-ends, tees, reducers, and at crosses having one or more opening plugged. Thrust devices shall be cast-in-place concrete, Metal harness or other suitable devices. (for details see Volume II). Optionally, Joint Restraints as recommended by pipe manufacturer can be used.

5.7 General Specifications and Obligations on O&M of the System

The Contractor is required to outline and document in detail the processes of the Operation and Maintenance (O&M) Program carefully identifying the Emergency, Urgent, and Routine tasks, activities and responsibilities necessary for the system to be fully operational. This shall

include other works required in order to address restoration of the system to full operation if unforeseen events may prevent the system from operating efficiently.

This includes providing training on operation and maintenance of the plant operators for a total of 90-days during the one-year liability period following final commissioning.

5.8 Operations Performance Specifications

a. Water Quantity

The Contractor's obligation is to construct a water treatment plant to supply treated water equivalent to 5,060 m³/d to the Stoung area.

b. Water Quality

The quality of the treated water shall meet the Cambodian National Drinking Water Quality Standards upon calibration during pre and final testing and commissioning.

c. Water Availability and Pressure

The delivery shall be 24 hours /365 days subject to planned water interruption, at the minimum sustained pressure of 7 m through distribution pumps controlled by variable frequency drives (VFDs).

6. Technical Specification

The technical specification for the works is provided or given in separate volume of this document Volume II, represent minimum requirements, in case of conflicting specifications between Section VII and Volume II, please refer in principal Section VII. The Contractor is expected to provide his services to comply with the Work's Requirements.

Environmental and Social (ES) requirements

In carrying this work, the contractor shall ensure full compliance with Cambodia's regulations regarding environmental impact assessment, and other social and land regulation, as well as the World Bank's Operational Policies triggered for WaSSIP, including the World Bank's Operational Policy (OP) 4.10 on Environmental Assessment, Natural Habitats (OP/BP 4.04); Physical Cultural Resources (OP/BP 4.11), Indigenous Peoples (OP/BP 4.10.) Involuntary Resettlement (OP/BP 4.12), Safety of Dams (OP/BP 4.37), and International Waterways (OP/BP 7.50). The contractor shall also comply with the World Bank's Good Practice Note on Addressing Sexual Exploitation and Abuse and Sexual Harassment (SEA/SH) in Investment Project Financing involving Major Civil Works, as well as WaSSIP's Environmental and Social Instruments including Environmental and Social Management Framework (ESMF), Indigenous Peoples Planning Framework (IPPF), Resettlement Policy Framework (RPF), and the site specific Environmental and Social Management Plan (for Stoung).

Specific E&S requirements include the following:

1. Health, Safety, Environment (HSE) and Social Requirements
2. Provision on Environment, Health and Safety (EHS), Mitigation Measures at the site including reports.
3. As part of the construction and testing and commissioning/training, the Contractor shall conduct baseline water quality sampling at the 30 September Dam (at the proposed intake site). Parameters to be tested are those outlined in the Drinking Water Quality Standards (Prakas No. 294 dated 27 April 2004). Baseline monitoring will also include measurement of air quality (PM10, total suspended particulates, SO₂, and NO₂) and noise levels at the proposed intake and WTP sites to establish benchmark of environmental parameters during the detailed design phase.

The Contractor shall include in the construction the use of environmentally-friendly and safe chemicals for the treatment of raw water. Separate storage area for chemicals shall be included in the WTP.

4. The Contractor shall prepare a Construction Environmental and Social Management Plan (C-ESMP) based on the Environmental Management and Monitoring Plan outlined in the "Bid and Contract Supplementary Document - Environment Safeguards". The C-ESMP shall identify the specific locations of construction camps, materials storage and disposal areas, borrow, and quarry sites.
 - a. The C-ESMP shall address potential environmental, social, health and safety issues related to project construction activities which include air and water pollution, generation of solid and hazardous waste, silt runoff, noise and vibration, impacts on public health and safety, damage to properties, traffic congestion, interference with public utilities, and procedures for worker guidance in case land mine/UXO or archaeological artifacts is unearthed, as well as proposed action plan to manage risks of SEA/SH as identified in the ESMP (annexed to this bidding document). Particular attention should be paid to workers' health and safety, base camps, resource mobilization, and waste management. The C-ESMP will be submitted to the PMU within one (1) month of the contract commencement date. Construction work cannot

- commence until the C-ESMP has been approved. The Contractor must fully implement all environmental mitigation measures identified in the project's CEMP.
- b. The Contractor shall appoint an environmental, health and safety engineer who shall oversee implementation of the C-ESMP.
 - c. The Contractor shall coordinate with relevant Government authorities such as the Department of Public Works and Transport (DPWT), electricity distribution company, telecommunication company, local authorities and owners of affected properties prior to commencement of civil works.
 - d. Any structure in public or private property that may be damaged in the course of the civil works shall be replaced and restored by the Contractor, subject to the approval of the owner of the affected structure.
 - e. Consistent with WB policy and national laws and regulations, the Contractor shall comply with the stipulations and laws of the Royal Government of Cambodia concerning environmental pollution control and regulation and shall never engage in illicit harvesting of natural resources (e.g. timber, wildlife) or disposal of wastes (e.g. in nearby rivers).
 - f. The Contractor shall use construction methods that will assure safety of the works; that any adjacent feature is not endangered; and that free and efficient natural and artificial drainage is provided to prevent erosion and clogging of drains.
 - g. The construction sites, borrow areas and quarries shall be sited and restored in accordance with the specifications. Spoils shall be disposed of at approved disposal sites
 - h. The Contractor should be aware of the applicable prohibited activities as stipulated in Appendix 5 of the WB Safeguard Policy Statement (2009) and WB Reference Guidelines on Environmentally Responsible Procurement.
 - i. The Contractor is required to establish a Grievance Redress Mechanism (GRM) to receive and respond to complaints received from the community during project implementation.
 - j. The Contractor through its environmental, health and safety engineer shall conduct daily inspection and monitoring and review of construction records to check compliance with C-ESMP. Completed daily and weekly checklists shall be filed for records purposes.
 - k. The Due Diligence Reports (DDRs) will be updated after the detailed design to identify and confirm any land acquisition and resettlement impacts along the transmission line and at the raw water intake. In view of this critical task, the Contractor shall ensure that the final alignment will show the exact location of the pipes to be laid, within the right-of-way, to ensure all the impacts, temporary or otherwise, will be identified appropriately for proper mitigation measures based on WB Safeguard Policies and requirements.
 - l. The Contractor will be informed and oriented on the grievance redress mechanism and process for properly addressing complaints as a result of the construction and restoration activities on the temporary impact sites. The Contractor is required to restore the right-of-way area into its original form after construction.

5. Social and Gender Compliance

- a. To ensure safeguard compliance on social and gender targets, the Contractor shall be required to document the (i) names of workers that were employed in construction activities disaggregated by sex, (ii) names of workers that attended IEC/ trainings on HIV/AIDS/STDs (iii) Type of construction skills training and the name/number of women attending the trainings, and (iv) certification that no child labor has been hired during construction.
- b. The Contractor will prepare the monitoring weekly and monthly depending on the target activities conducted. Compliance with the target activities will be monitored by the Employer with the assistance of the relevant authority.
- c. Provisions for solid waste management, temporary drainage, temporary lighting, sanitation, IEC for HIV/AIDS and other sexually transmitted diseases (STD) including GAP, and the preparation of good and safe organization of works.

6. 1 Gender Requirements

Based on the Gender Action Plan (GAP) approved by WB, the Contractor shall ensure compliance of the following:

- a. **At least 10% women** employed in project unskilled civil works construction and project O& M activities with safe working conditions and equal pay for the same work between male and female workers, and payment to be paid directly to female workers.
- b. Train and upgrade the construction skills of women in appropriate areas to enhance their formal employment opportunities (to be discussed what can be done during short construction time period with the winning contractor).
- c. Provide training to (construction) workers and the community to prevent the risk of HIV/AIDS/STDs and other diseases, and address issues associated with occupational health and safety.
- d. No child labor is employed.
- e. Priority hiring will be from the communities where construction will take place or those belonging to the poor households.

7. Monitoring

Actual performance status with regards to environmental and social impacts during construction will be monitored during and after construction activities. The Contractor shall be required to document agreement by the Owners of affected environment for any temporary impacts on them. The restoration to its original form will be subject to approval by the owners. In addition to the Contractor's own monitoring, MISTI and DISTI will also undertake the monitoring during and after construction. Photo documentation will be prepared together with the monitoring form to show actual restored condition of the affected asset or right of way. Appropriate monitoring forms will be developed and discussed with the Contractor.

8. UXO (Un Exploded Ordinance)

The Owner, MISTI provide the UXO data to the Contractor for the construction area if there is a possibility that there is a UXO at the construction site. This contract before the construction

starts, the Contractor must coordinate with the relevant authority and UXO Specialist and arrange meetings and site visits together with the Specialist to verify or pinpoint the actual location of the clear site.

The UXO Clearance copies are available and with the Employer (PMU), and as part of the contract document and included in the relevant UXO Clearance.

9. Environmental and Social Management Plan (ESMP) for this contract is presented in Annex of the bid documents. The Contractor should comply with the Environmental Management Monitoring Plan checklist.

Payment for ES Requirements

The payment for the delivery of ES requirements shall be a subsidiary obligation of the Contractor covered under the prices quoted for other Bill of Quantity items.

Contractor's Representative and Key Personnel

Item No.	Position/specialization	Relevant academic qualifications	Minimum years of relevant work experience
1	1 Construction Project Manager	Master degree of Civil Engineer or Management	5 years similar size and type
2	1 Construction Manager	Master degree of Civil Engineer	5 years similar size and type
3	1 Plant Manager	Bachelor degree of Civil Engineer or relevant	5 years similar size
4	2 Construction Supervisors	Bachelor degree of Civil Engineer or relevant	3 years similar size
5	1 Structural Engineer	Bachelor degree of Civil Engineer or relevant	3 years similar size
6	1 Mechanical Engineer	Bachelor degree of Mechanic Civil Engineer or relevant	3 years similar size
7	1 Electrical Engineer	Bachelor degree of Electrical Civil Engineer or relevant	3 years similar size
8	1 Materials Engineers	Bachelor degree of Civil Engineer or relevant	3 years similar size
9	1 Survey Engineer	Bachelor degree of Civil Engineer or relevant	2 years similar size
10	1 Environmental Specialist	Master/Bachelor degree of Environmental Science or other related fields	4 years similar size and type
11	1 Social Specialist	Master/Bachelor degree of Social Science, Development Studies or related field	4 years similar size and type

Drawings

All Drawings please refer to Volume III.

Supplementary Information

Regarding Works to be Procured

1. Description of the Project

1. The Stoung water supply system utilizes water from river inside 30 September Dam, which is pre-chlorinated and then put through two package-plant type iron/manganese filters, before further chlorination and storage. The PWW plant capacity is 5,060 m³/day and daily supply was 4,000 m³/day. The system needs to be extended into new service areas.
2. Improvements involve construction of a new conventional water treatment plant (WTP) with nominal capacity of 4,600 m³ per day including appurtenances coagulations, flocculation's, sedimentation tanks pre & post chlorination, filter tanks, backwash by water and air scouring system, and sludge drying bed. Other improvements involve electrical switch gear and valves/fittings, as well as raw water and treated water piping to transfer to existing underground tank and distribution

2. Description of the Environment

(iii)Physical Resources

Stoung-Tang Krasang Water Utility is located along national road (NR6), about 215km with 4-hour travel from Phnom Penh. It situates on the east side of the Tonle Sap Lake, around 56km to the Northwest of Kampong Thom city. Agriculture and fishery are the main activities for population to generate income. With that, the water in the area is supplied by a bunch of complexed water irrigation canals

Following table and figure shows anual maximum daily rainfall data at Stoung.

Table 7-3 Annual maximum daily rainfall data for 24 hr and 48 hr of Stoung and Taing Krasaing station

Year	Stoung Station		Taing Krasaing Station	
	24hr	48hr	24hr	48hr
2001	91.2	104.8	62.9	72.5
2002	99.4	141.0	77.3	104.9
2003	78.7	105.6	62.1	86.1
2004	79.6	105.4	71.7	94.2
2005	101.0	104.8	57.1	74.7
2006	119.8	168.1	79.5	94.7
2007	75.1	83.8	89.1	95.4
2008	136.4	198.8	96.6	149.2
2009	131.4	143.2	105.9	115.5
2010	70.0	100.0	91.5	139.5
2011	140.0	190.7	127.3	210.3
2012	81.8	123.0	85.6	140.5
2013	87.2	108.4	70.3	103.0
2014	105.6	137.8	74.0	81.2
2015	59.1	63.7	127.0	161.6
2016	75.5	149.7	70.9	125.8
2017	70.1	91.5	81.4	81.4
2018	72.7	72.9	66.0	72.5
2019	68.9	85.7	84.9	88.6
2020	115.2	145.9	67.6	89.7
2021	171.4	171.4	84.3	105.4
max	171.4	198.8	127.3	210.3

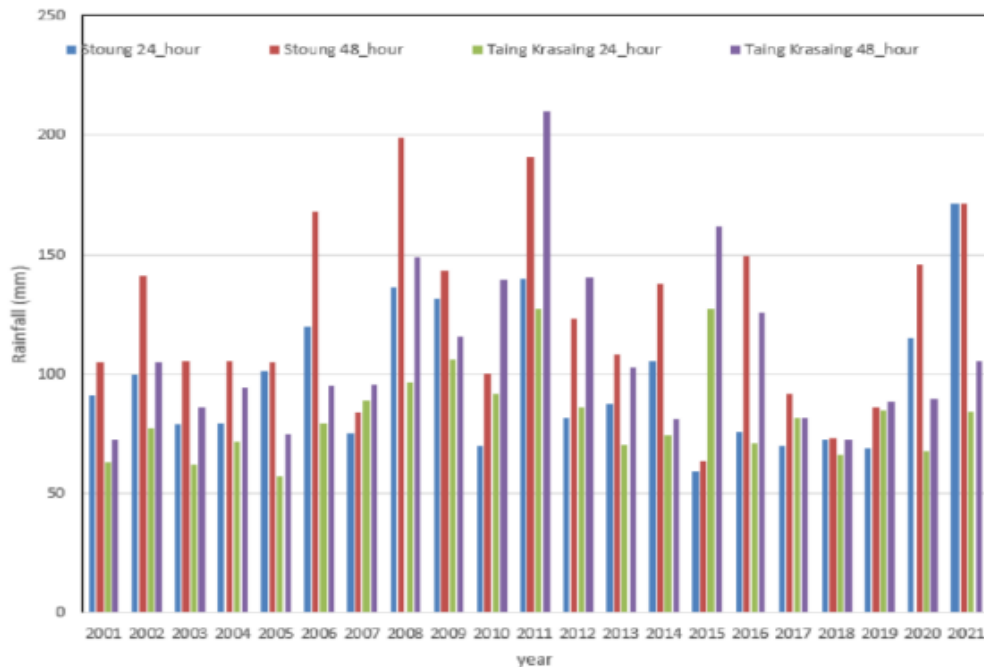
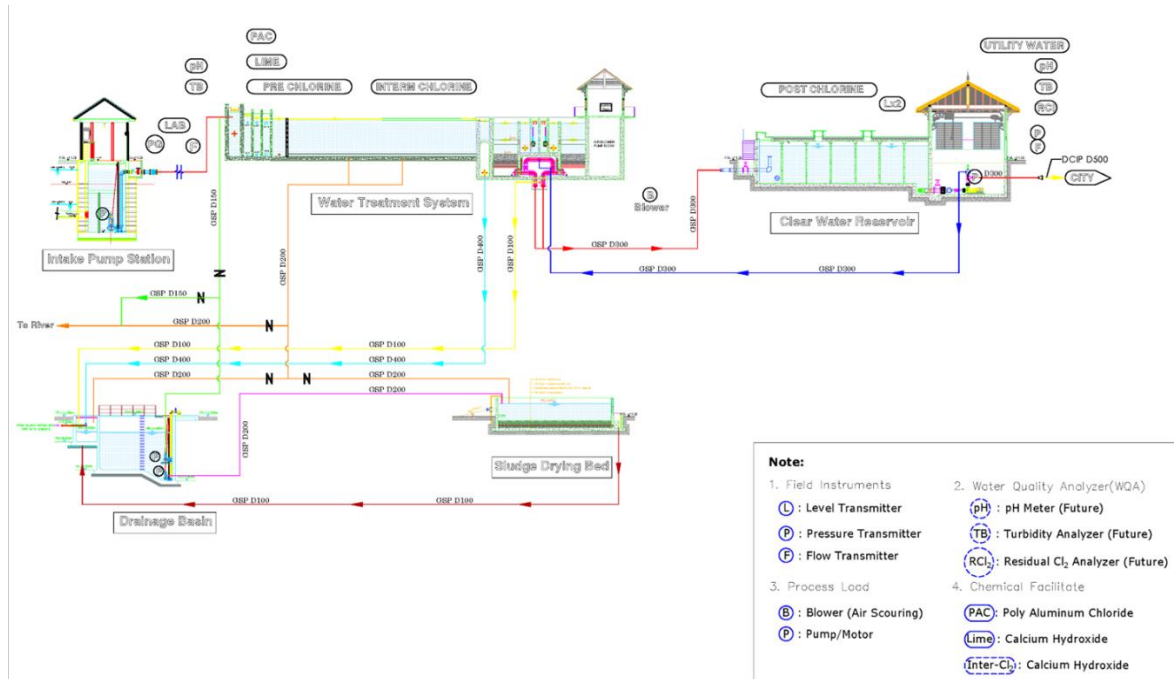


Figure 7-1 The bar chart of Annual maximum daily rainfall data for 24 hr and 48 hr

(b) Description of Water Production Process

Source of water is taken from the dam. Main purpose of water treatment is to remove the turbidity from surface water and add chlorine to disinfect the treated water before sending the clean water to service area. Following figure shows the schematic flow diagram of the treatment plant.

SCHMATIC FLOW DIAGRAM



(c) Other information

Following documents are provides as reference of the Stoung sub-Project;

- 1) Feasibility Study of Stoung Water Supply System Improvement Project by MISTI, April 2022
- 2) Preliminary Engineering Design Report for Stoung by the Consultant, March 2023.
- 3) Geotechnical Investigation Report by the Consultant
- 4) Topographical Survey Report by the Consultant.

PART 3 – Conditions of Contract and Contract Forms

Section VIII – General Conditions (GC)

Red Book:

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The Conditions of Contract are the “General Conditions” which form part of the “Conditions of Contract for Construction for Building and Engineering Works Designed by the Employer (“Red book”) Second edition 2017, reprinted 2022 with amendments” published by the Federation Internationale Des Ingenieurs – Conseils (FIDIC) and the following “Particular Conditions” which comprise of the World Bank’s COPA and the amendments and additions to such General Conditions.

An original copy of the above FIDIC publication i.e., “Conditions of Contract for Building and Engineering Works Designed by the Employer” must be obtained from FIDIC.

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Section IX – Particular Conditions

The following Particular Conditions shall supplement the General Conditions. Whenever there is a conflict, the provisions herein shall prevail over those in the General Conditions.

Part A – Contract Data

Conditions	Sub-Clause	Data
Where the Contract allows for Cost Plus Profit, percentage profit to be added to the Cost	1.1.20	N/A
Employer's name and address	1.1.31	Ministry of Industry, Science, Technology & Innovation (MISTI). #45, Preah Norodom Blvd, Sangkat Chaktomok, Khan Daun Penh, Phnom Penh, Cambodia. Floor: 13th Floor, Techo Sen Building. H.E. Houl Bonnarith, WaSSIP Project Director/Under Secretary of State/ MISTI. Email: houl.bonnarith@misti.gov.kh Cc: tan.sokchea@gmail.com and kimchanrithy123@gmail.com .
Engineer's name and address	1.1.35	To be notified by the Employer later (information is not available at the date of Bid preparation)
Bank's name	1.1.89	The World Bank
Borrower's name	1.1.90	Kingdom of Cambodia
Time for Completion	1.1.84	540 days (18 months)
Defects Notification Period	1.1.27	365 days. (one year)
Sections	1.1.73	Entire Package/Contract
Electronic transmission system	1.3 (a) (ii)	Communications shall be in writing and hand-delivered; advance copy can be transmitted electronically (e-mail) to avoid delays
Address of Employer for communications:	1.3(d)	#45, Preah Norodom Blvd, Sangkat Chaktomok, Khan Daun Penh, Phnom Penh, Cambodia. Floor: 1st Floor, Old Building.
Address of Engineer for communications:	1.3(d)	To be notified later
Address of Contractor for communications:	1.3(d)	To be notified later
Governing Law	1.4	The Law of the Kingdom of Cambodia
Ruling language	1.4	English
Language for communications	1.4	English
Time for the Parties to sign a Contract Agreement	1.6	28 days after receipt of the Letter of Acceptance
Number of additional paper copies of Contractor's Documents	1.8	Two (2) copies
Total liability of the Contractor to the Employer	1.15	100% of contract amount

Conditions	Sub-Clause	Data
under or in connection with the Contract		
Site	1.1 74	Kandaol Chas Village, Preah Damrey Commune, Stoung District, Kampong Thom Province
Time for access to the Site	2.1	No later than the Commencement Date
Engineer's Duties and Authority	3.2	Any variation exceeds contract amount shall require written consent of the Employer.
Cyber security- Contractor's obligations	4.1	N/A
Performance Security	4.2	<p>The Performance Security will be in the form of a demand guarantee in the amount(s) of 10% of the Accepted Contract Amount and in the same currency (ies) of the Accepted Contract Amount and shall be submitted within twenty-eight (28) days after receipt of the Letter of Acceptance. The cost for complying with the requirements of this clause shall be borne by the Contractor.</p> <p>The Issuing Bank shall have a Branch in the Kingdom of Cambodia. In case issuing Bank is located outside the Kingdom of Cambodia, it shall have a correspondent Bank established in Cambodia. In such a case, the Bidder shall provide a Letter duly signed and stamped by the corresponding Bank established in Cambodia certifying that the Security is executable by the services of the said corresponding Bank established in Cambodia.</p>
Environmental and Social (ES) Performance Security	4.2	<p>The Environmental and Social (ES) Performance Security will be in the form of a demand guarantee in the amount(s) of 3% of the Accepted Contract Amount and in the same currency (ies) of the Accepted Contract Amount and shall be submitted within twenty-eight (28) days after receipt of the Letter of Acceptance. The cost for complying with the requirements of this clause shall be borne by the Contractor.</p> <p>The Issuing Bank shall have a Branch in the Kingdom of Cambodia. In case issuing Bank is located outside the Kingdom of Cambodia, it shall have a correspondent Bank established in Cambodia. In such a case, the Bidder shall provide a Letter duly signed and stamped by the corresponding Bank established in Cambodia</p>

Conditions	Sub-Clause	Data
		certifying that the Security is executable by the services of the said corresponding Bank established in Cambodia.
Period for notification of errors in the items of reference	4.7.2 (a)	30 Days
Period of payment for temporary utilities	4.19	At least 3 days prior to the due date
Number of additional paper copies of progress reports	4.20	Two (2) copies
Cyber security	4.20	N/A
Cyber security-immediate reporting	4.20	N/A
Maximum allowable accumulated value of work subcontracted (as a percentage of the Accepted Contract Amount)	5.1(a)	20%
Parts of the Works for which subcontracting is not permitted	5.1(b)	N/A
Normal working hours	6.5	Within the day are from 7:30AM – 12:00PM and 13:30 PM to 17:00PM when works are to be carried out (performing 8 hours/day). Subject to any provision of the normal working hours in the country. The Contractor shall have the option to work continuously by day and by night and on locally recognized holidays or days of rest. In such cases, the Contractor shall inform and seek the approval of the Employer and/or the Engineer 24 hours in advance of such working hours deviation.
Number of additional paper copies of program	8.3	Two (2) copies
Delay damages payable for each day of delay	8.8	0.10% of the Accepted Contract Amount, less provisional sum for DAAB.
Maximum amount of delay damages	8.8	10% of the Accepted Contract Amount less provisional sum for DAAB
Method of measurement	12.2	Follow the BoQ
Percentage profit	12.3	<i>As stated under 1.1.20 above</i>
Cyber security- Variation	13.3.1 (a)	N/A
Percentage rate to be applied to Provisional Sums for overhead charges and profit	13.4 (b)(ii)	None.

Conditions	Sub-Clause	Data
Total advance payment	14.2	<p>10% of the Accepted Contract Amount payable in the currencies and proportions in which the Accepted Contract Amount is payable.</p> <p>It shall be paid to the Contractor no later than 28 days from the submission of an advance payment guarantee and performance security acceptable to the Employer.</p>
Repayment of Advance payment	14.2.3	<p>(a) minimum amount of certified interim payments to commence repayment of the Advance Payment, as a percentage of the Accepted Contract Amount payable in that currency less Provisional Sums 20%</p> <p>(b) percentage deductions for the repayment of the Advance Payment is 20% provided that the advance payment shall be completely repaid prior to the time when 90 percent (90%) of the Accepted Contract Amount less Provisional Sums has been certified for payment.</p>
Period of payment	14.3	After end of each month.
Number of additional paper copies of Statements	14.3(b)	Two (2) copies
Percentage of retention	14.3(iii)	10% of Monthly Interim Payment shall be deducted for Retention
Limit of Retention Money (as a percentage of Accepted Contract Amount)	14.3(iii)	10% of Accepted Contract Amount
Plant and Materials	14.5(b)(i)	If Sub-Clause 14.5 applies: Plant and Materials for payment when shipped N/A.
	14.5(c)(i)	Plant and Materials for payment when delivered to the Site N/A.
Minimum Amount of Interim Payment Certificates	14.6.2	0.50 % of the Accepted Contract Amount.
Cyber security- withholding payments	14.6.2	N/A
Period of payment of Advance Payment to the Contractor	14.7(a)	28 days
Period for the Employer to make interim payments to the Contractor under Sub-Clause 14.6 (interim Payment)	14.7b(i)	56 days

Conditions	Sub-Clause	Data
Period for the Employer to make interim payments to the Contractor under Sub-Clause 14.13 (Final Payment)	14.7b(ii)	28 days
Period for the Employer to make final payment to the Contractor	14.7(c)	56 days
financing charges for delayed payment (percentage points above the average bank short-term lending rate as referred to under sub-paragraph (a))	14.8	8% per annum reckoned from the date of invoice
Number of additional paper copies of draft Final Statement	14.11.1(b)	Two (2) copies
Forces of nature, the risks of which are allocated to the Contractor	17.2(d)	All kinds of forces of nature

Conditions	Sub-Clause	Data
Permitted deductible limits	19.1	<ul style="list-style-type: none"> - Insurance requirement for the Works: US\$ 10,000. - Insurance requirement for Goods: US\$ 10,000. - Insurance requirement for liability for breach of professional duty: US\$ 5,000. - Insurance required against liability for fitness for purpose (if any is required): N/A. - Insurance required for injury to employees: US\$ 5,000. - Other insurances required by Laws and by local practice: <ul style="list-style-type: none"> (i) Third Party Liability (Damage to Property/Public Liability): Third Party Liability for any one incident or series of incidents arising out of one event, with the number of occurrences being unlimited. Sum insured; USD 500,000. Deductibles (any one occurrence) applying to Third Party Property Only, 10% of the loss. (ii) Contractor's Plant, Machinery & Equipment Insurance not covered by Works and Goods above: All non-owned, owned, leased or rented Contractor's Plant, Machinery & Equipment shall be insured. The sum insured shall be the const of replacement of the insured items by new items of the same kind and capacity. The deductible any one occurrence shall not be greater than 10% of the loss subject to a maximum of USD 25,000. (iii) Vehicles Insurance for Physical Damage & Third-Party Liability: All non-owned, owned, leased or rented Vehicles shall be insured. The physical damage sum insured for the Vehicles shall be their replacement cost. The limit of indemnity for Third Party Liability shall be USD 1,000,000 or the local statutory limit, whichever is the higher.
Additional amount to be insured (as a percentage of the replacement value, if less or more than 15%)	19.2.1(b)	0%
List of risks arising from Exceptional Events which shall not be excluded from the insurance cover for the Works	19.2.1(iv)	N/A

Conditions	Sub-Clause	Data
Extent of insurance required for Goods	19.2.2	N/A
Amount of insurance required for Goods		N/A
amount of insurance required for liability for breach of professional duty	19.2.3(a)	N/A
Insurance required against liability for fitness for purpose	19.2.3(b)	N/A
Period of insurance required for liability for breach of professional duty	19.2.3	N/A
Amount of insurance required for injury to persons and damage to property	19.2.4	US\$ 1 million for any incident and in cumulative amount for all incidents. Deductible limits: US\$ 10,000.
Other insurances required by Laws and by local practice (give details)		No additional requirements than required by Laws and by local practice.
Time for appointment of DAAB member (s)	21.1	42 days after signature by both parties of the Contract Agreement
The DAAB shall be comprised of	21.1	One sole Member
List of proposed members of DAAB	21.1	Proposed by Employer <i>[Attach CVs to the bidding document and the Contract]</i> 1. _____ 2. _____ 3. _____ Proposed by Contractor <i>[Attach CVs to the Contract]</i> 1. _____ 2. _____ 3. _____
Rules of arbitration	21.6(a)	Sub-Clause 21.6(a) of PART B – Special Provisions shall apply. The Singapore International Arbitration Centre (SIAC).
	21.6 (b)	Sub-Clause 21.6(b) of PART B – Special Provisions shall apply.
Place of arbitration	21.6(a)	The Singapore International Arbitration Centre (SIAC).

Table: Summary of Sections (if any)

Description of parts of the Works that shall be designated a Section for the purposes of the Contract (Sub-Clause 1.1.73)	Value: Percentage* of Accepted Contract Amount (Sub-Clause 14.9)	Time for Completion (Sub-Clause 1.1.84)	Delay Damages (Sub-Clause 8.8)
Entire Contract/Package	10% of Accepted Contract Amount	18 months	0.10% for each day of delay, Max 10%

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

Part B - Special Provisions

- Sub-Clause 1.1.49**
Laws
- The Sub-Clause is replaced with:
 “**Laws**” means all national (or state) legislation, statutes, ordinances and other laws, and regulations and by-laws of any legally constituted public authority.”
- Sub-Clause 1.1.74**
Site
- The Sub-Clause is replaced with:
 “**Site**” means the places where the Permanent Works are to be executed, including storage, and working area, and to which Plant and Materials are to be delivered, and any other places specified in the Contract as forming part of the Site.”
- Sub-Clause 1.1.89 to 1.1.92 are added after Sub-Clause 1.1.88**
- Sub-Clause 1.1 89 Bank**
- “**Bank**” means the financing institution (if any) named in the Contract Data.
- Sub-Clause 1.1.90**
Borrower
- “**Borrower**” means the person (if any) named as the borrower in the Contract Data.
- Sub-Clause 1.1.91**
ES
- “**ES**” means Environmental and Social (including Sexual Exploitation and Abuse (SEA), and Sexual Harassment (SH)).
- Sub-Clause 1.1.92**
Sexual Exploitation and Abuse (SEA), and Sexual Harassment (SH)
- “**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; and
- “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 Contractor’s Personnel with other Contractor’s or Employer’s Personnel.
- Sub-Clause 1.2**
Interpretation
- Sub-paragraph (a) is replaced with the following:
- (a) “Words indicating one gender include all genders;
 “he/she” is replaced with:” it”;
 “him/her” is replaced with “it”;

“his” and “his/her” are replaced with: “its”;

“himself/herself” are replaced with: “itself”.

Further, “and” is deleted from the end of sub-paragraph (i) and added at the end of sub-paragraph (j).

sub-paragraph (k) is added:

- (k) “The word “tender” is synonymous with “bid” or “proposal”, the word tenderer with “bidder” or “proposer” and the words “tender documents” with “request for bids documents” or “request for proposal documents”, as applicable.”

Sub-Clause 1.5
Priority of Documents

The following documents are added in the list of Priority Documents after (e):

- (f) “ the Particular Conditions Part C- Fraud and Corruption;
- (g) the Particular Conditions Part D- Environmental and Social (ES) Metrics for Progress Reports;
- (h) Particular Conditions- Part E- Sexual Exploitation and Abuse (SEA) and/or Sexual Harassment Performance Declaration for Subcontractors;”

and the list renumbered accordingly.

Sub-Clause 1.6
Contract Agreement

The last paragraph is replaced with:

“If the Contractor comprises a JV, the authorised representative of the JV shall sign the Contract Agreement in accordance with Sub-Clause 1.14 [*Joint and Several Liability.*]”

Sub-Clause 1.12
Confidentiality

The following is added at the end of the second paragraph: “The Contractor shall be permitted to disclose information required to establish its qualifications to compete for other projects.”

“or” at the end of (b) is deleted.

“or” at the end of (c) is added.

The following is then added as (d): “is being provided to the Bank .”

Sub-Clause 1.17
Inspections & Audit by the Bank

The following Sub-Clause is added after Sub-Clause 1.16:

“Pursuant to paragraph 2.2 e. of Particular Conditions - Part C- Fraud and Corruption, the Contractor 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 Contractor's and its Subcontractors' and subconsultants' attention is drawn to Sub-Clause 15.8 (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)."

Sub-Clause 2.4**Employer's Financial Arrangements**

The first paragraph is replaced with:

"The Employer shall submit, before the Commencement Date, reasonable evidence that financial arrangements have been made for financing the Employer's obligations under the Contract."

The following sub-paragraph is added at the end of Sub-Clause 2.4:

"In addition, if the Bank has notified to the Borrower that the Bank has suspended disbursements under its loan, which finances in whole or in part the execution of the Works, the Employer shall give notice of such suspension to the Contractor with detailed particulars, including the date of such notification, with a copy to the Engineer, within 7 days of the Borrower having received the suspension notification from the Bank. If alternative funds will be available in appropriate currencies to the Employer to continue making payments to the Contractor beyond a date 60 days after the date of Bank notification of the suspension, the Employer shall provide reasonable evidence in its notice of the extent to which such funds will be available."

Sub-Clause 2.6**Employer-Supplied Materials and Employer's Equipment**

[If Employer-Supplied Materials are listed in the Works' Requirements for the Contractor's use in the execution of Works, the following provisions may be added]:

The following is added after the last paragraph of Sub-Clause 2.6:

"The Employer shall supply to the Contractor the Employer-Supplied Materials listed in the Specification, at the time(s) stated in the Specification (if not stated, within the times that shall be required to enable the Contractor to proceed with execution of the Works in accordance with the Programme).

When made available by the Employer, the Contractor shall visually inspect the Employer-Supplied Materials and shall promptly give a Notice to the Engineer of any shortage, defect, or default in them. Thereafter, the Contractor shall rectify such shortage, defect or default to the extent instructed by the Engineer. Such instruction shall be deemed

to have been given under Sub-Clause 13.3.1 [*Variation by Instruction*].

After this visual inspection, the Employer-Supplied Materials shall come under the care, custody, and control of the Contractor. The Contractor's obligations of inspection, care, custody, and control shall not relieve the Employer of liability of any shortage, defect, or default not apparent from a visual inspection."

[If Employer's Equipment are listed in the Specification for the Contractor's use in the execution of Works, the following provisions may be added]:

The following is added after the last paragraph of Sub-Clause 2.6:

"The Employer shall make the Employer's Equipment listed in the Specification available to the Contractor at the time(s) stated in the Specification (if not stated, within the times that shall be required to enable the Contractor to proceed with execution of the Works in accordance with the Programme).

Unless expressly stated otherwise in the Specification, the Employer's Equipment shall be provided for the exclusive use of the Contractor.

When made available by the Employer, the Contractor shall visually inspect the Employer's Equipment and shall promptly give a Notice to the Engineer of any shortage, defect, or default in them. Thereafter, the Contractor shall rectify such shortage, defect or default to the extent instructed by the Engineer. Such instruction shall be deemed to have been given under Sub-Clause 13.3.1 [*Variation by Instruction*].

The Contractor shall be responsible for the Employer's Equipment while it is under the Contractor's control and/or any of the Contractor's Personnel is operating it, driving it, directing it, using it, or in control of it.

The Contractor shall not remove from the Site any items of the Employer's Equipment without the consent of the Employer. However, consent shall not be required for vehicles transporting Goods or Contractor's personnel to or from the Site."

Sub-Clause 3.1
The Engineer

The following is added at the end of the first sub-paragraph:

"The Engineer's staff shall include suitably qualified engineers and other professionals who are competent to carry out these duties."

- Sub-Clause 3.2
Engineer’s Duties and
Authority**
- The Engineer shall obtain the consent in writing of the Employer before taking action under the following Sub-Clauses of these Conditions:
- (a) Sub-Clause 13.1: Right to vary - instructing a variation, except;
 - (i) in an emergency situation as determined by the Engineer; or
 - (ii) (if such a Variation would increase the Accepted Contract Amount by less than the percentage specified in the Contract Data.
 - (b) Sub-Clause 13.2 (Value Engineering): stating consent or otherwise to a value engineering proposal submitted by the Contractor in accordance with Sub-Clause 13.2.

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

- Sub-Clause 3.3
Engineer’s
Representative**
- The following is added at the end of Sub-Clause 3.3:
- “The Engineer shall obtain the consent of the Employer before appointing or replacing an Engineer’s Representative.”

- Sub-Clause 3.4
Delegation by the
Engineer**
- The following is added at the end of the second paragraph:
- “If any assistants are not fluent in this language, the Engineer shall make competent interpreters available during all working hours, in a number sufficient for those assistants to properly perform their assigned duties and/or exercise their delegated authority.”

- Sub-Clause 3.6
Replacement of the
Engineer**
- In the first paragraph, “42 days” is replaced with: “21 days”;
- In the third paragraph, “shall” is replaced with: “should”.

Sub-Clause 4.1
Contractor's General
Obligations

The following is inserted after the paragraph “The Contractor shall provide the Plant (and spare parts, if any) ...”:

“All equipment, material, and services to be incorporated in or required for the Works shall have their origin in any eligible source country as defined by the Bank.”

The following is inserted after the paragraph “The Contractor shall, whenever required by the Engineer...”:

“The Contractor shall not carry out mobilization to Site (e.g. limited clearance for haul roads, site accesses and work site establishment, geotechnical investigations or investigations to select ancillary features such as quarries and borrow pits) unless the Engineer gives a Notice of No-objection to the Contractor, a Notice that shall not be unreasonably delayed, to the measures the Contractor proposes to manage the environmental and social risks and impacts, which at a minimum shall include applying the Management Strategies and Implementation Plans (MSIPs) and Code of Conduct for Contractor's Personnel submitted as part of the Bid and agreed as part of the Contract.

The Contractor shall submit to the Engineer for Review any additional MSIPs as are necessary to manage the ES risks and impacts of ongoing Works (e.g., excavation, earth works, bridge and structure works, stream, and road diversions, quarrying or extraction of materials, concrete batching, and asphalt manufacture). These MSIPs collectively comprise the Contractor's Environmental and Social Management Plan (C-ESMP). The Contractor shall review the C-ESMP, periodically (but not less than every six (6) months), and update it as required to ensure that it contains measures appropriate to the Works. The updated C-ESMP shall be submitted to the Engineer for Review.

The C-ESMP shall be part of the Contractor's Documents. The procedures for Review of the C-ESMP and its updates shall be as described in Sub-Clause 4.4.1 [*Preparation and Review*].”

The following is added as (g); (g) and (h) of the Sub-Clause are then renumbered as (h) and (i) respectively. “if so stated in the Specification, the Contractor shall:

design structural elements of the Works taking into account climate change considerations;

apply the concept of universal access (the concept of universal access means unimpeded access for people of all ages and abilities in different situations and under various circumstances;

consider the incremental risks of the public's potential exposure to operational accidents or natural hazards, including extreme weather events; and

any other requirement stated in the Specification.”

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

“The Contractor shall provide relevant contract- related information, as the Employer and/or Engineer may reasonably request to conduct Stakeholder engagements. “Stakeholder” refers to individuals or groups who:

- (i) are affected or likely to be affected by the Contract; and
- (ii) may have an interest in the Contract.

The Contractor shall also directly participate in Stakeholder engagements, as the Employer and/or Engineer may reasonably request.

Pursuant to the Contract Data, the Contractor, including its Subcontractors/ suppliers/ manufacturers shall take all technical and organizational measures necessary to protect the information technology systems and data used in connection with the Contract. Without limiting the foregoing, the Contractor, including its Subcontractors/ suppliers/ manufacturers, shall use all reasonable efforts to establish, maintain, implement and comply with, reasonable information technology, information security, cyber security and data protection controls, policies and procedures, including oversight, access controls, encryption, technological and physical safeguards and business continuity/disaster recovery and security plans that are designed to protect against and prevent breach, destruction, loss, unauthorized distribution, use, access, disablement, misappropriation or modification, or other compromise or misuse of or relating to any information technology system or data used in connection with the Contract.”

Sub-Clause 4.2

Performance Security and ES Performance Security

The first paragraph is replaced with:

“The Contractor shall obtain (at its cost) a Performance Security for proper performance and, if applicable, an Environmental and Social (ES) Performance Security for compliance with the Contractor's ES obligations, in the amounts stated in the Contract Data and denominated in the currency(ies) of the Contract or in a freely convertible currency acceptable to the Employer. If amounts are not stated in the Contract Data, this Sub-Clause shall not apply.”

In the following Sub-Clauses of the General Conditions, the term “Performance Security” is replaced with: “Performance Security and, if applicable, an Environmental and Social (ES) Performance Security”:

2.1- Right of Access to the Site;

14.2- Advance Payment;

14.6- Issue of IPC;

14.12- Discharge;

14.13- Issue of FPC;

14.14 Cessation of Employer’s Liability;

15.2- Termination for Contractor’s Default;

15.5- Termination for Employer’s Convenience.

Sub-Clause 4.2.1

**Contractor’s
obligations**

The first paragraph is replaced with:

“The Contractor shall deliver the Performance Security and, if applicable, an ES Performance Security to the Employer within 28 days after receiving the Letter of Acceptance and shall send a copy to the Engineer. The Performance Security and, if applicable, the ES Performance Security, shall be issued by a reputable bank or financial institution selected by the Contractor. The Performance Security shall be, as stipulated in the Contract Data, and shall be in accordance with the form included in the request for bidding documents for the subject contract or in another form agreed by the Employer.”

Thereafter, throughout Sub-Clause 4.2 “Performance Security” is replaced with: “Performance Security and, if applicable, ES Performance Security.”

Sub-Clause 4.2.2

**Claims under the
Performance Security**

The first paragraph is replaced in its entirety with: “The Employer shall not make a claim under the Performance Security, except for amounts for which the Employer is entitled under the Contract.”

Sub-Clause 4.2.3

**Return of Performance
Security**

In sub-paragraph (a) “21 days” is replaced with: “28 days”.

Sub-Clause 4.3

**Contractor’s
Representative**

The following is added at the end of the last paragraph: “If any of these persons is not fluent in this language, the Contractor shall make competent interpreters available during all working hours in a number deemed sufficient by the Engineer.”

Sub-Clause 4.6

The following is added after the first paragraph:

Co-operation

“The Contractor shall also, as stated in the Specification or as instructed by the Engineer, cooperate with and allow appropriate opportunities for the Employer’s Personnel to conduct any environmental and social assessment.”

Sub-Clause 4.8**Health and Safety Obligations**

The following are included after deleting “and” at the end of (f) and replacing “.” with “;” at the end of (g):

“

- (h) provide health and safety training of Contractor’s Personnel as appropriate and maintain training records;
- (i) actively engage the Contractor’s Personnel in promoting understanding, and methods for, implementation of health and safety requirements, as well as in providing information to Contractor’s Personnel, and provision of personal protective equipment without expense to the Contractor’s Personnel;
- (j) put in place workplace processes for Contractor’s Personnel 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;
- (k) Contractor’s Personnel 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. Contractor’s Personnel shall not be retaliated against or otherwise subject to reprisal or negative action for such reporting or removal;
- (l) subject to Sub-Clause 4.6, collaborate with the entities and Personnel under paragraph (a) , (b) and (c) of Sub-Clause 4.6, in applying the health and safety requirements. This is without prejudice to the responsibility of the relevant entities for the health and safety of their own personnel; and
- (m) establish and implement a system for regular (not less than six-monthly) review of health and safety performance and the working environment.”

The second and third paragraphs are replaced with the following:

“Subject to Sub-Clause 4.1, the Contractor shall submit to the Engineer for Review a health and safety manual which has been specifically prepared for the Works, the Site, and other places (if any) where the Contractor intends to execute

the Works. The procedures for Review of the health and safety manual and its updates shall be as described in Sub-Clause 4.4.1 [*Preparation and Review*].

The health and safety manual shall be in addition to any other similar document required under applicable health and safety regulations and Laws.

The health and safety manual shall set out all the health and safety requirements under the Contract,

- (a) which shall include at a minimum:
 - (i) the procedures to establish and maintain a safe working environment without risk to health at all workplaces, machinery, equipment, and processes under the control of the Contractor, including control measures for chemical, physical and biological substances, and agents;
 - (ii) details of the training to be provided, records to be kept;
 - (iii) the procedures for prevention, preparedness, and response activities to be implemented in the case of an emergency event (i.e., an unanticipated incident, arising from both natural and man-made hazards, typically in the form of fire, explosions, leaks, or spills, which may occur for a variety of different reasons including failure to implement operating procedures that are designed to prevent their occurrence, extreme weather, or lack of early warning);
 - (iv) the measures to be taken to avoid or minimize the potential for community exposure to water-borne, water-based, water-related, and vector-borne diseases,
 - (v) the measures to be implemented to avoid or minimize the spread of communicable diseases (including transfer of Sexually Transmitted Diseases or Infections (STDs), such as HIV virus) and non-communicable diseases associated with the execution of the Works, taking into consideration differentiated exposure to and higher sensitivity of vulnerable groups. This includes taking measures to avoid or minimize the transmission of communicable diseases that may be associated with the influx of temporary or permanent Contract-related labour;

- (vi) the policies and procedures on the management and quality of accommodation and welfare facilities if such accommodation and welfare facilities are provided by the Contractor in accordance with Sub-Clause 6.6; and

- (b) any other requirements stated in the Specification.

The paragraph starting with: “In addition to the reporting requirement of...” is deleted and replaced with the addition to GC Sub-Clause 4.20 in Sub-Clause 4.20 of the Special Provisions.

Sub-Clause 4.15

Access Route

The following is added at the end of Sub-Clause 4.15:

“The Contractor shall take all necessary safety measures to avoid the occurrence of incidents and injuries to any third party, associated with the use of, if any, Contractor’s Equipment on public roads or other public infrastructure.

The Contractor shall monitor road safety incidents and accidents to identify negative safety issues and establish and implement necessary measures to resolve them.”

Sub-Clause 4.18

Protection of the Environment

Sub-Clause 4.18 Protection of the Environment is replaced with:

“The Contractor shall take all necessary measures to:

- protect the environment (both on and off the Site); and

- limit damage and nuisance to people and property resulting from pollution, noise, and other results of the Contractor’s operations and/ or activities.

The Contractor shall ensure that emissions, surface discharges, effluent and any other pollutants from the Contractor’s activities shall exceed neither the values indicated in the Specification, nor those prescribed by applicable Laws.

In the event of damage to the environment, property and/or nuisance to people, on or off Site as a result of the Contractor’s operations, the Contractor shall agree with the Engineer the appropriate actions and time scale to remedy, as practicable, the damaged environment to its former condition. The Contractor shall implement such remedies at its cost to the satisfaction of the Engineer.”

Sub-Clause 4.20

Progress Reports

Replace “4.20 (g) with: “the Environmental and Social (ES) metrics set out in Particular Conditions - Part D”.

The following paragraph is added prior to the paragraph starting with: “However, nothing stated...”: “Unless

otherwise stated in the Contract Data, progress reports shall include status of compliance to cyber security risks management, and any foreseeable cyber security risk and mitigation.”

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

“In addition to the reporting requirement of this subparagraph (g) of Sub-Clause 4.20 [*Progress Reports*] the Contractor shall inform the Engineer immediately of any allegation, incident, or accident, which has or is likely to have a significant adverse effect on the environment, the affected communities, the public, Employer’s Personnel or Contractor’s Personnel. This includes, but is not limited to, any incident or accident causing fatality or serious injury; significant adverse effects or damage to private property; any cyber security incidents as specified in the Contract Data; or any allegation of SEA and/or SH. In case of SEA and/or SH, while maintaining confidentiality as appropriate, the type of allegation (sexual exploitation, sexual abuse, or sexual harassment), gender and age of the person who experienced the alleged incident should be included in the information.

The Contractor, upon becoming aware of the allegation, incident, or accident, shall also immediately inform the Engineer of any such incident or accident on the Subcontractors’ or suppliers’ premises relating to the Works which has or is likely to have a significant adverse effect on the environment, the affected communities, the public, Employer’s Personnel or Contractor’s, its Subcontractors’, and suppliers’ personnel. The notification shall provide sufficient detail regarding such incidents or accidents. The Contractor shall provide full details of such incidents or accidents to the Engineer within the timeframe agreed with the Engineer.

The Contractor shall require its Subcontractors and suppliers (other than Subcontractors) to immediately notify the Contractor of any incidents or accidents referred to in this Subclause.”

**Sub-Clause 4.21
Security of the Site**

Sub-Clause 4.21 Security of the Site is replaced with:

“Sub-Clause 4.21 Security of the Site

The Contractor shall be responsible for the security of the Site, and:

- (a) for keeping unauthorised persons off the Site;
- (b) authorised persons shall be limited to the Contractor’s Personnel, the Employer’s Personnel, and to any other personnel identified as authorised personnel (including the Employer’s other

contractors on the Site), by a Notice from the Employer or the Engineer to the Contractor.

Subject to Sub-Clause 4.1, the Contractor shall submit for the Engineer's No-objection a security management plan that sets out the security arrangements for the Site.

The Contractor shall (i) conduct appropriate background checks on any personnel retained to provide security; (ii) train the security personnel adequately (or determine that they are properly trained) in the use of force (and where applicable, firearms), and appropriate conduct towards Contractor's Personnel, Employer's Personnel and affected communities; and (iii) require the security personnel to act within the applicable Laws and any requirements set out in the Specification.

The Contractor shall not permit any use of force by security personnel in providing security except when used for preventive and defensive purposes in proportion to the nature and extent of the threat.

In making security arrangements, the Contractor shall also comply with any additional requirements stated in the Specification.”

Sub-Clause 4.23

Archaeological and Geological Findings

The first paragraph is replaced with the following:

“All fossils, coins, articles of value or antiquity, structures, groups of structures, and other remains or items of geological, archaeological, paleontological, historical, architectural, or religious interest found on the Site shall be placed under the care and custody of the Employer. The Contractor shall:

take all reasonable precautions, including fencing-off the area or site of the finding, to avoid further disturbance and prevent Contractor's Personnel or other persons from removing or damaging any of these findings;

train relevant Contractor's Personnel on appropriate actions to be taken in the event of such findings; and

implement any other action consistent with the requirements of the Specification and relevant Laws.”

Sub-Clause 4.24

Suppliers (other than Subcontractors)

4.24.1 Forced Labour

The Contractor shall take measures to require its suppliers (other than Subcontractors) not to employ or engage forced labour including trafficked persons as described in Sub-Clause 6.21. If forced labour/trafficking cases are identified, the Contractor shall take measures to require the suppliers to

take appropriate steps to remedy them. Where the supplier does not remedy the situation, the Contractor shall within a reasonable period substitute the supplier with a supplier that is able to manage such risks.

4.24.2 Child labour

The Contractor shall take measures to require its suppliers (other than Subcontractors) not to employ or engage child labour as described in Sub-Clause 6.22. If child labour cases are identified, the Contractor shall take measures to require the suppliers to take appropriate steps to remedy them. Where the supplier does not remedy the situation, the Contractor shall within a reasonable period substitute the supplier with a supplier that is able to manage such risks.

4.24.3 Serious Safety Issues

The Contractor, including its Subcontractors, shall comply with all applicable safety obligations, including as stated in Sub-Clauses 4.8, 5.1 and 6.7. The Contractor shall also take measures to require its suppliers (other than Subcontractors) to adopt procedures and mitigation measures adequate to address safety issues related to their personnel. If serious safety issues are identified, the Contractor shall take measures to require the suppliers to take appropriate steps to remedy them. Where the supplier does not remedy the situation, the Contractor shall within a reasonable period substitute the supplier with a supplier that is able to manage such risks.

4.24.4 Obtaining natural resource materials in relation to supplier

The Contractor shall obtain natural resource materials from suppliers that can demonstrate, through compliance with the applicable verification and/ or certification requirements, that obtaining such materials is not contributing to the risk of significant conversion or significant degradation of natural or critical habitats such as unsustainably harvested wood products, gravel or sand extraction from riverbeds or beaches.

If a supplier cannot continue to demonstrate that obtaining such materials is not contributing to the risk of significant conversion or significant degradation of natural or critical habitats, the Contractor shall within a reasonable period substitute the supplier with a supplier that is able to demonstrate that they are not significantly adversely impacting the habitats.

Sub-Clause 4.25 Code of Conduct

The Contractor shall have a Code of Conduct for the Contractor's Personnel.

The Contractor shall take all necessary measures to ensure that each Contractor's Personnel 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 Contractor's Personnel and seeking to obtain that person's signature acknowledging receipt of such instructions and/or documentation, as appropriate.

The Contractor shall also ensure that the Code of Conduct is visibly displayed in multiple locations on the Site and any other place where the Works will be carried out, 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 Contractor's Personnel, Employer's Personnel, and the local community.

The Contractor's Management Strategy and Implementation Plans shall include appropriate processes for the Contractor to verify compliance with these obligations.

**Sub-Clause 5.1
Subcontractors**

The following is added at the beginning of the second paragraph.

“The Contractor shall require in all subcontracts relating to the Works that Subcontractors execute the Works in accordance with the Contract, including complying with the relevant ES requirements and the obligations set out in Sub-Clause 4.25 above.”

The following is added after the first sentence of the fourth paragraph: “The Contractor's submission to the Engineer shall also include such a Subcontractor's declaration in accordance with the Particular Conditions- Part E- Sexual Exploitation and Abuse (SEA) and/or Sexual Harassment Performance Declaration for Subcontractors.”

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

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

Where practicable, the Contractor shall give fair and reasonable opportunity for contractors from the Country to be appointed as Subcontractors.”

- Sub-Clause 5.2.2**
Objection to Nomination
- In sub-paragraph (c):
“and” is deleted from the end of (i);
“.” at the end of (ii) is replaced with: “, and”.
The following is then added as (iii):
“(iii) be paid only if and when the Contractor has received from the Employer payments for sums due under the Subcontract referred to under Sub-Clause 5.2.3 [*Payment to nominated Subcontractors*].”
- Sub-Clause 6.1**
Engagement of Staff and Labour
- The following paragraphs are added at the end of the Sub-Clause:
“The Contractor shall provide the Contractor’s Personnel information and documentation that are clear and understandable regarding their terms and conditions of employment. The information and documentation shall set out their rights under relevant labour Laws applicable to the Contractor’s Personnel (which will include any applicable collective agreements), including their rights related to hours of work, wages, overtime, compensation, and benefits, as well as those arising from any requirements in the Specification. The Contractor’s Personnel shall be informed when any material changes to their terms or conditions of employment occur.
The Contractor is encouraged, to the extent practicable and reasonable, to employ staff and labour with appropriate qualifications and experience from sources within the Country.”
- Sub-Clause 6.2**
Rates of Wages and Conditions of Labour
- The following paragraphs are added at the end of the Sub-Clause:
“The Contractor shall inform the Contractor’s Personnel about:
any deduction to their payment and the conditions of such deductions in accordance with the applicable Laws or as stated in the Specification; and
their liability to pay personal income taxes in the Country in respect of such of their salaries, wages, allowances, and any benefits as are subject to tax under the Laws of the Country for the time being in force.
The Contractor shall perform such duties in regard to such deductions thereof as may be imposed on him by such Laws.
Where required by applicable Laws or as stated in the Specification, the Contractor shall provide the Contractor’s Personnel written notice of termination of employment and details of severance payments in a timely manner. The

Contractor shall have paid the Contractor's Personnel (either directly or where appropriate for their benefit) all due wages and entitlements including, as applicable, social security benefits and pension contributions, on or before the end of their engagement/ employment."

Sub-Clause 6.5 Working Hours

The following is inserted at the end of the Sub-Clause:

"The Contractor shall provide the Contractor's Personnel annual holiday and sick, maternity and family leave, as required by applicable Laws or as stated in the Specification."

Sub-Clause 6.6 Facilities for Staff and Labour

The following is added as the last paragraph:

"If stated in the Specification, the Contractor shall give access to or provide services that accommodate the physical, social, and cultural needs of the Contractor's Personnel. The Contractor shall also provide similar facilities for the Employer's Personnel as stated in the Specification."

Sub-Clause 6.7 Health and Safety of Personnel

In the second paragraph, "The Contractor" is replaced with:

"Except as otherwise stated in the Specification, the Contractor..."

Sub-Clause 6.9 Contractor's Personnel

The Sub-Clause is replaced with:

"The Contractor's Personnel (including Key Personnel, if any) shall be appropriately qualified, skilled, experienced, and competent in their respective trades or occupations.

The Engineer may require the Contractor to remove (or cause to be removed) any person employed on the Site or Works, including the Contractor's Representative and Key Personnel (if any), who:

- (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 Works;
- (f) has been recruited from the Employer's Personnel in breach of Sub-Clause 6.3 [Recruitment of Persons];
- (g) undertakes behaviour which breaches the Code of Conduct for Contractor's Personnel (ES).

If appropriate, the Contractor shall then promptly appoint (or cause to be appointed) a suitable replacement with

equivalent skills and experience. In the case of replacement of the Contractor's Representative, Sub-Clause 4.3 [*Contractor's Representative*] shall apply. In the case of replacement of Key Personnel (if any), Sub-Clause 6.12 [*Key Personnel*] shall apply.

Subject to the requirements in Sub-Clause 4.3 [*Contractor's Representative*] and 6.12 [*Key Personnel*], and notwithstanding any requirement from the Engineer to remove or cause to remove any person, the Contractor shall take immediate action as appropriate in response to any violation of (a) through (g) above. Such immediate action shall include removing (or causing to be removed) from the Site or other places where the Works are being carried out, any Contractor's Personnel who engages in (a), (b), (c), (d), (e) or (g) above or has been recruited as stated in (f) above."

Sub-Clause 6.12

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

Key Personnel

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

The following Sub-Clauses 6.13 to 6.27 are added after sub-clause 6.12

Sub-Clause 6.13

Foreign Personnel

The Contractor may bring into the Country any foreign personnel who are necessary for the execution of the Works to the extent allowed by the applicable Laws. The Contractor shall ensure that these personnel are provided with the required residence visas and work permits. The Employer will, if requested by the Contractor, use its best endeavours in a timely and expeditious manner to assist the Contractor in obtaining any local, state, national, or government permission required for bringing in the Contractor's personnel.

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

Sub-Clause 6.14

Supply of Foodstuffs

The Contractor shall arrange for the provision of a sufficient supply of suitable food as may be stated in the Specification at reasonable prices for the Contractor's Personnel for the purposes of or in connection with the Contract.

Sub-Clause 6.15

Supply of Water

The Contractor shall, having regard to local conditions, provide on the Site an adequate supply of drinking and other water for the use of the Contractor's Personnel.

- Sub-Clause 6.16**
Measures against Insect and Pest Nuisance
- The Contractor shall at all times take the necessary precautions to protect the Contractor's Personnel employed on the Site from insect and pest nuisance, and to reduce the danger to their health. The Contractor shall comply with all the regulations of the local health authorities, including use of appropriate insecticide.
- Sub-Clause 6.17**
Alcoholic Liquor or Drugs
- The Contractor shall not, otherwise than in accordance with the Laws of the Country, import, sell, give, barter, or otherwise dispose of any alcoholic liquor or drugs, or permit or allow importation, sale, gift, barter, or disposal thereto by Contractor's Personnel.
- Sub-Clause 6.18**
Arms and Ammunition
- The Contractor shall not give, barter, or otherwise dispose of, to any person, any arms or ammunition of any kind, or allow Contractor's Personnel to do so.
- Sub-Clause 6.19**
Festivals and Religious Customs
- The Contractor shall respect the Country's recognized festivals, days of rest and religious or other customs.
- Sub-Clause 6.20**
Funeral Arrangements
- The Contractor shall be responsible, to the extent required by local regulations, for making any funeral arrangements for any of its local employees who may die while engaged upon the Works.
- Sub-Clause 6.21**
Forced Labour
- The Contractor, including its Subcontractors, shall not employ or engage forced labour. Forced labour consists of any work or service, not voluntarily performed, that is exacted from an individual under threat of force or penalty, and includes any kind of involuntary or compulsory labour, such as indentured labour, bonded labour, or similar labour-contracting arrangements.
- No persons shall be employed or engaged who have been subject to trafficking. Trafficking in persons is defined as the recruitment, transportation, transfer, harbouring 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.

Sub-Clause 6.22
Child Labour

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

The Contractor, including its Subcontractors, 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 Contractor including its Subcontractors, 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 Contractor with the Engineer's consent. The Contractor shall be subject to regular monitoring by the Engineer 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:

- with exposure to physical, psychological, or sexual abuse;

- underground, underwater, working at heights or in confined spaces;

- with dangerous machinery, equipment, or tools, or involving handling or transport of heavy loads;

- in unhealthy environments exposing children to hazardous substances, agents, or processes, or to temperatures, noise or vibration damaging to health;
- or

- under difficult conditions such as work for long hours, during the night or in confinement on the premises of the employer.

Sub-Clause 6.23
Employment Records of Workers

The Contractor shall keep complete and accurate records of the employment of labour at the Site. The records shall include the names, ages, genders, hours worked, and wages paid to all workers. These records shall be summarised on a monthly basis and submitted to the Engineer. These records shall be included in the details to be submitted by the Contractor under Sub-Clause 6.10 [Records of Contractor's Personnel and Equipment].

Sub-Clause 6.24
Workers' Organisations

In countries where the relevant labour laws recognise workers' rights to form and to join workers' organisations of their choosing and to bargain collectively without

interference, the Contractor 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 labour laws substantially restrict workers' organisations, the Contractor shall enable alternative means for the Contractor's Personnel to express their grievances and protect their rights regarding working conditions and terms of employment. The Contractor shall not seek to influence or control these alternative means. The Contractor shall not discriminate or retaliate against the Contractor's Personnel who participate, or seek to participate, in such organisations and collective bargaining or alternative mechanisms. Workers' organisations are expected to fairly represent the workers in the workforce.

Sub-Clause 6.25
Non-Discrimination and
Equal Opportunity

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

Special measures of protection or assistance to remedy past discrimination or selection for a particular job based on the inherent requirements of the job shall not be deemed discrimination. The Contractor shall provide protection and assistance as necessary to ensure non-discrimination and equal opportunity, including for specific groups such as women, people with disabilities, migrant workers, and children (of working age in accordance with Sub-Clause 6.22).

Sub-Clause 6.26
Contractor's Personnel
Grievance Mechanism

The Contractor shall have a grievance mechanism for Contractor's Personnel, and where relevant the workers' organizations stated in Sub-Clause 6.24, 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 Contractor's Personnel 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 Contractor's Personnel.

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, providing that they are properly designed and implemented, address concerns promptly, and are readily accessible to Contractor's Personnel. Existing grievance mechanisms may be supplemented as needed with Contract-specific arrangements.

Sub-Clause 6.27
Training of Contractor's Personnel

The Contractor shall provide appropriate training to relevant Contractor's Personnel on ES aspects of the Contract, including appropriate sensitization on prohibition of SEA and SH, and health and safety training referred to in Sub-Clause 4.8

As stated in the Specification or as instructed by the Engineer, the Contractor shall also allow appropriate opportunities for the relevant Contractor's Personnel to be trained on ES aspects of the Contract by the Employer's Personnel.

The Contractor shall provide training on SEA and SH, including its prevention, to any of its personnel who has a role to supervise other Contractor's Personnel.

Sub-Clause 7.3 Inspection

The following is added in the first paragraph after "Employer's Personnel" "(including the Bank staff or consultants acting on the Bank's behalf, stakeholders and third parties, such as independent experts, local communities, or non-governmental organizations)"

The following is added as (b) (iv):

"(iv) carryout environmental and social audit, and"

Sub-Clause 7.7
Ownership of Plant and Materials

The following is added before the first paragraph:

"Except as otherwise provided in the Contract,"

Sub-Clause 8.1
Commencement of Work

The Sub- Clause is replaced in its entirety with the following:

“The Engineer shall give a Notice to the Contractor stating the Commencement Date, not less than 14 days before the Commencement Date.

The Notice shall be issued promptly after the Engineer determines the fulfilment of the following conditions:

- (a) signature of the Contract Agreement by both Parties, and if required, approval of the Contract by relevant authorities of the Country;
- (b) delivery to the Contractor of reasonable evidence of the Employer’s financial arrangements (under Sub-Clause 2.4 [Employer’s Financial Arrangements]);
- (c) except if otherwise specified in the Contract Data, effective access to and possession of the Site given to the Contractor together with such permission(s) under (a) of Sub-Clause 1.13 [Compliance with Laws] as required for the commencement of the Works;
- (d) receipt by the Contractor of the Advance Payment under Sub-Clause 14.2 [Advance Payment] provided that the corresponding bank guarantee has been delivered by the Contractor;
- (e) constitution of the DAAB in accordance with Sub-Clause 21.1 and Sub-Clause 21.2 as applicable.

Subject to Sub-Clause 4.1 on the Management Strategies and Implementation Plans and the C-ESMP and Sub-Clause 4.8 on the health and safety manual, the Contractor shall commence the execution of the Works as soon as is reasonably practicable after the Commencement Date and shall then proceed with the Works with due expedition and without delay.”

Sub-Clause 11.7
Right of Access after
Taking Over

In the second paragraph, “Whenever the Contractor intends to access any part of the Works during the relevant DNP:” is replaced with:

“Whenever, until the date 28 days after issue of the Performance Certificate, the Contractor intends to access any part of the Works:”

Sub-Clause 13.3.1
Variation by Instruction

Subparagraph 13.3.1 (a) is replaced with: “a description of the varied work performed or to be performed, including details of the resources and methods adopted or to be adopted by the Contractor, and sufficient ES information to enable an evaluation of ES risks and impacts; and sufficient

information to enable assessment of cyber security risks as specified in the Contract Data.”

Sub-Clause 13.4

Provisional Sums

The following is inserted as the penultimate paragraph:

“The Provisional Sum shall be used to cover the Employer’s share of the DAAB members’ fees and expenses, in accordance with Clause 21. No prior instruction of the Engineer shall be required with respect to the work of the DAAB. The Contractor shall submit the DAAB members’ invoices and satisfactory evidence of having paid 100% of such invoices as part of the substantiation of those Statements submitted under Sub-Clause 14.3.”

Sub-Clause 13.6

**Adjustments for Changes
in Laws**

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

“Notwithstanding the foregoing, the Contractor shall not be entitled to an extension of time if the relevant delay has already been taken into account in the determination of a previous extension of time and such Cost shall not be separately paid if the same shall already have been taken into account in the indexing of any inputs to the Table of Adjustment Data in accordance with the provisions of Sub-Clause 13.7 [Adjustments for Changes in Cost].”

Sub-Clause 14.1

The Contract Price

[Note to the Employer: include one of the following two alternative texts as applicable]

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

[Alternative 1]

“Notwithstanding the provisions of subparagraph (b), Contractor’s Equipment, including essential spare parts therefor, imported by the Contractor for the sole purpose of executing the Contract shall be exempt from the payment of import duties and taxes upon importation.”

[Alternative 2]

“Notwithstanding the provisions of subparagraph (b), Contractor’s Equipment, including essential spare parts therefore, imported by the Contractor for the sole purpose of executing the Contract shall be temporarily exempt from the payment of import duties and taxes upon initial importation, provided the Contractor shall post with the customs authorities at the port of entry an approved export bond or bank guarantee, valid until the Time for Completion plus six months, in an amount equal to the full import duties and taxes which would be payable on the assessed imported value of such Contractor’s Equipment and spare parts, and callable in the event the Contractor’s Equipment is not exported from the Country on completion of the Contract. A

copy of the bond or bank guarantee endorsed by the customs authorities shall be provided by the Contractor to the Employer upon the importation of individual items of Contractor's Equipment and spare parts. Upon export of individual items of Contractor's Equipment or spare parts, or upon the completion of the Contract, the Contractor shall prepare, for approval by the customs authorities, an assessment of the residual value of the Contractor's Equipment and spare part to be exported, based on the depreciation scale (s and other criteria used by the customs authorities for such purposes under the provisions of the applicable Laws. Import duties and taxes shall be due and payable to the customs authorities by the Contractor on (a) the difference between the initial imported value and the residual value of the Contractor's Equipment and spare parts to exported; and (b) on the initial imported value of the Contractor's Equipment and spare parts remaining in the Country after completion of the Contract. Upon payment of such dues within 28 days of being invoiced, the bond or bank guarantee shall be reduced or released accordingly; otherwise, the security shall be called in the full amount remaining."

Sub-Clause 14.2.1

Advance Payment Guarantee

The first paragraph is replaced with:

“The Contractor shall obtain (at the Contractor’s cost) an Advance Payment Guarantee in amounts and currencies equal to the advance payment and shall submit it to the Employer with a copy to the Engineer. This guarantee shall be issued by reputable bank or financial institution selected by the Contractor and shall be in accordance with the form included in the request for bidding documents for the subject contract or in another form acceptable to the Employer.”

Sub-Clause 14.3

Application for Interim Payment

The following is inserted at the end of (vi) after: *[Agreement or Determination]*: “any reimbursement due to the Contractor under the DAAB Agreement. (Appendix General Conditions of DAAB Agreement).”

Sub-Clause 14.6.2

Withholding (amounts in) an IPC

“and/or” from subparagraph (b) is deleted.

The following is then added as subparagraph (c) and subparagraph (c) of the Sub-Clause is renumbered as (d):

“(c) if the Contractor was, or is, failing to perform any ES obligations or work under the Contract, the value of this work or obligation, as determined by the Engineer, may be withheld until the work or obligation has been performed, and/or the cost of rectification or replacement, as determined by the Engineer, may be withheld until rectification or

replacement has been completed. Failure to perform includes, but is not limited to the following:

failure to comply with any ES obligations or work described in the Works' Requirements which may include: working outside site boundaries, excessive dust, damage to offsite vegetation, pollution of water courses from oils or sedimentation, contamination of land e.g., from oils, human waste, damage to archaeology or cultural heritage features, air pollution as a result of unauthorized and/or inefficient combustion;

failure to regularly review C-ESMP and/or update it in a timely manner to address emerging ES issues, or anticipated risks or impacts;

failure to implement the C-ESMP e.g., failure to provide required training or sensitization;

failing to have appropriate consents/permits prior to undertaking Works or related activities;

failure to submit ES report/s (as described in Particular Conditions - Part D), or failure to submit such reports in a timely manner;

failure to implement remediation as instructed by the Engineer within the specified timeframe (e.g., remediation addressing non-compliance/s).”

The following is added as penultimate paragraph: “As specified in the Contract Data, if the Contractor fails to perform its cyber security obligations under the Contract, an assessed amount, as determined by the Engineer, may be withheld until the obligation has been performed.”

Sub-Clause 14.7 Payment

At the end of sub-paragraph (b): “and” is replaced with “or” and the following inserted as (iii):

“(iii) at a time when the Bank’s loan or credit (from which part of the payments to the Contractor is being made) is suspended, the amount shown on any statement submitted by the Contractor within 14 days after such statement is submitted, any discrepancy being rectified in the next payment to the Contractor; and”

At the end of sub-paragraph (c): “.” is replaced with “;” and the following inserted:

“or, at a time when the Bank’s loan or credit (from which part of the payments to the Contractor is being made) is suspended the undisputed amount shown in the Final Statement within 56 days after the date of notification of

the suspension in accordance with Sub-Clause 16.2 [Termination by Contractor].”

Sub-Clause 14.9

The following is added at the end of Sub-Clause 14.9:

Release of Retention Money

“Unless otherwise stated in the Contract, when the Taking-Over Certificate has been issued for the Works and the first half of the Retention Money has been certified for payment by the Engineer, the Contractor shall be entitled to substitute a guarantee, in the form annexed to the Particular Conditions or in another form approved by the Employer and issued by a reputable bank or financial institution selected by the Contractor, for the second half of the Retention Money. The Contractor shall ensure that the guarantee is in the amounts and currencies of the second half of the Retention Money and is valid and enforceable until the Contractor has executed and completed the Works and remedied any defects, as specified for the Performance Security and, if applicable, an ES Performance Security in Sub-Clause 4.2. On receipt by the Employer of the required guarantee, the Engineer shall certify, and the Employer shall pay the second half of the Retention Money. The release of the second half of the Retention Money against a guarantee shall then be in lieu of the release after the latest of the expiry dates of the Defects Notification Periods. The Employer shall return the guarantee to the Contractor within 21 days after receiving a copy of the Performance Certificate.

If the Performance Security and, if applicable, an ES Performance Security required under Sub-Clause 4.2 is in the form of a demand guarantee, and the amount guaranteed under them when the Taking-Over Certificate is issued is more than half of the Retention Money, then the Retention Money guarantee will not be required. If the amount guaranteed under the Performance Security and, if applicable, an ES Performance Security, when the Taking-Over Certificate is issued is less than half of the Retention Money, the Retention Money guarantee will only be required for the difference between half of the Retention Money and the amount guaranteed under the Performance Security and, if applicable, an ES Performance Security.”

Sub-Clause 14.15

Currencies of Payment

Throughout Sub-Clause 14.15, “Contract Data” is replaced with: “Schedule of Payment Currencies”.

Sub-Clause 15.1

Notice to Correct

“and” is deleted from (b) and

“.” is replaced by: “; and” in (c).

The following is then added as (d)

“(d) specify the time within which the Contractor shall respond to the Notice to Correct.”

In the third para., “shall immediately respond” is replaced with: “shall respond within the time specified in (d)”. Further, in the third para., “to comply with the time specified in the Notice to Correct.” is replaced with: “to comply with the time specified in (c).”

Sub-Clause 15.2.1

Notice

Sub-paragraph (h) is replaced with: “based on reasonable evidence, has engaged in Fraud and Corruption as defined in paragraph 2.2 of the Particular Conditions - Part C- Fraud and Corruption, in competing for or in executing the Contract.”

Sub-Clause 15.8

Fraud and Corruption

The following new Sub-Clause is added:

“ 15.8.1 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 Particular Conditions - Part C- Fraud and Corruption.

15.8.2 The Employer requires the Contractor 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 bidding 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.”

Sub-Clause 16.1

Suspension by Contractor

The following paragraph is inserted after the first paragraph:

“Notwithstanding the above, if the Bank has suspended disbursements under the loan or credit from which payments to the Contractor are being made, in whole or in part, for the execution of the Works, and no alternative funds are available as provided for in Sub-Clause 2.4 [Employer’s Financial Arrangements], the Contractor may by notice suspend work or reduce the rate of work at any time, but not less than 7 days after the Borrower having received the suspension notification from the Bank.”

Sub-Clause 16.2.1

Notice

Sub-paragraph (j) is deleted in its entirety.

At the end of sub-paragraph (i): “; or” is replaced with: “.”
sub-paragraph (f) is replaced with:

“(f) the Contractor does not receive a Notice of the Commencement Date under Sub-Clause 8.1 [Commencement of Works] within 180 days after receiving

the Letter of Acceptance, for reasons not attributable to the Contractor.”

Sub-Clause 16.2.2

Termination

The following is added at the end of Sub-Clause 16.2.2:

“In the event the Bank suspends the loan or credit from which part or whole of the payments to the Contractor are being made, if the Contractor has not received the sums due to him upon expiration of the 14 days referred to in Sub-Clause 14.7 [Payment] for payments under Interim Payment Certificates, the Contractor may, without prejudice to the Contractor's entitlement to financing charges under Sub-Clause 14.8 [Delayed Payment], take one of the following actions, namely (i) suspend work or reduce the rate of work under Sub-Clause 16.1 above, or (ii) terminate the Contract by giving notice to the Employer, with a copy to the Engineer, such termination to take effect 14 days after the giving of the notice.”

Sub-Clause 16.3

Contractor's Obligations After Termination

[If the Employer has made available any Employer-Supplied Materials and/or Employer's Equipment in accordance with Sub-Clause 2.6, include the following:]

“and” is deleted from the end of sub-paragraph (b), sub-paragraph (c) deleted and the following added:

“

deliver to the Engineer all Employer- Supplied Materials and/or Employer's Equipment made available to the Contractor in accordance with Sub-Clause 2.6 *[Employer-Supplied materials and Employer's Equipment]*; and

remove all other Goods from the Site, except as necessary for safety, and leave the Site.”

Sub-Clause 17.1

Responsibility for Care of the Works

[If Employer- Supplied Materials are listed in the Specification for the Contractor's use in the execution of Works, include the following provision. See also Sub-Clause 2.6 [Employer-Supplied Materials and Employer's Equipment]]

After the two instances of “Goods” in the last paragraph, the following is added: “Employer- Supplied Materials”.

[If Employer's Equipment are listed in the Works' Requirements for the Contractor's use in the execution of Works, include the following provision. See also Sub-Clause 2.6 [Employer-Supplied Materials and Employer's Equipment]]

After the two instances of “Goods” in the last paragraph, the following is added: “, Employer's Equipment,”.

- Sub-Clause 17.7** The following Sub-Clause is added as 17.7:
- Use of Employer’s Accommodation/Facilities** “The Contractor shall take full responsibility for the care of the Employer-provided accommodation and facilities, if any, as detailed in the Specification, from the respective dates of hand-over to the Contractor until cessation of occupation (where hand-over or cessation of occupation may take place after the date stated in the Taking-Over Certificate for the Works)
- If any loss or damage happens to any of the above items while the Contractor is responsible for their care arising from any cause whatsoever other than those for which the Employer is liable, the Contractor shall, at its own cost, rectify the loss or damage to the satisfaction of the Engineer.”
- Sub-Clause 18.1** Sub-paragraph (c) is substituted with:
- Exceptional Events** “(c) riot, commotion, disorder, or sabotage by persons other than the Contractor’s Personnel and other employees of the Contractor and Subcontractors;”
- Sub-Clause 18.4** The following is added at the end of sub-paragraph (b) after deleting the “.”:
- Consequences of an Exceptional Event** “, including the costs of rectifying or replacing the Works and/or Goods damaged or destroyed by Exceptional Events, to the extent they are not indemnified through the insurance policy referred to in Sub-Clause 19.2 [Insurance to be provided by the Contractor].”
- Sub-Clause 18.5** In sub-paragraph (c), “and necessarily” is inserted after
- Optional Termination** ““was reasonably”.
- Sub-Clause 19.1** The following paragraphs are added after the first:
- General Requirements** “Wherever the Employer is the insuring Party, each insurance shall be effected with insurers and in terms acceptable to the Contractor. These terms shall be consistent with terms (if any) agreed by both Parties before the date of the Letter of Acceptance.
- This agreement of terms shall take precedence over the provisions of this Clause.”
- Sub-Clause 19.2** The following is inserted as the first sentence in Sub-Clause 19.2:
- insurance to be provided by the Contractor** “The Contractor shall be entitled to place all insurances relating to the Contract (including, but not limited to the insurance referred to Clause 19) with insurers from any eligible source country.”

- Sub-Clause 19.2.5
Injury to employees** The second paragraph is replaced with:
“The Employer and the Engineer shall also be indemnified under the policy of insurance, against liability for claims, damages, losses, and expenses (including legal fees and expenses) arising from injury, sickness, disease, or death of any person employed by the Contractor or any other of the Contractor’s Personnel, except that this insurance may exclude losses and claims to the extent that they arise from any act or neglect of the Employer or of the Employer’s Personnel.”
- Sub-Clause 20.1
Claims** In a): “any additional payment” is replaced with “payment”.
- Sub-Clause 20.2
Claims for Payment
and/or EOT** The first paragraph is replaced with:
“If either Party considers that it is entitled to claim under 20.1 (a) or (b), the following claim procedure shall apply:”
- Sub-Clause 21.1
Constitution of the DAAB** In the second paragraph, at the end of the first sentence after deleting: “.”, the following is added: “, each of whom shall meet the criteria set forth in Sub-Clause 3.3 of Appendix-General Conditions of DAAB Agreement.”

After the second paragraph insert the following paragraph:
“If the Contract is with a foreign Contractor, the DAAB members shall not have the same nationality as the Employer or the Contractor.”
- Sub-Clause 21.2
Failure to Appoint DAAB
Member (s)** For both (a) and (b): “by the date stated in the first paragraph of Sub-Clause 21.1 [*Constitution of the DAAB*]” is replaced with: “within 42 days from the date the Contract is signed by both Parties”
- Sub-Clause 21.6
Arbitration** In the first paragraph, “unless otherwise agreed by both Parties:” is deleted and replaced with: “ The Parties agree:”
- Sub-Clause 21.6
Arbitration** In the first paragraph, delete starting from: “international arbitration” up to the end of (c), and replace with the following:
“arbitration. Arbitration shall be conducted as follows:
(a) if the contract is with foreign contractors, unless otherwise specified in the Contract Data; the dispute shall be finally settled under the Rules of Arbitration of the International Chamber of Commerce; by one or three arbitrators appointed in accordance with these Rules. The place of arbitration shall be the neutral location specified in the Contract Data; and the

arbitration shall be conducted in the ruling language defined in Sub-Clause 1.4 [Law and Language].

- (b) If the Contract is with domestic contractors, arbitration with proceedings conducted in accordance with the laws of the Employer's country."

Appendix- General Conditions of DAAB Agreement

- 1. Definitions** In Sub-Clause 1.8 a(i): "authorised representative of the contractor or of the Employer" is replaced with: "Contractor's Representative or authorised representative of the Employer".
- 2. General Provisions** Sub-Clause 2.2 is deleted in its entirety.
- 3. Warranties** Sub-Clause 3.3 is deleted and replaced with the following:

"When appointing the DAAB Member, each Party relies on the DAAB Member's representations, that he/she:

 - a) has at least a bachelor's degree in relevant disciplines such as law, engineering, construction management or contract management;
 - b) has at least ten years of experience in contract administration/management and dispute resolution, out of which at least five years of experience as an arbitrator or adjudicator in construction-related disputes;
 - c) has received formal training as an adjudicator from an internationally recognized organization;
 - d) has experience and/or is knowledgeable in the type of work which the Contractor is to carry out under the Contract;
 - e) has experience in the interpretation of construction and/or engineering contract documents;
 - f) has familiarity with the forms of contract published by FIDIC since 1999, and an understanding of the dispute resolution procedures contained therein; and
 - g) is fluent in the language for communications stated in the Contract Data (or the language as agreed between the Parties and the DAAB)."
- 7. Confidentiality** In Sub-Clause 7.3: "or" is deleted after sub-paragraph (b), and the following added:

"or (d) is being provided to the Bank."
- 9. Fees and Expenses** In Sub-Clause 9.1 (c): "business class or equivalent" is replaced with: "in less than first class".

In Sub-Clause 9.4: “and air fares” and “other” are deleted from the first and second sentences respectively.

Particular Conditions

Part C- Fraud and Corruption

(Text in this Particular Conditions - Part C 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, consultants, contractors, and suppliers; any sub-contractors, sub-consultants, 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, harass 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, sub-contractors, 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 manner¹; (ii) to be a nominated ² 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, consultants, contractors, and suppliers, and their sub-contractors, sub-consultants, service providers, suppliers, agents, personnel, permit the Bank to inspect ³ all accounts,

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

records and other documents relating to the submission of bids and contract performance, and to have them audited by auditors appointed by the Bank.

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.

Particular Conditions

Part D- Environmental and Social (ES)

Metrics for Progress Reports

[Note to Employer: the following metrics may be amended to reflect the specifics of the Contract. The Employer shall ensure that the metrics provided are appropriate for the Works and impacts/key issues identified in the environmental and social assessment.]

Metrics for regular reporting:

- a. *environmental incidents or non-compliances with contract requirements, including contamination, pollution, or damage to ground or water supplies;*
- b. *health and safety incidents, accidents, injuries that require treatment and all fatalities;*
- c. *interactions with regulators: identify agency, dates, subjects, outcomes (report the negative if none);*
- d. *status of all permits and agreements:*
 - (i) *work permits: number required, number received, actions taken for those not received;*
 - (ii) *status of permits and consents:*
 - *list areas/facilities with permits required (quarries, asphalt & batch plants), dates of application, dates issued (actions to follow up if not issued), dates submitted to resident engineer (or equivalent), status of area (waiting for permits, working, abandoned without reclamation, decommissioning plan being implemented, etc.);*
 - *list areas with landowner agreements required (borrow and spoil areas, camp sites), dates of agreements, dates submitted to resident engineer (or equivalent);*
 - *identify major activities undertaken in each area in the reporting period and highlights of environmental and social protection (land clearing, boundary marking, topsoil salvage, traffic management, decommissioning planning, decommissioning implementation);*
 - *for quarries: status of relocation and compensation (completed, or details of activities and current status in the reporting period).*
- e. *health and safety supervision:*
 - (i) *safety officer: number days worked, number of full inspections & partial inspections, reports to construction/project management;*
 - (ii) *number of workers, work hours, metric of PPE use (percentage of workers with full personal protection equipment (PPE), partial, etc.), worker violations observed (by type of violation, PPE or otherwise), warnings given, repeat warnings given, follow-up actions taken (if any);*

- f. *worker accommodations:*
 - (i) number of expats housed in accommodations, number of locals;
 - (ii) date of last inspection, and highlights of inspection including status of accommodations' compliance with national and local law and good practice, including sanitation, space, etc.;
 - (iii) actions taken to recommend/require improved conditions, or to improve conditions.
- g. *Health services: provider of health services, information and/or training, location of clinic, number of non-safety disease or illness treatments and diagnoses (no names to be provided);*
- h. *gender (for expats and locals separately): number of female workers, percentage of workforce, gender issues raised and dealt with (cross-reference grievances or other sections as needed);*
- i. *training:*
 - (i) number of new workers, number receiving induction training, dates of induction training;
 - (ii) number and dates of toolbox talks, number of workers receiving Occupational Health and Safety (OHS), environmental and social training;
 - (iii) number and dates of communicable diseases (including STDs) sensitization and/or training, no. workers receiving training (in the reporting period and in the past); same questions for gender sensitization, flag person training.
 - (iv) number and date of SEA and SH prevention sensitization and/or training events, including number of workers receiving training on Code of Conduct for Contractor's Personnel (in the reporting period and in the past), etc.
- j. *environmental and social supervision:*
 - (i) environmentalist: days worked, areas inspected and numbers of inspections of each (road section, work camp, accommodations, quarries, borrow areas, spoil areas, swamps, forest crossings, etc.), highlights of activities/findings (including violations of environmental and/or social best practices, actions taken), reports to environmental and/or social specialist/construction/site management;
 - (ii) sociologist: days worked, number of partial and full site inspections (by area: road section, work camp, accommodations, quarries, borrow areas, spoil areas, clinic, HIV/AIDS center, community centers, etc.), highlights of activities (including violations of environmental and/or social requirements observed, actions taken), reports to environmental and/or social specialist/construction/site management; and
 - (iii) community liaison person(s): days worked (hours community center open), number of people met, highlights of activities (issues raised, etc.), reports to environmental and/or social specialist /construction/site management.
- k. *Grievances: list new grievances (e.g., number of allegations of SEA and SH) received in the reporting period and number of unresolved past grievances by date received, complainant's age and sex, how received, to whom referred to for action,*

resolution, and date (if completed), data resolution reported to complainant, any required follow-up (Cross-reference other sections as needed):

- (i) Worker grievances;
- (ii) Community grievances
- l. *Traffic, road safety and vehicles/equipment:*
 - traffic and road safety incidents and accidents involving project vehicles & equipment: provide date, location, damage, cause, follow-up;
 - traffic and road safety incidents and accidents involving non-project vehicles or property (also reported under immediate metrics): provide date, location, damage, cause, follow-up;
 - overall condition of vehicles/equipment (subjective judgment by environmentalist); non-routine repairs and maintenance needed to improve safety and/or environmental performance (to control smoke, etc.).
- m. *Environmental mitigations and issues (what has been done):*
 - (i) dust: number of working bowsers, number of waterings/day, number of complaints, warnings given by environmentalist, actions taken to resolve; highlights of quarry dust control (covers, sprays, operational status); % of rock/spoil lorries with covers, actions taken for uncovered vehicles;
 - (ii) erosion control: controls implemented by location, status of water crossings, environmentalist inspections and results, actions taken to resolve issues, emergency repairs needed to control erosion/sedimentation;
 - (iii) quarries, borrow areas, spoil areas, asphalt plants, batch plants: identify major activities undertaken in the reporting period at each, and highlights of environmental and social protection: land clearing, boundary marking, topsoil salvage, traffic management, decommissioning planning, decommissioning implementation;
 - (iv) blasting: number of blasts (and locations), status of implementation of blasting plan (including notices, evacuations, etc.), incidents of off-site damage or complaints (cross-reference other sections as needed);
 - (v) spill clean-ups, if any: material spilled, location, amount, actions taken, material disposal (report all spills that result in water or soil contamination);
 - (vi) waste management: types and quantities generated and managed, including amount taken offsite (and by whom) or reused/recycled/disposed on-site;
 - (vii) details of tree plantings and other mitigations required undertaken in the reporting period;
 - (viii) details of water and swamp protection mitigations required undertaken in the reporting period.
- n. *compliance:*
 - (i) compliance status for conditions of all relevant consents/permits, for the Work, including quarries, etc.): statement of compliance or listing of issues and actions taken (or to be taken) to reach compliance;
 - (ii) compliance status of C-ESMP/ESIP requirements: statement of compliance or listing of issues and actions taken (or to be taken) to reach compliance

- (iii) compliance status of SEA and SH prevention and response action plan: statement of compliance or listing of issues and actions taken (or to be taken) to reach compliance
- (iv) compliance status of Health and Safety Management Plan re: statement of compliance or listing of issues and actions taken (or to be taken) to reach compliance
- (v) other unresolved issues from previous reporting periods related to environmental and social: continued violations, continued failure of equipment, continued lack of vehicle covers, spills not dealt with, continued compensation or blasting issues, etc. Cross-reference other sections as needed.

Particular Conditions

Part E- Sexual Exploitation and Abuse (SEA) and/or Sexual Harassment Performance Declaration for Subcontractors (Not Applicable)

[The following table shall be filled in by each subcontractor proposed by the Contractor, that was not named in the Contract]

Subcontractor’s Name: *[insert full name]*

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

Contract reference *[insert contract reference]*

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

SEA and/or SH Declaration
<p>We:</p> <p><input type="checkbox"/> (a) have not been subject to disqualification by the Bank for non-compliance with SEA/ SH obligations.</p> <p><input type="checkbox"/> (b) are subject to disqualification by the Bank for non-compliance with SEA/ SH obligations.</p> <p><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.</p> <p><input type="checkbox"/> (d) had been subject to disqualification by the Bank for non-compliance with SEA/ SH obligations for a period of two years. We have subsequently demonstrated that we have adequate capacity and commitment to comply with SEA /SH obligations.</p> <p><input type="checkbox"/> (e) had been subject to disqualification by the Bank for non-compliance with SEA/ SH obligations for a period of two years. We have attached specific evidence demonstrating that we have adequate capacity and commitment to comply with SEA and SH obligations.</p>
<p><i>[If (c) above is applicable, attach evidence of an arbitral award reversing the findings on the issues underlying the disqualification.]</i></p>
<p><i>[If (d) or (e) above are applicable, provide the following information:]</i></p>
<p>Period of disqualification: From: _____ To: _____</p>
<p>If previously provided on another Bank financed works contract, details of evidence that demonstrated adequate capacity and commitment to comply with SEA/SH obligations (as per (d) above)</p> <p style="margin-left: 20px;">Name of Employer: _____</p> <p style="margin-left: 20px;">Name of Project: _____</p> <p style="margin-left: 20px;">Contract description: _____</p> <p style="margin-left: 20px;">Brief summary of evidence provided: _____</p>

R-21/22

Contact Information: (Tel, email, name of contact person): _____

As an alternative to the evidence under (d), other evidence demonstrating adequate capacity and commitment to comply with SEA/SH obligations (as per (e) above) <i>[attach details as appropriate]</i> .

Name of the Subcontractor _____

Name of the person duly authorized to sign on behalf of the Subcontractor _____

Title of the person signing on behalf of the Subcontractor _____

Signature of the person named above _____

Date signed _____ day of _____, _____

Countersignature of authorized representative of the Contractor:

Signature: _____

Date signed _____ day of _____, _____

Section X – Contract Forms

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Notification of Intention to Award

[This Notification of Intention to Award shall be sent to each Bidder that submitted a Bid unless the Bidder has previously received notice of exclusion from the process at an interim stage of the procurement process.]

[Send this Notification to the Bidder's Authorized Representative named in the Bidder Information Form]

For the attention of Bidder's Authorized Representative

Name: *[insert Authorized Representative's name]*

Address: *[insert Authorized Representative's Address]*

Telephone/Fax numbers: *[insert Authorized Representative's telephone/fax numbers]*

Email Address: *[insert Authorized Representative's email address]*

[IMPORTANT: insert the date that this Notification is transmitted to all participating Bidders. The Notification must be sent to all Bidders simultaneously. This means on the same date and as close to the same time as possible.]

DATE OF TRANSMISSION: This Notification is sent by: *[email/fax]* on *[date]* (local time)

Notification of Intention to Award

Employer: *[insert the name of the Employer]*

Project: *[insert name of project]*

Contract title: *[insert the name of the contract]*

Country: *[insert country where RFB is issued]*

Loan No. /Credit No. / Grant No.: *[insert reference number for loan/credit/grant]*

RFB No: *[insert RFB reference number from Procurement Plan]*

This Notification of Intention to Award (Notification) notifies you of our decision to award the above contract. The transmission of this Notification begins the Standstill Period. During the Standstill Period you may:

- a) request a debriefing in relation to the evaluation of your Bid, and/or
- b) submit a Procurement-related Complaint in relation to the decision to award the contract.

1. The successful Bidder

Name:	<i>[insert name of successful Bidder]</i>
Address:	<i>[insert address of the successful Bidder]</i>
Contract price:	<i>[insert contract price of the successful Bidder]</i>

Total combined score:	<i>[insert the total combined score of the successful Bidder]</i>
-----------------------	---

2. Other Bidders *[INSTRUCTIONS: insert names of all Bidders that submitted a Bid, Bid price as read out and evaluated, technical and combined scores.]*

Name of Bidder	Technical Score	Bid price	Evaluated Bid Cost	Combined Score
<i>[insert name]</i>	<i>[insert Technical score]</i>	<i>[insert Bid price]</i>	<i>[insert evaluated cost]</i>	<i>[insert combined score]</i>
<i>[insert name]</i>	<i>[insert Technical score]</i>	<i>[insert Bid price]</i>	<i>[insert evaluated cost]</i>	<i>[insert combined score]</i>
<i>[insert name]</i>	<i>[insert Technical score]</i>	<i>[insert Bid price]</i>	<i>[insert evaluated cost]</i>	<i>[insert combined score]</i>
<i>[insert name]</i>	<i>[insert Technical score]</i>	<i>[insert Bid price]</i>	<i>[insert evaluated cost]</i>	<i>[insert combined score]</i>
<i>[insert name]</i>	<i>[insert Technical score]</i>	<i>[insert Bid price]</i>	<i>[insert evaluated cost]</i>	<i>[insert combined score]</i>

3. Reason/s why your Bid was unsuccessful *[Delete if the combined score already reveals the reason]*

[INSTRUCTIONS: State the reason/s why this Bidder's Bid was unsuccessful. Do NOT include: (a) a point by point comparison with another Bidder's Bid or (b) information that is marked confidential by the Bidder in its Bid.]

4. How to request a debriefing

DEADLINE: The deadline to request a debriefing expires at midnight on *[insert date]* (local time).

You may request a debriefing in relation to the results of the evaluation of your Bid. If you decide to request a debriefing your written request must be made within three (3) Business Days of receipt of this Notification of Intention to Award.

Provide the contract name, reference number, name of the Bidder, contact details; and address the request for debriefing as follows:

Attention: *[insert full name of person, if applicable]*

Title/position: *[insert title/position]*

Agency: *[insert name of Employer]*

Email address: *[insert email address]*

Fax number: *[insert fax number] delete if not used*

If your request for a debriefing is received within the 3 Business Days deadline, we will provide the debriefing within five (5) Business Days of receipt of your request. If we are unable to provide the debriefing within this period, the Standstill Period shall be extended

by five (5) Business Days after the date that the debriefing is provided. If this happens, we will notify you and confirm the date that the extended Standstill Period will end.

The debriefing may be in writing, by phone, video conference call or in person. We shall promptly advise you in writing how the debriefing will take place and confirm the date and time.

If the deadline to request a debriefing has expired, you may still request a debriefing. In this case, we will provide the debriefing as soon as practicable, and normally no later than fifteen (15) Business Days from the date of publication of the Contract Award Notice.

5. How to make a complaint

DEADLINE: The deadline for submitting a Procurement-related Complaint challenging the decision to award the contract expires on midnight, *[insert date]* (local time).

Provide the contract name, reference number, name of the Bidder, contact details; and address the Procurement-related Complaint as follows:

Attention: *[insert full name of person, if applicable]*

Title/position: *[insert title/position]*

Agency: *[insert name of Employer]*

Email address: *[insert email address]*

Fax number: *[insert fax number] delete if not used*

At this point in the procurement process, you may submit a Procurement-related Complaint challenging the decision to award the contract. You do not need to have requested, or received, a debriefing before making this complaint. Your complaint must be submitted within the Standstill Period and received by us before the Standstill Period ends.

Further information:

For more information see the [Procurement Regulations for IPF Borrowers \(Procurement Regulations\)](#) (Annex III). You should read these provisions before preparing and submitting your complaint. In addition, the World Bank's Guidance "[How to make a Procurement-related Complaint](#)" provides a useful explanation of the process, as well as a sample letter of complaint.

In summary, there are four essential requirements:

You must be an 'interested party'. In this case, that means a Bidder who submitted a Bid in this bidding process and is the recipient of a Notification of Intention to Award.

The complaint can only challenge the decision to award the contract.

You must submit the complaint within the period stated above.

You must include, in your complaint, all of the information required by the Procurement Regulations (as described in Annex III).

6. Standstill Period

DEADLINE: The Standstill Period is due to end at midnight on *[insert date]* (local time).

The Standstill Period lasts ten (10) Business Days after the date of transmission of this Notification of Intention to Award.

The Standstill Period may be extended. This may happen where we are unable to provide a debriefing within the five (5) Business Day deadline. If this happens, we will notify you of the extension.

If you have any questions regarding this Notification, please do not hesitate to contact us.

On behalf of the Employer:

Signature: _____

Name: _____

Title/position: _____

Telephone: _____

Email: _____

Beneficial Ownership Disclosure Form

INSTRUCTIONS TO BIDDERS: DELETE THIS BOX ONCE YOU HAVE COMPLETED THE FORM

This Beneficial Ownership Disclosure Form (“Form”) is to be completed by the successful Bidder. In case of joint venture, the Bidder must submit a separate Form for each member. The beneficial ownership information to be submitted in this Form shall be current as of the date of its submission.

For the purposes of this Form, a Beneficial Owner of a Bidder is any natural person who ultimately owns or controls the Bidder by meeting one or more of the following conditions:

directly or indirectly holding 25% or more of the shares

directly or indirectly holding 25% or more of the voting rights

directly or indirectly having the right to appoint a majority of the board of directors or equivalent governing body of the Bidder

RFB No.: *[insert number of RFB process]*

Request for Bid No.: *[insert identification]*

To: *[insert complete name of Employer]*

In response to your request in the Letter of Acceptance dated *[insert date of letter of Acceptance]* to furnish additional information on beneficial ownership: *[select one option as applicable and delete the options that are not applicable]*

(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 the Voting Rights (Yes / No)	Directly or indirectly having the right to appoint a majority of the board of the directors or an equivalent governing body of the Bidder (Yes / No)
<i>[include full name (last, middle, first), nationality, country of residence]</i>			

OR

(ii) *We declare that there is no Beneficial Owner meeting one or more of the following conditions:*

directly or indirectly holding 25% or more of the shares
directly or indirectly holding 25% or more of the voting rights
directly or indirectly having the right to appoint a majority of the board of directors or equivalent governing body of the Bidder

OR

(iii) *We declare that we are unable to identify any Beneficial Owner meeting one or more of the following conditions. [If this option is selected, the Bidder shall provide explanation on why it is unable to identify any Beneficial Owner]*

directly or indirectly holding 25% or more of the shares
directly or indirectly holding 25% or more of the voting rights
directly or indirectly having the right to appoint a majority of the board of directors or equivalent governing body of the Bidder”

Name of the Bidder: *[insert complete name of the Bidder]_____

Name of the person duly authorized to sign the Bid on behalf of the Bidder: **[insert complete name of person duly authorized to sign the Bid]_____

Title of the person signing the Bid: [insert complete title of the person signing the Bid]_____

Signature of the person named above: [insert signature of person whose name and capacity are shown above]_____

Date signed [insert date of signing] **day of** [insert month], [insert year]_____

* In the case of the Bid submitted by a Joint Venture specify the name of the Joint Venture as Bidder. In the event that the Bidder is a joint venture, each reference to “Bidder” in the Beneficial Ownership Disclosure Form (including this Introduction thereto) shall be read to refer to the joint venture member.

** Person signing the Bid shall have the power of attorney given by the Bidder. The power of attorney shall be attached with the Bid Schedules.

Letter of Acceptance

[letterhead paper of the Employer]

[date]

To: *[name and address of the Contractor]*

This is to notify you that your Bid dated *[date]* for execution of the *[name of the Contract and identification number, as given in the Contract Data]* for the Accepted Contract Amount *[amount in numbers and words] [name of currency]*, as corrected and modified in accordance with the Instructions to Bidders, is hereby accepted by our Agency.

You are requested to furnish (i) the Performance Security and an Environmental and Social Performance Security ***[Delete ES Performance Security if it is not required under the contract]*** within 28 days in accordance with the Conditions of Contract, using, for that purpose, one of the Performance Security Forms and the ES Performance Security Form, ***[Delete reference to the ES Performance Security Form if it is not required under the contract]*** and (ii) the additional information on beneficial ownership in accordance with ITB 48.1, within eight (8) Business days using the Beneficial Ownership Disclosure Form, included in Section X, Contract Forms, of the bidding document.

Authorized Signature: _____

Name and Title of Signatory: _____

Name of Agency: _____

Attachment: Contract Agreement

Contract Agreement

THIS AGREEMENT made the _____ day of _____, _____, between _____ of _____ (hereinafter “the Employer”), of the one part, and _____ of _____ (hereinafter “the Contractor”), of the other part:

WHEREAS the Employer desires that the Works known as _____ should be executed by the Contractor, and has accepted a Bid by the Contractor for the execution and completion of these Works and the remedying of any defects therein,

The Employer and the Contractor agree as follows:

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

2. The following documents shall be deemed to form and be read and construed as part of this Agreement. This Agreement shall prevail over all other Contract documents.

the Letter of Acceptance;

the Letter of Bid;

the addenda Nos _____ (if any);

the Particular Conditions;

the General Conditions;

the Specification;

the Drawings; and

the completed Schedules and any other documents forming part of the contract, including, but not limited to:

the ES Management Strategies and Implementation Plans; and

Code of Conduct for Contractor’s Personnel (ES).

3. In consideration of the payments to be made by the Employer to the Contractor as specified in this Agreement, the Contractor hereby covenants with the Employer to execute the Works and to remedy defects therein in conformity in all respects with the provisions of the Contract.

4. The Employer hereby covenants to pay the Contractor in consideration of the execution and completion of the Works and the remedying of defects therein, the Contract Price or such other sum as may become payable under the provisions of the Contract at the times and in the manner prescribed by the Contract.

IN WITNESS whereof the parties hereto have caused this Agreement to be executed in accordance with the laws of _____ on the day, month and year specified above.

Signed by _____ (for the Employer)

Signed by _____ (for the Contractor)

Performance Security Option 1: Demand Guarantee

[Guarantor letterhead or SWIFT identifier code]

Beneficiary: *[insert name and Address of Employer]*

Date: _____ *[Insert date of issue]*

PERFORMANCE GUARANTEE No.: _____

Guarantor: *[Insert name and address of place of issue, unless indicated in the letterhead]*

We have been informed that _____ (hereinafter called "the Applicant") has entered into Contract No. _____ dated _____ with the Beneficiary, for the execution of _____ (hereinafter called "the Contract").

Furthermore, we understand that, according to the conditions of the Contract, a performance guarantee is required.

At the request of the Applicant, we as Guarantor, hereby irrevocably undertake to pay the Beneficiary any sum or sums not exceeding in total an amount of _____ (_____),¹ such sum being payable in the types and proportions of currencies in which the Contract Price is payable, upon receipt by us of the Beneficiary's complying demand supported by the Beneficiary's statement, whether in the demand itself or in a separate signed document accompanying or identifying the demand, stating that the Applicant is in breach of its obligation(s) under the Contract, without the Beneficiary needing to prove or to show grounds for your demand or the sum specified therein.

This guarantee shall expire, no later than the Day of, 2...², and any demand for payment under it must be received by us at this office indicated above on or before that date.

This guarantee is subject to the Uniform Rules for Demand Guarantees (URDG) 2010 Revision, ICC Publication No. 758, except that the supporting statement under Article 15(a) is hereby excluded.

¹ The Guarantor shall insert an amount representing the percentage of the Accepted Contract Amount specified in the Letter of Acceptance, less provisional sums, if any, and denominated either in the currency(cies) of the Contract or a freely convertible currency acceptable to the Beneficiary.

² Insert the date twenty-eight days after the expected completion date as described in GC Clause 11.9. The Employer should note that in the event of an extension of this date for completion of the Contract, the Employer 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 Employer 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 Beneficiary's written request for such extension, such request to be presented to the Guarantor before the expiry of the guarantee."

[signature(s)]

Note: All italicized text (including footnotes) is for use in preparing this form and shall be deleted from the final product.

Performance Security Option 2: Performance Bond (Not Applicable)

By this Bond _____ as Principal (hereinafter called “the Contractor”) and _____] as Surety (hereinafter called “the Surety”), are held and firmly bound unto _____] as Obligee (hereinafter called “the Employer”) in the amount of _____, for the payment of which sum well and truly to be made in the types and proportions of currencies in which the Contract Price is payable, the Contractor and the Surety bind themselves, their heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

WHEREAS the Contractor has entered into a written Agreement with the Employer dated the _____ day of _____, 20____, for _____ in accordance with the documents, plans, specifications, and amendments thereto, which to the extent herein provided for, are by reference made part hereof and are hereinafter referred to as the Contract.

NOW, THEREFORE, the Condition of this Obligation is such that, if the Contractor shall promptly and faithfully perform the said Contract (including any amendments thereto), then this obligation shall be null and void; otherwise, it shall remain in full force and effect. Whenever the Contractor shall be, and declared by the Employer to be, in default under the Contract, the Employer having performed the Employer’s obligations thereunder, the Surety may promptly remedy the default, or shall promptly:

- (1) complete the Contract in accordance with its terms and conditions; or
- (2) obtain a Bid or Bids from qualified Bidders for submission to the Employer for completing the Contract in accordance with its terms and conditions, and upon determination by the Employer and the Surety of the lowest responsive Bidder, arrange for a Contract between such Bidder and Employer and make available as work progresses (even though there should be a default or a succession of defaults under the Contract or Contracts of completion arranged under this paragraph) sufficient funds to pay the cost of completion less the Balance of the Contract Price; but not exceeding, including other costs and damages for which the Surety may be liable hereunder, the amount set forth in the first paragraph hereof. The term “Balance of the Contract Price,” as used in this paragraph, shall mean the total amount payable by Employer to Contractor under the Contract, less the amount properly paid by Employer to Contractor; or
- (3) pay the Employer the amount required by Employer to complete the Contract in accordance with its terms and conditions up to a total not exceeding the amount of this Bond.

The Surety shall not be liable for a greater sum than the specified penalty of this Bond.

Any suit under this Bond must be instituted before the expiration of one year from the date of the issuing of the Taking-Over Certificate.

No right of action shall accrue on this Bond to or for the use of any person or corporation other than the Employer named herein or the heirs, executors, administrators, successors, and assigns of the Employer.

In testimony whereof, the Contractor has hereunto set its hand and affixed its seal, and the Surety has caused these presents to be sealed with its corporate seal duly attested by the signature of its legal representative, this _____ day of _____ 20_____
_____.

SIGNED ON _____ on behalf of _____

By _____ in the capacity of _____

In the presence of _____

SIGNED ON _____ on behalf of _____

By _____ in the capacity of _____

In the presence of _____

Environmental and Social (ES) Performance Security

ES Demand Guarantee

[Guarantor letterhead or SWIFT identifier code]

Beneficiary: *[insert name and Address of Employer]*

Date: *_ [Insert date of issue]*

ES PERFORMANCE GUARANTEE No.: *[Insert guarantee reference number]*

Guarantor: *[Insert name and address of place of issue, unless indicated in the letterhead]*

We have been informed that _____ (hereinafter called "the Applicant") has entered into Contract No. _____ dated _____ with the Beneficiary, for the execution of _____ (hereinafter called "the Contract").

Furthermore, we understand that, according to the conditions of the Contract, a performance guarantee is required.

At the request of the Applicant, we as Guarantor, hereby irrevocably undertake to pay the Beneficiary any sum or sums not exceeding in total an amount of _____ (_____),¹ such sum being payable in the types and proportions of currencies in which the Contract Price is payable, upon receipt by us of the Beneficiary's complying demand supported by the Beneficiary's statement, whether in the demand itself or in a separate signed document accompanying or identifying the demand, stating that the Applicant is in breach of its Environmental and/or Social (ES) obligation(s) under the Contract, without the Beneficiary needing to prove or to show grounds for your demand or the sum specified therein.

This guarantee shall expire, no later than the Day of, 2...², and any demand for payment under it must be received by us at this office indicated above on or before that date.

This guarantee is subject to the Uniform Rules for Demand Guarantees (URDG) 2010 Revision, ICC Publication No. 758, except that the supporting statement under Article 15(a) is hereby excluded.

¹ *The Guarantor shall insert an amount representing the percentage of the Accepted Contract Amount specified in the Letter of Acceptance, less provisional sums, if any, and denominated either in the currency (cies) of the Contract or a freely convertible currency acceptable to the Beneficiary.*

² *Insert the date twenty-eight days after the expected completion date as described in GC Clause 11.9. The Employer should note that in the event of an extension of this date for completion of the Contract, the Employer 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 Employer 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 Beneficiary's written request for such extension, such request to be presented to the Guarantor before the expiry of the guarantee."*

[signature(s)]

Note: All italicized text (including footnotes) is for use in preparing this form and shall be deleted from the final product.

Advance Payment Security

-Demand Guarantee

[Guarantor letterhead or SWIFT identifier code]

[Guarantor letterhead or SWIFT identifier code]

Beneficiary: _____ *[Insert name and Address of Employer]*

Date: _____ *[Insert date of issue]*

ADVANCE PAYMENT GUARANTEE No.: _____ *[Insert guarantee reference number]*

Guarantor: *[Insert name and address of place of issue, unless indicated in the letterhead]*

We have been informed that _____ (hereinafter called “the Applicant”) has entered into Contract No. _____ dated _____ with the Beneficiary, for the execution of _____ (hereinafter called "the Contract").

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

At the request of the Applicant, we as Guarantor, hereby irrevocably undertake to pay the Beneficiary any sum or sums not exceeding in total an amount of _____ (_____) ¹ upon receipt by us of the Beneficiary’s complying demand supported by the Beneficiary’s statement, whether in the demand itself or in a separate signed document accompanying or identifying the demand, stating either that the Applicant:

(a) has used the advance payment for purposes other than the costs of mobilization in respect of the Works; or

(b) has failed to repay the advance payment in accordance with the Contract conditions, specifying the amount which the Applicant has failed to repay.

A demand under this guarantee may be presented as from the presentation to the Guarantor of a certificate from the Beneficiary’s bank stating that the advance payment referred to above has been credited to the Applicant on its account number _____ at _____..

¹ 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 Employer.

The maximum amount of this guarantee shall be progressively reduced by the amount of the advance payment repaid by the Applicant as specified in copies of interim statements or payment certificates which shall be presented to us. This guarantee shall expire, at the latest, upon our receipt of a copy of the interim payment certificate indicating that ninety (90) percent of the Accepted Contract Amount, less provisional sums, has been certified for payment, or on the ___ day of _____, 2____,² 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, except that the supporting statement under Article 15(a) is hereby excluded.

[signature(s)]

Note: All italicized text (including footnotes) is for use in preparing this form and shall be deleted from the final product.

² *Insert the expected expiration date of the Time for Completion. The Employer should note that in the event of an extension of the time for completion of the Contract, the Employer 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 Employer 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 Beneficiary’s written request for such extension, such request to be presented to the Guarantor before the expiry of the guarantee.”*

Retention Money Security

Demand Guarantee

_____ [Guarantor letterhead or SWIFT identifier code]

Beneficiary: _____ [Insert name and Address of Employer]

Date: _____ [Insert date of issue]

RETENTION MONEY GUARANTEE No.: _____ [Insert guarantee reference number]

Guarantor: [Insert name and address of place of issue, unless indicated in the letterhead]

We have been informed that _____ [insert name of Contractor, which in the case of a joint venture shall be the name of the joint venture] (hereinafter called "the Applicant") has entered into Contract No. _____ [insert reference number of the contract] dated _____ with the Beneficiary, for the execution of _____ [insert name of contract and brief description of Works] (hereinafter called "the Contract").

Furthermore, we understand that, according to the conditions of the Contract, the Beneficiary retains moneys up to the limit set forth in the Contract ("the Retention Money"), and that when the Taking-Over Certificate has been issued under the Contract and the first half of the Retention Money has been certified for payment, payment of [insert the second half of the Retention Money or if the amount guaranteed under the Performance Guarantee when the Taking-Over Certificate is issued is less than half of the Retention Money, the difference between half of the Retention Money and the amount guaranteed under the Performance Security and, if required, the ES Performance Security] is to be made against a Retention Money guarantee.

At the request of the Applicant, we, as Guarantor, hereby irrevocably undertake to pay the Beneficiary any sum or sums not exceeding in total an amount of _____ [insert amount in figures] (_____) [amount in words]¹ upon receipt by us of the Beneficiary's complying demand supported by the Beneficiary's statement, whether in the demand itself or in a separate signed document accompanying or identifying the demand, stating that the Applicant is in breach of its obligation(s) under the Contract, without your needing to prove or show grounds for your demand or the sum specified therein.

¹ The Guarantor shall insert an amount representing the amount of the second half of the Retention Money or if the amount guaranteed under the Performance Guarantee when the Taking-Over Certificate is issued is less than half of the Retention Money, the difference between half of the Retention Money and the amount guaranteed under the Performance Security and denominated either in the currency(ies) of the second half of the Retention Money as specified in the Contract, or in a freely convertible currency acceptable to the Beneficiary.

A demand under this guarantee may be presented as from the presentation to the Guarantor of a certificate from the Beneficiary's bank stating that the second half of the Retention Money as referred to above has been credited to the Applicant on its account number _____ at _____ *[insert name and address of Applicant's bank]*.

This guarantee shall expire no later than the Day of, 2...², and any demand for payment under it must be received by us at the office indicated above on or before that date.

This guarantee is subject to the Uniform Rules for Demand Guarantees (URDG) 2010 Revision, ICC Publication No. 758, except that the supporting statement under Article 15(a) is hereby excluded.

[signature(s)]

Note: All italicized text (including footnotes) is for use in preparing this form and shall be deleted from the final product.

² *Insert the same expiry date as set forth in the performance security, representing the date twenty-eight days after the completion date described in GC Clause 11.9. The Employer should note that in the event of an extension of this date for completion of the Contract, the Employer 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 Employer 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 Beneficiary's written request for such extension, such request to be presented to the Guarantor before the expiry of the guarantee."*