****Edited by C

**Ministry of Finance**

Republic of Maldives

**Bidding Document for Procurement of:**

**Survey, Design & Harbour Reconstruction of 3 Islands (B.Kudarikilu, B.Dhonfanu & B.Kihaadhoo)**

**Project Number: TES/2019/170**

**Employer: Ministry of National Planning and Infrastructure**

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National Tender

Ministry of Finance

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PART 1

Bidding Procedures

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| Section I. Instructions to Bidders |

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| **Section I. Instructions to Bidders** | |
|  | A. General |
| Scope of Bid | 1.1 In connection with the Invitation for Bids specified in the Bid Data Sheet (BDS), the Employer, as specified in the BDS, issues these Bidding Documents for the procurement of Works as specified in Section VII, Works Requirements. The name, identification, and number of lots (contracts) of this International Competitive Bidding (ICB) process are provided in the BDS. |
|  | 1.2 Throughout these Bidding Documents:   * + 1. the term “in writing” means communicated in written form and delivered against receipt;     2. except where the context requires otherwise, words indicating the singular also include the plural and words indicating the plural also include the singular; and     3. “day” means calendar day. |
| Source of Funds | 2.1 The Beneficiary or Recipient (hereinafter called “Beneficiary”) specified in the BDS has received or has applied for financing (hereinafter called “funds”) from the OPEC Funds for International Development(OFID) (hereinafter called “the Fund”) in an amount **specified in the BDS**,. The Beneficiary intends to apply a portion of the funds to eligible payments under the contract(s) for which these Bidding Documents are issued. |
|  | 2.2 Payment by the Fund will be made only at the request of the Beneficiary and upon approval by the Fund, and will be subject, in all respects, to the terms and conditions of the financing Agreement. The financing Agreement prohibits a withdrawal from the Financing/Loan/Grants (or other financing) account for the purpose of any payment to persons or entities, or for any import of goods, if such payment or import, to the knowledge of the Fund, is prohibited by a decision of the Organization. No party other than the Beneficiary shall derive any rights from the financing Agreement or have any claim to the proceeds of the financing (or other financing). |
| Corrupt and Fraudulent Practices | 3.1 The Fund requires compliance with its policy in regard to corrupt and fraudulent practices as set forth in Section VI.  3.2 In further pursuance of this policy, Bidders shall permit and cause its agents (whether declared or not), sub-contractors, sub-consultants, service providers, or suppliers and any personnel thereof, to permit the Fund to inspect all accounts, records and other documents relating to any prequalification process, bid submission, and contract performance (in the case of award), and to have them audited by auditors appointed by the Fund. |
| Eligible Bidders | 4.1 A Bidder may be a firm that is a private entity, a government-owned entity—subject to ITB 4.5—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 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. |
|  | 4.2 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:   * + 1. directly or indirectly controls, is controlled by or is under common control with another Bidder; or     2. receives or has received any direct or indirect subsidy from another Bidder; or     3. has the same legal representative as another Bidder; or     4. 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     5. participates in more than one bid in this bidding process. Participation by a Bidder in more than one Bid will result in the disqualification of all Bids in which such Bidder is involved. However, this does not limit the inclusion of the same subcontractor in more than one bid; or     6. 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     7. or any of its affiliates has been hired (or is proposed to be hired) by the Employer or Beneficiary as Engineer for the Contract implementation;     8. 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 2.1that 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     9. has a close business or family relationship with a professional staff of the Beneficiary (or of the project implementing agency, or of a recipient of a part of the financing) who: (i) are directly or indirectly involved in the preparation of the bidding documents 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 Fund throughout the procurement process and execution of the contract. |
|  | 4.3 A Bidder shall have the nationality of any country, subject to the restrictions pursuant to ITB 4.7 and in accordance with Section V. 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 sub-contractors or sub-consultants for any part of the Contract including related Services. |
|  | 4.4 A Bidder that has been sanctioned by the Fund in accordance with the above ITB 3.1, including in accordance with the Fund’s Guidelines on Preventing and Combating Corruption in Projects Financed by OFID financing and Grants (“Anti-Corruption Guidelines”), shall be ineligible to be prequalified for, bid for, or be awarded a Fund-financed contract or benefit from a Fund-financed contract, financially or otherwise, during such period of time as the Fund shall have determined. The list of debarred firms and individuals is available at the electronic address **specified in the BDS**. |
|  | 4.5 Bidders that are Government-owned enterprises or institutions in the Employer’s Country may participate only if they can establish that they (i) are legally and financially autonomous (ii) operate under commercial law, and (iii) are not dependent agencies of the Employer. To be eligible, a government-owned enterprise or institution shall establish to the Fund’s satisfaction, through all relevant documents, including its Charter and other information the Fund may request, that it: (i) is a legal entity separate from the government (ii) does not currently receive substantial subsidies or budget support; (iii) operates like any commercial enterprise, and, inter alia, is not obliged to pass on its surplus to the government, can acquire rights and liabilities, borrow funds and be liable for repayment of its debts, and can be declared bankrupt; and (iv) is not bidding for a contract to be awarded by the department or agency of the government which under their applicable laws or regulations is the reporting or supervisory authority of the enterprise or has the ability to exercise influence or control over the enterprise or institution.  4.6 A Bidder shall not be under suspension from bidding by the Employer as the result of the operation of a Bid–Securing Declaration.  4.7 Firms and individuals may be ineligible if so indicated in Section V and (a) as a matter of law or official regulations, the Beneficiary’s country prohibits commercial relations with that country, provided that the Fund 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 the Boycott Regulations of OFID, the Beneficiary’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.  4.8 This bidding is open only to prequalified Bidders unless **specified in the BDS**.  4.9 A Bidder shall provide such evidence of eligibility satisfactory to the Employer, as the Employer shall reasonably request. |
| Eligible Materials, Equipment, and Services | 5.1 The materials, equipment and services to be supplied under the Contract and financed by the Fund 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 Documents |
| Sections of Bidding Documents | 6.1 The Bidding Documents consist of Parts 1, 2, and 3, which include 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. Fund Policy-Corrupt and Fraudulent Practices   **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. Annex to the Particular Conditions - Contract Forms |
|  | 6.2 The Invitation for Bids issued by the Employer is not part of the Bidding Documents. |
|  | 6.3 Unless obtained directly from the Employer, the Employer is not responsible for the completeness of the Bidding Documents, responses to requests for clarification, the minutes of the pre-Bid meeting (if any), or Addenda to the Bidding Documents in accordance with ITB 8. In case of any contradiction, documents obtained directly by the Employer shall prevail. |
|  | 6.4 The Bidder is expected to examine all instructions, forms, terms, and specifications in the Bidding Documents and to furnish with its bid all information and documentation as is required by the Bidding Documents. |
| Clarification of Bidding Documents, Site Visit, Pre-Bid Meeting | 7.1 A Bidder requiring any clarification of the Bidding Documents 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 Documents 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 Documents, the Employer shall amend the Bidding Documents following the procedure under ITB 8 and ITB 22.2. |
|  | 7.2 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. |
|  | 7.3 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. |
|  | 7.4 If so specified in the BDS, the Bidder’s designated representative is invited to attend a pre-bid meeting. The purpose of the meeting will be to clarify issues and to answer questions on any matter that may be raised at that stage. |
|  | 7.5 The Bidder is requested to submit any questions in writing, to reach the Employer not later than one week before the meeting. |
|  | 7.6 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 Documents in accordance with ITB 6.3. Any modification to the Bidding Documents 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. Non attendance at the pre-bid meeting will not be a cause for disqualification of a Bidder. |
| Amendment of Bidding Documents | 8.1 At any time prior to the deadline for submission of bids, the Employer may amend the Bidding Documents by issuing addenda. |
|  | 8.2 Any addendum issued shall be part of the Bidding Documents and shall be communicated in writing to all who have obtained the Bidding Documents 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. |
|  | 8.3 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 |
| Cost of Bidding | 9.1 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. |
| Language of Bid | 10.1 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. |
| Documents Comprising the Bid | 11.1 The Bid shall comprise the following:   1. Letter of Bid and Appendix to Bid; 2. completed schedules as required, including priced Bill of Quantities, in accordance with ITB 12 and 14; 3. Bid Security or Bid-Securing Declaration, in accordance with ITB 19.1; 4. alternative bids, if permissible, in accordance with ITB 13; 5. written confirmation authorizing the signatory of the Bid to commit the Bidder, in accordance with ITB 20.2; 6. documentary evidence in accordance with ITB 17 establishing the Bidder’s continued qualified status or, if post-qualification applies, as specified in accordance with ITB 4.8, the Bidder’s qualifications to perform the contract if its Bid is accepted; 7. Technical Proposal in accordance with ITB 16; and 8. any other document **required in the BDS**.   11.2 In addition to the requirements under ITB 11.1, bids submitted by a JV shall include a copy of the Joint Venture Agreement entered into by all members. Alternatively, a letter of intent to execute a Joint Venture Agreement in the event of a successful bid shall be signed by all members and submitted with the bid, together with a copy of the proposed Agreement.  11.3 The Bidder shall furnish in the Letter of Bid information on commissions and gratuities, if any, paid or to be paid to agents or any other party relating to this Bid. |
| Letter of Bid and Schedules | 12.1 The Letter of Bid and Schedules, including the Bill of Quantities*,* shall be prepared using the relevant form*s* 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 20.2. All blank spaces shall be filled in with the information requested. |
| Alternative Bids | 13.1 Unless otherwise specified in the BDS, alternative bids shall not be considered. |
|  | 13.2 When alternative times for completion are explicitly invited, a statement to that effect will be included in the BDS, as will the method of evaluating different times for completion. |
|  | 13.3 Except as provided under ITB 13.4 below, Bidders wishing to offer technical alternatives to the requirements of the Bidding Documents must first price the Employer’s design as described in the Bidding Documents 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 lowest evaluated Bidder conforming to the basic technical requirements shall be considered by the Employer. |
|  | 13.4 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. |
| Bid Prices and Discounts | 14.1 The prices and discounts (including any price reduction) quoted by the Bidder in the Letter of Bid and in the Bill of Quantities shall conform to the requirements specified below.  14.2 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. |
|  | 14.3 The price to be quoted in the Letter of Bid, in accordance with ITB 12.1, shall be the total price of the Bid, excluding any discounts offered. |
|  | 14.4 The Bidder shall quote any discounts and the methodology for their application in the Letter of Bid, in accordance with ITB 12.1. |
|  | 14.5 Unless otherwise specified in the BDS and the Contract, the rates and prices quoted by the Bidder are subject to adjustment during the performance of the Contract in accordance with the provisions of the Conditions of Contract. In such a case, the Bidder shall furnish the indices and weightings for the price adjustment formulae in the Schedule of Adjustment Data and the Employer may require the Bidder to justify its proposed indices and weightings. |
|  | 14.6 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. |
|  | 14.7 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. |
| Currencies of Bid and Payment | 15.1 The currency(ies) of the bid and the currency(ies) of payments shall be as specified in the BDS*.*  15.2 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 Schedule 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. |
| Documents Comprising the Technical Proposal | 16.1 The Bidder shall furnish a Technical Proposal including a statement of work methods, equipment, personnel, schedule and any other information as stipulated in Section IV, in sufficient detail to demonstrate the adequacy of the Bidder’s proposal to meet the work requirements and the completion time. |
| Documents Establishing the Qualifications of the Bidder | 17.1 In accordance with Section III, Evaluation and Qualification Criteria, to establish that the Bidder continues to meet the criteria used at the time of prequalification, the Bidder shall provide in the corresponding information sheets included in Section IV, Bidding Forms, updated information on any assessed aspect that changed from that time, or if post-qualification applies as specified in ITB 4.8, the Bidder shall provide the information requested in the corresponding information sheets included in Section IV, Bidding Forms. |
|  | 17.2 If a margin of preference applies as specified in accordance with ITB 33.1, 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 33.1.  17.3 Any change in the structure or formation of a Bidder after being prequalified and invited to Bid (including, in the case of a JV, any change in the structure or formation of any member thereto) 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 set forth in Section III, Qualification Criteria and Requirements; 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 Invitation for Bids. |
| Period of Validity of Bids | 18.1 Bids shall remain valid for the period specified in the BDS after the bid submission deadline date prescribed by the Employer in accordance with ITB 22.1. A bid valid for a shorter period shall be rejected by the Employer as non responsive. |
|  | 18.2 In exceptional circumstances, prior to the expiration of the bid validity period, 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 deadline of the extended validity period. 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. |
|  | 18.3 If the award is delayed by a period exceeding fifty-six (56) days beyond the expiry of the initial bid validity, the Contract price shall be determined as follows:   * + 1. In the case of fixed price contracts, the Contract price shall be the bid price adjusted by the factor **specified in the BDS**.     2. In the case of adjustable price contracts, to determine the Contract price, the fixed portion of the bid price shall be adjusted by the factor **specified in the BDS**.     3. In any case, bid evaluation shall be based on the bid price without taking into consideration the applicable correction from those indicated above. |
| Bid Security | 19.1 The Bidder shall furnish as 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. |
|  | 19.2 A Bid-Securing Declaration shall use the form included in Section IV, Bidding Forms..*(It is not applicable)* |
|  | 19.3 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 Fund or 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 the unconditional guarantee is issued by a financial institution located outside the Employer’s Country, the issuing financial institution shall have a correspondent financial institution located in the Employer’s Country to make it enforceable. 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 validity period of the bid, or beyond any period of extension if requested under ITB 18.2. |
|  | 19.4 If a bid security 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. |
|  | 19.5 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 pursuant to ITB 42. |
|  | 19.6 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. |
|  | 19.7 The bid security may be forfeited or the Bid-Securing Declaration executed:   * + 1. if a Bidder withdraws its bid during the period of bid validity specified by the Bidder on the Letter of Bid, or any extension thereto provided by the Bidder; or     2. if the successful Bidder fails to:  (i) sign the Contract in accordance with ITB 41; or(ii) furnish a performance security in accordance with ITB 42. |
|  | 19.8 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 11.2*.*  19.9 If a bid security is not required in the BDS pursuant to ITB 19.1, and   * 1. if a Bidder withdraws its bid during the period of bid validity specified by the Bidder on the Letter of Bid, or   2. if the successful Bidder fails to sign the Contract in accordance with ITB 41; or furnish a performance security in accordance with ITB 42;   the Beneficiary may, if provided for in the BDS, declare the Bidder ineligible to be awarded a contract by the Employer for a period of time as stated in the BDS. |
| Format and Signing of Bid | 20.1 The Bidder shall prepare one original of the documents comprising the bid as described in ITB 11 and clearly mark it “Original.” Alternative bids, if permitted in accordance with ITB 13, shall be clearly marked “Alternative.” In addition, the Bidder shall submit copies of the bid, in the number specified in the BDS and clearly mark them “Copy.” In the event of any discrepancy between the original and the copies, the original shall prevail. |
|  | 20.2 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. |
|  | 20.3 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. |
|  | 20.4 Any inter-lineation, erasures, or overwriting shall be valid only if they are signed or initialed by the person signing the bid. |
|  | D. Submission and Opening of Bids |
| Sealing and Marking of Bids | 21.1 The Bidder shall enclose the original and all copies of the bid, including alternative bids, if permitted in accordance with ITB 13, in separate sealed envelopes, duly marking the envelopes as “Original”, “Alternative” and “Copy.” These envelopes containing the original and the copies shall then be enclosed in one single envelope. |
|  | 21.2 The inner and outer envelopes shall:   1. bear the name and address of the Bidder; 2. be addressed to the Employer in accordance with ITB 22.1; 3. bear the specific identification of this bidding process specified in the BDS 1.1; and 4. bear a warning not to open before the time and date for bid opening. |
|  | 21.3 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. |
| Deadline for Submission of Bids | 22.1 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. |
|  | 22.2 The Employer may, at its discretion, extend the deadline for the submission of bids by amending the Bidding Documents 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. |
| Late Bids | 23.1 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. |
| Withdrawal, Substitution, and Modification of Bids | 24.1 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 20.2, (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:   1. 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 2. received by the Employer prior to the deadline prescribed for submission of bids, in accordance with ITB 22. |
|  | 24.2 Bids requested to be withdrawn in accordance with ITB 24.1 shall be returned unopened to the Bidders. |
|  | 24.3 No bid may be withdrawn, substituted, or modified in the interval between the deadline for submission of bids and the expiration of the period of bid validity specified by the Bidder on the Letter of Bid or any extension thereof. |
| Bid Opening | 25.1 Except in the cases specified in ITB 23 and 24, the Employer shall publicly open and read out in accordance with ITB 25.3 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 choose 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. |
|  | 25.2 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. 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. Only bids that are opened and read out at bid opening shall be considered further. |
|  | 25.3 All other envelopes shall be opened one at a time, reading out: the name of the Bidder and whether there is a modification; the total Bid Price, per lot (contract) if applicable, including any discounts and alternative bids; the presence or absence of a bid security, if required; and any other details as the Employer may consider appropriate. Only discounts and alternative bids read out at bid opening shall be considered for evaluation. The Letter of Bid and the Bill of Quantities 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). |
|  | 25.4 The Employer shall prepare a record of the bid opening that shall include, as a minimum: the name of the Bidder and whether there is a withdrawal, substitution, or modification; the Bid Price, per lot (contract) if applicable, including any discounts and alternative bids; and 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. |
|  | E. Evaluation and Comparison of Bids |
| Confidentiality | 26.1 Information relating to the evaluation of bids and recommendation of contract award shall not be disclosed to Bidders or any other persons not officially concerned with the bidding process until information on Contract award is communicated to all Bidders in accordance with ITB 40. |
|  | 26.2 Any attempt 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. |
|  | 26.3 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. |
| Clarification of Bids | 27.1 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 31. |
|  | 27.2 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. |
| Deviations, Reservations, and Omissions | 28.1 During the evaluation of bids, the following definitions apply:   1. “Deviation” is a departure from the requirements specified in the Bidding Documents; 2. “Reservation” is the setting of limiting conditions or withholding from complete acceptance of the requirements specified in the Bidding Documents; and 3. “Omission” is the failure to submit part or all of the information or documentation required in the Bidding Documents. |
| Determination of Responsiveness | 29.1 The Employer’s determination of a bid’s responsiveness is to be based on the contents of the bid itself, as defined in ITB11. |
|  | 29.2 A substantially responsive bid is one that meets the requirements of the Bidding Documents without material deviation, reservation, or omission. A material deviation, reservation, or omission is one that,  (a) 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 Documents, the Employer’s rights or the Bidder’s obligations under the proposed Contract; or (b) if rectified, would unfairly affect the competitive position of other Bidders presenting substantially responsive bids. |
|  | 29.3 The Employer shall examine the technical aspects of the bid submitted in accordance with ITB 16, Technical Proposal, in particular, to confirm that all requirements of Section VI, Works Requirements have been met without any material deviation, reservation or omission. |
|  | 29.4 If a bid is not substantially responsive to the requirements of the Bidding Documents, it shall be rejected by the Employer and may not subsequently be made responsive by correction of the material deviation, reservation, or omission. |
| Nonmaterial Nonconformities | 30.1 Provided that a bid is substantially responsive, the Employer may waive any nonconformities in the Bid*.* |
|  | 30.2 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. |
|  | 30.3 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. The adjustment shall be made using the method specified in Section III, Evaluation and Qualification Criteria*.* |
| Correction of Arithmetical Errors | 31.1 Provided that the bid is substantially responsive, the Employer shall correct arithmetical errors on the following basis:  (a) 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;  (b) 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  (c) 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. |
|  | 31.2 Bidders shall be requested to accept correction of arithmetical errors. Failure to accept the correction in accordance with ITB 31.1, shall result in the rejection of the Bid. |
| Conversion to Single Currency | 32.1 For evaluation and comparison purposes, the currency(ies) of the Bid shall be converted into a single currency as specified in the BDS. |
| Margin of Preference | 33.1 **Unless otherwise specified in the BDS,** a margin of preference for domestic bidders[[1]](#footnote-1) shall not apply. |
| Subcontractors | 34.1 **Unless otherwise stated in the BDS,** the Employer does not intend to execute any specific elements of the Works by sub-contractors selected in advance by the Employer.  34.2 In case of Prequalification, the Bidder’s Bid shall name the same specialized subcontractor as submitted in the prequalification application and approved by the Employer.  34.3 In case of Post qualification, the Employer may permit subcontracting for certain specialized works as indicated in Section III 4.2. When subcontracting is permitted by the Employer, the specialized sub-contractor’s experience shall be considered for evaluation. Section III describes the qualification criteria for sub-contractors.  34.4Bidders may propose subcontracting up to the percentage of total value of contracts or the volume of works as **specified in the BDS**. |
| Evaluation of Bids | 35.1 The Employer shall use the criteria and methodologies listed in this Clause. No other evaluation criteria or methodologies shall be permitted.  35.2 To evaluate a bid, the Employer shall consider the following:  (a) the bid price, excluding Provisional Sums and the provision, if any, for contingencies in the Summary Bill of Quantities, but including Daywork items, where priced competitively;  (b) price adjustment for correction of arithmetic errors in accordance with ITB 31.1;  (c) price adjustment due to discounts offered in accordance with ITB 14.3;  (d) converting the amount resulting from applying (a) to (c) above, if relevant, to a single currency in accordance with ITB 32;  (e) price adjustment due to quantifiable nonmaterial nonconformities in accordance with ITB 30.3;  (f) the additional evaluation factors are specified in Section III, Evaluation and Qualification Criteria; |
|  | 35.3 The estimated effect of the price adjustment provisions of the Conditions of Contract, applied over the period of execution of the Contract, shall not be taken into account in bid evaluation. |
|  | 35.4 If these Bidding Documents allows Bidders to quote separate prices for different lots (contracts), the methodology to determine the lowest evaluated price of the lot (contract) combinations, including any discounts offered in the Letter of Bid Form, is specified in Section III, Evaluation and Qualification Criteria. |
|  | 35.5 If the bid, which results in the lowest Evaluated Bid Price, is seriously unbalanced or front loaded in the opinion of the Employer, the Employer may require the Bidder to produce detailed price analyses for any or all items of the Bill of Quantities, to demonstrate the internal consistency of those prices with the construction methods and schedule proposed. After evaluation of the price analyses, taking into consideration the schedule of estimated Contract payments, the Employer may require that the amount of the performance security be increased at the expense of the Bidder to a level sufficient to protect the Employer against financial loss in the event of default of the successful Bidder under the Contract. |
| Comparison of Bids | 36.1 The Employer shall compare the evaluated prices of all substantially responsive bids established in accordance with ITB 35.2to determine the lowest evaluated bid*.* |
| Qualification of the Bidder | 37.1 The Employer shall determine to its satisfaction whether the Bidder that is selected as having submitted the lowest evaluated and substantially responsive bid either continues to meet (if prequalification applies) or meets (if post qualification applies) the qualifying criteria specified in Section III, Evaluation and Qualification Criteria. |
|  | 37.2 The determination shall be based upon an examination of the documentary evidence of the Bidder’s qualifications submitted by the Bidder, pursuant to ITB 17.1.  37.3 An affirmative determination shall be a prerequisite for award of the Contract to the Bidder. A negative determination shall result in disqualification of the bid, in which event the Employer shall proceed to the next lowest evaluated bid to make a similar determination of that Bidder’s qualifications to perform satisfactorily. |
| Employer’s Right to Accept Any Bid, and to Reject Any or All Bids | 38.1 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. |
|  | F. Award of Contract |
| Award Criteria | 39.1 Subject to ITB 38.1, the Employer shall award the Contract to the Bidder whose offer has been determined to be the lowest evaluated bid and is substantially responsive to the Bidding Documents, provided further that the Bidder is determined to be qualified to perform the Contract satisfactorily. |
| Notification of Award | 40.1 Prior to the expiration of the period of bid validity, the Employer shall notify the successful Bidder, in writing, that its bid has been accepted. The notification letter (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 and completion of the Works (hereinafter and in the Conditions of Contract and Contract Forms called “the Contract Price”). At the same time, the Employer shall also notify all other Bidders of the results of the bidding and shall publish in an appropriate newspaper or Gazette and OFID website online the results identifying the bid and lot (contract)numbers and the following information:  (i) name of each Bidder who submitted a Bid;  (ii) bid prices as read out at Bid Opening;  (iii) name and evaluated prices of each Bid that was evaluated;  (iv) name of bidders whose bids were rejected and the reasons for their rejection; and  (v) name of the successful Bidder, and the Price it offered, as well as the duration and summary scope of the contract awarded. |
|  | 40.2 Until a formal contract is prepared and executed, the notification of award shall constitute a binding Contract. |
|  | 40.3 The Employer shall promptly respond in writing to any unsuccessful Bidder who, after notification of award in accordance with ITB 40.1, requests in writing the grounds on which its bid was not selected. |
| Signing of Contract | 41.1 Promptly upon notification, the Employer shall send the successful Bidder the Contract Agreement. |
|  | 41.2 Within twenty-eight (28) days of receipt of the Contract Agreement, the successful Bidder shall sign, date, and return it to the Employer. |
| Performance Security | 42.1 Within twenty-eight (28) days of the receipt of notification of award from the Employer, the successful Bidder shall furnish the performance security in accordance with the General Conditions of Contract, subject to ITB 35.5, using for that purpose the Performance Security Form included in Section IX, Annex to the Particular Conditions - 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. |
|  | 42.2 Failure of the successful Bidder to submit the above-mentioned 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 next lowest evaluated Bidder whose offer is substantially responsive and is determined by the Employer to be qualified to perform the Contract satisfactorily. |

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| Section II. Bid Data Sheet | |
| **A. Introduction** | |
| **ITB 1.1** | The Number of the Invitation for Bids is : (IUL)13-K/13/2019/359 |
| **ITB 1.1** | The Employer is: Ministry of National Planning and Infrastructure |
| **ITB 2.1** | The Beneficiary is: Ministry of Finance |
| **ITB 2.1** | Financing Agreement amount: USD …………….. |
| **ITB 2.1** | The Name of the Project is: **Survey, Design & Harbour Reconstruction of 3 Islands (B.Kudarikilu, B.Dhonfanu & B.Kihaadhoo)** |
| ITB 4.1 | Maximum number of members in the JV shall be: ***3*** |
| ITB 4.3 | The following grades of contractors registered under National Contractors Registry will be eligible to participate in this tender.  **HC01-01** |
| ITB 4.4 | The electronic address of firms and individuals debarred by the Fund is available at: <http://www.ofid.org> |
| ITB 4.8 | This Bidding Process IS NOT subject to prequalification. |
| **B. Bidding Documents** | |
| **ITB 7.1** | For **clarification purposes** only, the Employer’s address is:  **National Tender,**  Ministry of Finance  Ameenee Magu, Male’, 20-03  Republic of Maldives,  Tel: (+960) 3349105  Email: hawwa.maldha@finance.gov.mv  CC: tender@finance.gov.mv |
| **ITB 7.1** | Web page: [www.finance.gov.mv](http://www.finance.gov.mv/) |
| **ITB 7.4** | A Pre-Bid meeting take place at the following date, time and place:  NA |
| **C. Preparation of Bids** | |
| ITB 10.1 | The language of the bid is: ENGLISH  All correspondence exchange shall be in ENGLISH language.  Language for translation of supporting documents and printed literature is ENGLISH |
| **ITB 11.1(b)** | The following schedules shall be submitted with the Tender:  • Bill of Quantities  • Work Schedule |
| **ITB 11.1 (i)** | The Tenderer shall submit with its Tender the following additional documents:  The Tenderer shall submit the following additional documents in its tender:   1. **Power of Attorney** to confirm authorization of the signatory of the Bid to commit the Bidder, in accordance with ITT Clause 20.2. 2. **Business Registration Certificate.**   International bidders shall seek all applicable foreign investment registration requirements of Maldives prior to bid submission. For more information please visit : <http://www.trade.gov.mv/>   1. **GST Registration Certificate.**   International foreign companies who are already engaged in any work in Maldives, or have re-registered their entity in the Maldives, or have incorporated a company in Maldives shall be eligible to pay local taxes under tax regulations of the Maldives. For more information please visit: <https://www.mira.gov.mv/>   1. **National Contractors Registry Certificate.**   All contractors should adhere to National Contractors Registry and all relevant guidelines and shall sought any permits, if required, applicable at the time of submission of the tender. For more information please visit: <http://www.planning.gov.mv/> |
| **ITB 13.1** | Alternative bids NOT permitted. |
| ITB 13.2 | Alternative times for completion NOT permitted.  If alternative times for completion are permitted, the evaluation method will be as specified in Section III, Evaluation and Qualification Criteria. |
| ITB 14.5 | N/A |
| **ITB 14.6** | The prices quoted by the Tenderer shall not be subject to adjustment during the performance of the Contract. |
| **ITB 14.7** | All bids shall be quoted inclusive of all applicable local taxes and GST.  Where bid prices quoted is not indicated or mentioned as “exclusive” of GST, the Purchaser have the right to take the quoted bid price deemed to be inclusive of GST. |
| **ITB 15.1** | The currency(ies) of the bid and the payment currency(ies) shall be in **United States Dollars (USD) and Maldivian Rufiya (MVR)** |
| **ITB 18.1** | The bid validity period shall be **120 days.** |
| **ITB 19.1** | A Bid Security SHALL BE required.  The amount and currency of the bid security shall be shall be MVR 600,000.00 or equivalent in USD |
| **ITB 19.3 (d)** | Bid Security Shall be an unconditional guarantee issued by a bank or financial institution (such as an insurance, bonding or surety company) or a cashier’s or certified check may be submitted by a local bidder. |
| **ITB 19.9** | N/A |
| **ITB 20.1** | In addition to the original of the bid, the number of copies is: 1 No |
| **ITB 20.2** | The written confirmation of authorization to sign on behalf of the Bidder shall consist of: Power of Attorney |
| **D. Submission and Opening of Bids** | |
| **ITB 22.1** | For Tender **submission purposes** only, the Employer’s address is:  Mr. Ahmed Mujuthaba,  Chief Procurement Executive,  National Tender  Ministry of Finance  Ameenee Magu, Male’, 20379  Republic of Maldives  Tel: (960) 334 105  E-mail: hawwa.maldha@finance.gov.mv  [tender@finance.gov.mv](mailto:tender@finance.gov.mv)    **The deadline for Tender submission is:**  Date: 23rd January 2020  Time: 13:00 hrs |
| **ITB 25.1** | The bid opening shall take place at:  Mr. Ahmed Mujuthaba,  Chief Procurement Executive,  National Tender  Ministry of Finance  Ameenee Magu, Male’, 20379  Republic of Maldives  Tel: (960) 334 105  E-mail: hawwa.maldha@finance.gov.mv  [tender@finance.gov.mv](mailto:tender@finance.gov.mv)  Date: 23rd January 2020  Time: 13:00 hrs |
| **E. Evaluation, and Comparison of Bids** | |
| **ITB 32.1** | The currency that shall be used for bid evaluation and comparison purposes to convert all bid prices expressed in various currencies into a single currency is US DOLLARS (US$)  The source of exchange rate shall be MALDIVES MONETARY AUTHORITY (MMA)  The date for the exchange rate shall be: 14 days before Bid Submission deadline  The currency(ies) of the Bid shall be converted into a single currency in accordance with the procedure under Alternative **B** that follows:  **Alternative A: Bidders quote entirely in local currency**  For comparison of bids, the Bid Price, corrected pursuant to Clause 31, shall first be broken down into the respective amounts payable in various currencies by using the exchange rates specified by the bidder in accordance with Sub-Clause 15.1.  In the second step, the Employer will convert the amounts in various currencies in which the Bid Price is payable (excluding Provisional Sums but including Daywork where priced competitively) to the single currency identified above at the selling rates established for similar transactions by the authority specified and on the date stipulated above.  **OR**  **Alternative B: Bidders quote in local and foreign currencies**  The Employer will convert the amounts in various currencies in which the Bid Price, corrected pursuant to Clause 31, is payable (excluding Provisional Sums but including Daywork where priced competitively) to the single currency identified above at the selling rates established for similar transactions by the authority specified and on the date stipulated above. |
| **ITB 33.1** | A margin of preference DOES NOT apply. |
| **ITB 34.1** | At this time the Employer *DOES NOT INTEND t*o execute certain specific parts of the Works by sub-contractors selected in advance. |
| **ITB 34.4** | **Option 1:**  **a) In the case of Prequalification**: N/A  **Option 2:**  **a) In the case of Post qualification**:  Contractor’s proposed subcontracting: Maximum percentage of subcontracting permitted is: *30% of the total contract amount*  b) Bidders planning to subcontract more than 10% of total volume of work shall specify, in the Bid Submission Form, the activity (ies) or parts of the works to be subcontracted along with complete details of the sub-contractors and their qualification and experience. The qualification and experience of the sub-contractors must meet the minimum criteria for the relevant work to be sub-contracted failing which such sub-contractors will not be permitted to participate.  c) Sub-contractors’ qualification and experience will not be considered for evaluation of the Bidder. The Bidder on its own (without taking into account the qualification and experience of the sub-contractor) should meet the qualification criteria. |

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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. In accordance with ITB 35 and ITB 37, no other factors, methods or criteria shall be used. 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 is 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 32.1. Any error in determining the exchange rates in the Bid may be corrected by the Employer.

* Tax clearance of the lowest evaluated bidder shall be checked prior to contract award.
* NCR grading and Tendering Limit of all the bidders shall be assessed. All bidders should adhere to NCR Grading and tendering limits and no bidder shall bid above the Tendering Limit specified in the corresponding NCR Grade and in case of such, the bid shall be disqualified.
* Lowest Evaluated bidder shall be assessed for any past work commitments with in the last 2 years with Government of Maldives which had been terminated due to poor performance. In addition, past work completed by the lowest evaluated bidder will be assessed by the concerned stakeholder for their overall performance.
* Employer’s requirement (issued with the bidding document) for the project must be met.

**1. Domestic Preference**

NA

**2. Evaluation**

In addition to the criteria listed in ITB 35.2 (a) – (e) the following criteria shall apply:

**2.1** **Assessment of adequacy of Technical Proposal with Requirements**

**2.3 Alternative Completion Times**, if permitted under ITB 13.2, will be evaluated as follows: Not Applicable

**2.4 Technical alternatives** , if permitted under ITB 13.4, will be evaluated as follows: Not Applicable

**2.5 Specialized Subcontractors**

Only the specific experience of sub-contractors for specialized works permitted by the Employer will be considered. The general experience and financial resources of the specialized sub-contractors shall not be added to those of the Bidder for purposes of qualification of the Bidder.

The specialized sub-contractors proposed shall be fully qualified for their work proposed, and meet the following criteria:

* + - 1. **Adequacy of Technical Proposal**

Evaluation of the Bidder's Technical Proposal will include an assessment of the Bidder's technical capacity to mobilize key equipment and personnel for the contract consistent with its proposal regarding work methods, scheduling, and material sourcing in sufficient detail and fully in accordance with the requirements stipulated in Section V (Employer's Requirements).

Omission of imformation on non-significant equipment and personnel requirements described in Section V (Employer’s Requirements) shall not be a ground for bid rejection and such non-compliance will be subject to clarification during bid evaluation and rectification prior to contract award.

* + - 1. **Quantifiable Nonconformities and Omissions**

Subject to ITB 14.2 and ITB 34.2, the evaluated cost of quantifiable nonconformities including omissions, is determined as follows:

“Pursuant to ITB 30.3, the cost of all quantifiable nonmaterial nonconformities shall be evaluated, including omissions in Daywork where competitively priced but excluding omission of prices in the Bill of Quantities. The Employer will make its own assessment of the cost of any nonmaterial nonconformities and omissions for the purpose of ensuring fair comparison of Bids.”]

* + - 1. **Multiple Contracts**

Works are grouped in multiple contracts and pursuant to ITB 34.4, the Employer shall evaluate and compare Bids on the basis of a contract, or a combination of contracts, or as a total of contracts in order to arrive at the least-cost combination for the Employer by taking into account discounts offered by Bidders in case of award of multiple contracts.

If a Bidder submits several successful (lowest evaluated substantially responsive) bids, the evaluation will also include an assessment of the Bidder’s capacity to meet the following aggregated requirements as presented in the bid:

* Average annual construction turnover,
* Financial resources,
* Equipment to be allocated, and
* Personnel to be fielded.

**3. Qualification**

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| **Eligibility and Qualification Criteria** | | | **Compliance Requirements** | | | | **Documentation** |
| **No.** | **Subject** | **Requirement** | **Single Entity** | **Joint Venture (existing or intended)** | | | **Submission Requirements** |
| **All Parties Combined** | **Each Member** | **One Member** |
| 1. Eligibility | | | | | | | |
| 1.1 | **Nationality** | Nationality in accordance with ITB 4.3 | 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 | **Fund Eligibility** | Not having been declared ineligible by the Fund, as described in ITB4.4, 4.5, 4.6 and 4.7 | Must meet requirement | Must meet requirement | Must meet requirement | N/A | Letter of Bid |
| 1.4 | **Government Owned Entity of the Beneficiary country** | Meets conditions of ITB 4.5 | 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 Beneficiary’s country law or Boycott Regulations of OFID.** | Not having been excluded as a result of prohibition in the Beneficiary’s country laws or official regulations against commercial relations with the Bidder’s country, in accordance with ITB 4.7 and Section V. | Must meet requirement | Must meet requirement | Must meet requirement | N/A | Forms ELI – 1.1 and 1.2, with attachments |
| 2. Historical Contract Non-Performance | | | | | | | |
| 2.1 | **History of Non-Performing Contracts** | Non-performance of a contract[[2]](#footnote-2) did not occur as a result of contractor default for the last five (05) years. | Must meet requirement12 | Must meet requirements | Must meet requirement[[3]](#footnote-3) | N/A | Form CON-2 |
| 2.2 | **Suspension Based on Execution of Bid Securing Declaration by the Employer or withdrawal of the Bid within Bid validity** | Not under suspension based on execution of a Bid Securing Declaration pursuant to ITB4.6 or withdrawal of the Bid pursuant ITB 19.9. | Must meet requirement | Must meet requirement | Must meet requirement | N/A | Bid Submission Form |
| 2.3 | **Pending Litigation** | Bidder’s financial position and prospective long term profitability 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 |
| 2.4 | **Litigation History** | No consistent history of court/arbitral award decisions against the Bidder[[4]](#footnote-4) for the last 5 years. | Must meet requirement | Must meet requirement | Must meet requirement | N/A | Form CON – 2 |
| 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 **USD $ 3,940,100.00**for the subject contract(s) net of the Bidders other commitments  (ii) The Bidders shall also demonstrate, to the satisfaction of the Employer, that it has adequate sources of finance to 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 ***5***years 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  Must meet requirement  N/A | Must meet requirement  N/A  Must meet requirement | N/A  N/A  N/A | Form FIN – 3.1, with attachments |
| 3.2 | **Average Annual Construction Turnover** | Minimum average annual construction turnover of **USD $ 1,182,030.00** calculated as total certified payments received for contracts in progress and/or completed within the last *5* years, divided by *5* years | Must meet requirement | Must meet requirement | Must meet  *30* %, *\_\_\_\_\_\_\_\_\_\_\_*of the requirement | Must meet  30%, *\_\_\_\_\_\_\_\_\_\_\_*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, JV member, sub-contractor, or management contractor for at least the last 5 years | Must meet requirement | N/A | Must meet requirement | N/A | Form EXP – 4.1 |
| 4.2 (a) | **Specific Construction & Contract Management Experience** | (i) A minimum number of similar[[5]](#footnote-5) contracts specified below that have been satisfactorily and substantially[[6]](#footnote-6) completed as a prime contractor, joint venture member[[7]](#footnote-7), management contractor or sub-contractor between last 5 years and application submission deadline:  (i) 2 contracts, each of minimum value **USD $ 2,758,070.00**;  Or  (ii) Less than or equal to 5 contracts, each of minimum value **USD $ 1,103,228.00**, but with total value of all contracts equal or more than **USD $ 5,513,140.00***.* | Must meet requirement | Must meet requirement[[8]](#footnote-8) | N/A | N/A | Form EXP 4.2(a) |
| 4.2 (b) |  | For the above and any other contracts completed and under implementation as prime contractor, joint venture member, management contractor or sub-contractor[[9]](#footnote-9) on or after the first day of the calendar year during the period stipulated in 4.2 (a) above, a minimum construction experience in the following key activities successfully completed[[10]](#footnote-10):  **-Construction of breakwaters**  **-Construction quay walls**  **- Dredging works** | Must meet requirements | Must meet requirements | N/A | Must meet the following requirements for the key activities listed below[[11]](#footnote-11)*[list key activities and the corresponding minimum requirements]* | Form EXP – 4.2 (b) |

**3.5 Personnel**

The Bidder must demonstrate that it has the personnel for the key positions that meet the following requirements:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **SlNo.** | **Position** | **Qualification** | **Number** | **Total Work**  **Experience (years)** | **In Similar Works Experience**  **(years)** |
| 1 | Project Manager | Masters in Project Management, Civil Engineering or relevant field or; | 1 | 10 | 5 |
| Degree in Project Management/ Civil Engineering or relevant field | 15 | 5 |
| 2 | Site Engineer | Bachelor’s Degree in Civil Engineering | 3 | 5 | 3 |
| 3 | Electrical Engineer | Bachelor’s Degree in Electrical Engineering | 1 | 5 | 3 |
| 5 | Site Supervisors | Engineering Diploma | 3 | 5 | 3 |
| 6 | Quantity Surveyor | Diploma in Quantity Surveying | 1 | 5 | 2 |
| 7 | Under water Diver | PADI Open Water | 1 | 3 | 2 |
| 8 | Land Surveyor | Diploma in Engineering/ Surveying | 1 | 5 | 2 |

The Bidder shall provide details of the proposed personnel and their experience records using Forms PER-1 and PER-2 included in Section IV, Bidding Forms.

**3.6 Equipment**

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

|  |  |  |
| --- | --- | --- |
| **No.** | **Equipment Type and Characteristics** | **Minimum Number required** |
| 1 | Excavator | 2 (each island) |
| 2 | Crane | 1 (each island) |
| 3 | Spud Barge | 3 (Whole project) |
| 4 | Wheel Loader | 1 (each island) |
| 5 | Trucks | 2 (each island) |

The Bidder shall provide further details of proposed items of equipment using Form EQU in Section IV, Bidding Forms.

|  |
| --- |
| Section IV. Bidding Forms |

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|  |
| --- |
| Letter of Bid |

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

Tenderer’s Reference No.: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Procurement Reference No.: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

To: Ahmed Mujuthaba,

Director General,

National Tender

Ministry of Finance

Male’, Republic of Maldives

We, the undersigned, declare that:

1. We have examined and have no reservations to the Bidding Documents, including Addenda issued in accordance with Instructions to Bidders (ITB8) ;
2. We meet the eligibility requirements and have no conflict of interest in accordance with ITB 4;
3. We have not been suspended nor declared ineligible by the Employer based on execution of a Bid Securing Declaration in the Employer’s country in accordance with ITB 4.6
4. We offer to execute in conformity with the Bidding Documents the following Works:

TES/2019/W-170 - Survey, Design & Harbour Reconstruction of 3 Islands (B.Kudarikilu, B.Dhonfanu & B.Kihaadhoo)

1. The total price of our Bid, excluding any discounts offered in item (f) below is:

In case of only one lot, total price of the Bid

In case of multiple lots, total price of each lot \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

In case of multiple lots, total price of all lots(sum of all lots)\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_;

1. The discounts offered and the methodology for their application are:
2. The discounts offered are: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
3. The exact method of calculations to determine the net price after application of discounts is shown below:

;

1. Our bid shall be valid for a period of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ days from the date fixed for the bid submission deadline in accordance with the Bidding Documents, and it shall remain binding upon us and may be accepted at any time before the expiration of that period;
2. If our bid is accepted, we commit to obtain a performance security in accordance with the Bidding Documents;
3. We are not participating, as a Bidder or as a subcontractor, in more than one bid in this bidding process in accordance with ITB 4.2(e), other than alternative bids submitted in accordance with ITB13;

(j) We, including any of our subcontractors or suppliers for any part of the contract, have not been declared ineligible by the Fund, under the Employer’s country laws or official regulations or by an act of compliance with a decision of the OFID;

(k) We are not a government owned entity/ We are a government owned entity but meet the requirements of ITB4.5;[[12]](#footnote-12)

(l) We have paid, or will pay the following commissions, gratuities, or fees with respect to the bidding process or execution of the Contract:

|  |  |  |  |
| --- | --- | --- | --- |
| Name of Recipient | Address | Reason | Amount |
|  |  |  |  |
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(If none has been paid or is to be paid, indicate “none.”)

(m) We understand that this bid, together with your written acceptance thereof included in your notification of award, shall constitute a binding contract between us, until a formal contract is prepared and executed; and

(n) We understand that you are not bound to accept the lowest evaluated bid or any other bid that you may receive.

1. We agree to permit OFID or its representative to inspect our accounts and records and other documents relating to the bid submission and to have them audited by auditors appointed by OFID.
2. If our Bid is accepted, we commit to mobilizing key equipment and personnel in accordance with the requirements set forth in Section V (Employer’s Requirements) and our technical proposal, or as otherwise agreed with the Employer.

(o) We hereby certify that we have taken steps to ensure that no person acting for us or on our behalf will engage in any type of fraud and corruption.

|  |  |
| --- | --- |
| Name of the Bidder\*: | ……………………......................................…{insert complete name} |
| Name of the person duly authorized to sign the Bid on behalf of the Bidder**\*\***: | ……………………...…..…{insert complete name of person signing} |
| Title of the person signing the Bid: | ……….……….……….........{insert legal capacity of person signing} |
| Signature of the person named above | ……………..…………….{insert complete name of Tenderer and Company stamp} |
| Date Signed: | ……... day of ……….…………….. …………. {DD/MM/YY} |

**\***: 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 Bid |

**Schedule 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 x B** | **D**  **Percentage of Total Bid Price (TBP)**  **100xC**  **TBP** |
| **Local currency** |  | **1.00** |  |  |
| **Foreign currency #1** |  |  |  |  |
| **Foreign currency #2** |  |  |  |  |
| **Foreign currency #** |  |  |  |  |
| **Total Bid Price** |  |  |  | **100.00** |
| **Provisional sums expressed in local currency** | [*To be entered by the Employer*] |  | [*To be entered by the Employer*] |  |
| **TOTAL BID PRICE (including provisional sum)** |  |  |  |  |

**Table: Alternative B**

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

Summary of currencies of the bid for \_\_\_\_\_\_\_\_\_\_\_*[insert name of Section of the Works]*

|  |  |
| --- | --- |
| **Name of currency** | **Amounts payable** |
| Local currency: |  |
| Foreign currency #1: |  |
| Foreign currency #2: |  |
| Foreign currency #3: |  |
| Provisional sums expressed in local currency  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | [*To be entered by the Employer*] |

|  |
| --- |
| Bill of Quantities |

Bill No. 1: Design and General Works

(Please refer to the BoQ sheets provided)

Bill No. 2: Harbor Reconstruction works

(Please refer to the BoQ sheets provided)

Schedule of Daywork Rates: 1. Labour

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Item No.** | **Description** | **Unit** | **Nominal quantity** | **Rate** | **Extended amount** |
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|  | Subtotal | | | |  |
| D122 | Allow percenta of Subtotal for Contractor’s overhead, profit, etc., in accordance with paragraph 3 (b) above. | | |  |  |
|  |  |  |  |  |  |
|  | Total for Daywork: Labour  (carried forward to Daywork Summary, p. ) | | | |  |
| a. To be entered by the bidder. | | | | | |

Schedule of Daywork Rates: 2. Materials

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Item No.** | **Description** | **Unit** | **Nominal quantity** | **Rate** | **Extended amount** |
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|  | Subtotal | | | |  |
|  | Allow percenta of Subtotal for Contractor’s overhead, profit, etc., in accordance with paragraph 3 (b) above. | | |  |  |
|  |  |  |  |  |  |
|  | Total for Daywork: Materials  (carried forward to Daywork Summary, p. ) | | | |  |
| a. To be entered by the bidder. | | | | | |

Schedule of Daywork Rates: 3. Contractor’s Equipment

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Item No.** | **Description** | **Nominal quantity (hours)** | **Basic hourly rental rate** | **Extended amount** | |
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| Total for Daywork: Contractor’s Equipment  (carried forward to Daywork Summary, p. ) | | | |  | |

Daywork Summary

|  |  |  |
| --- | --- | --- |
|  | **Amounta**  **(MVR)** | **% Foreign**  **(USD)** |
| 1. Total for Daywork: Labour |  |  |
| 2. Total for Daywork: Materials |  |  |
| 3. Total for Daywork: Contractor’s Equipment |  |  |
| Total for Daywork (Provisional Sum)  (carried forward to Bid Summary, p. ) |  |  |
| a. The Employer should insert local currency unit. | | |

Summary of Specified Provisional Sums

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Island** | **Description** | **Amount** |
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|  |  |  |  |
| Total for Specified Provisional Sums  (carried forward to Grand Summary (B), p. ) | | |  |

Grand Summary

Contract Name:

Contract No.:

|  |  |  |
| --- | --- | --- |
| **General Summary** | **Page** | **Amount** |
| Bill No. 1: Design and General Works |  |  |
| Bill No. 2: Harbour Reconstruction Works |  |  |
| Bill No. 3: Provisional Works for Quaywall |  |  |
| *—etc.—* |  |  |
| Subtotal of Bills | (A) |  |
| Total for Daywork (Provisional Sum) | (B) |  |
| Specified Provisional Sums included in subtotal of bills | (C) | [sum] |
| Total of Bills Plus Provisional Sums (A + B + C) | (D) |  |
| Add Provisional Sum for Contingency Allowance (if any) | (E) | [sum] |
| Bid Price (D + E) (Carried forward to Letter of Bid) | (F) |  |
|  |  |  |
| i) All Provisional Sums are to be expended in whole or in part at the direction and discretion of the Engineer in accordance with Sub-Clause 13.5 of the Conditions of Contract.  ii) To be entered by the Employer. | | |

|  |
| --- |
| Technical Proposal |

* **Site Organization**
* **Method Statement**
* **Mobilization Schedule**
* **Construction Schedule**
* **Equipment**
* **Others**

Site Organization

Method Statement

Mobilization Schedule

Construction ScheduleForm EQU: 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  o Owned o Rented o Leased o 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 | |
|  |  | |
|  |  | |

|  |
| --- |
| Personnel |

Form PER-1: Proposed Personnel

Bidders should provide the names of suitably qualified personnel to meet the specified requirements stated in Section III. The data on their experience should be supplied using the Form below for each candidate.

|  |  |
| --- | --- |
| **1.** | **Title of position\*** |
|  | **Name** |
| **2.** | **Title of position\*** |
|  | **Name** |
| **3.** | **Title of position\*** |
|  | **Name** |
| **4.** | **Title of position\*** |
|  | **Name** |

\*As listed in Section III.

Form PER-2: Resume of Proposed Personnel

|  |
| --- |
| **Name of Bidder** |

|  |  |  |
| --- | --- | --- |
| **Position** | | |
| **Personnel information** | **Name** | **Date of birth** |
|  | **Professional qualifications** | |
| **Present employment** | **Name of employer** | |
|  | **Address of employer** | |
|  | **Telephone** | **Contact (manager / personnel officer)** |
|  | **Fax** | **E-mail** |
|  | **Job title** | **Years with present employer** |

Summarize professional experience over the last 20 years, in reverse chronological order. Indicate particular technical and managerial experience relevant to the project.

| **From** | **To** | **Company / Project / Position / Relevant technical and management experience** |
| --- | --- | --- |
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Bidders 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: *\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_*  
ICB 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:  *[indicate country of Constitution]* |
| 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  🞎 Articles of Incorporation (or equivalent documents of constitution or association), and/or documents of registration ofthe legal entity named above, in accordance with ITB 4.3.  🞎 In case of JV, letter of intent to form JV or JV agreement, in accordance with ITB 4.1.  🞎 In case of Government-owned enterprise or institution, in accordance with ITB 4.5documents establishing:   * Legal and financial autonomy * Operation under commercial law * Establishing that the Bidder is not dependent agency of the Employer   2. Included are the organizational chart, a list of Board of Directors, and the beneficial ownership. |

**Form ELI -1.2**

Bidder's Party Information Form

Date: *\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_*ICB No. and title: *\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_*Page *\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_*of *\_\_\_\_\_\_\_\_\_\_\_\_*pages

|  |
| --- |
| Bidder’s name: |
| Bidder's Party name: |
| Bidder's Party country of registration: |
| Bidder Party's year of constitution: |
| Bidder Party's legal address in country of constitution: |
| Bidder Party's authorized representative information  Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  Address: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  Telephone/Fax numbers: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  E-mail address: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
| 1. Attached are copies of original documents of  🞎 Articles of Incorporation (or equivalent documents of constitution or association), and/orregistration documents of thelegal entity named above, in accordance with ITB 4.3.  🞎 In case of a Government-owned enterprise or institution, documents establishing legal and financial autonomy, operation in accordance with commercial law, and absence of dependent status, in accordance with ITB 4.5.  2. Included are the organizational chart, a list of Board of Directors, and the beneficial ownership. |

**Form CON – 2**

Historical Contract Non-Performance, Pending Litigation and Litigation History

Bidder’s Name: *\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_*Date: *\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_*Joint Venture Party Name\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ICB No. and title: *\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_*Page *\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_*of *\_\_\_\_\_\_\_\_\_\_\_\_\_\_*pages

|  |  |  |  |
| --- | --- | --- | --- |
| **Non-Performed Contracts in accordance with Section III, Evaluation and Qualification Criteria** | | | |
| 🞎 Contract non-performance did not occur since 1st January *[insert year]*specified in Section III, Evaluation and Qualification Criteria, Sub-Factor 2.1.  🞎 Contract(s) not performed since 1st January *[insert year]* specified in Section III, Evaluation and Qualification Criteria, requirement 2.1 | | | |
| **Year** | **Non- performed portion of contract** | **Contract Identification** | **Total Contract Amount (current value, currency, exchange rate and US$ equivalent)** |
| *[insert year]* | *[insert amount and percentage]* | Contract Identification: *[indicate complete contract name/ number, and any other identification]*  Name of Employer: *[insert full name]*  Address of Employer: *[insert street/city/country]*  Reason(s) for non performance: *[indicate main reason(s)]* | *[insert amount]* |
| **Pending Litigation, in accordance with Section III, Qualification Criteria and Requirements** | | | |
| 🞎 No pending litigation in accordance with Section III, Qualification Criteria and Requirements, Sub-Factor 2.3. | | | |
| 🞎 Pending litigation in accordance with Section III, Evaluation and Qualification Criteria, Sub-Factor 2.3 as indicated below. | | | |

|  |  |  |  |
| --- | --- | --- | --- |
| **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: *\_\_\_\_\_\_\_\_\_\_\_* |  |
|  |  |  |  |
| 🞎 No pending litigation in accordance with Section III, Evaluation and Qualification Criteria, Sub-Factor 2.3.  🞎 Pending litigation in accordance with Section III, Evaluation and Qualification Criteria, Sub-Factor 2.3 as indicated below. | | | |
| **Year of award** | **Outcome as percentage of Net Worth** | **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: |  |

**Form FIN – 3.1**

Financial Situation and Performance

Bidder’s Name:

Date:

Bidder’s Party Name*:*

ICB 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) |  |  |  |  |  |
| CurrentAssets (CA) |  |  |  |  |  |
| CurrentLiabilities (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 15 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 statements[[13]](#footnote-13) for the *\_\_\_\_\_\_\_\_\_\_\_\_*years required above; and complying with the requirements

**Form FIN - 3.2**

Average Annual Construction Turnover

Bidder's/Joint Venture Member's Name: *\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_*Date: *\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_*Bidder's Party Name: *\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_*ICB No. and title: *\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_*Page *\_\_\_\_\_\_\_\_\_\_\_\_\_\_*of *\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_*pages

|  |  |  |  |
| --- | --- | --- | --- |
| **Annual turnover data (construction only)** | | | |
| **Year** | **Amount**  **Currency** | **Exchange rate** | **USD equivalent** |
| *[indicate year]* | *[insert amount and indicate currency]* |  |  |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |
| 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/Joint Venture Member's Name: *\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_*Date: *\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_*Bidder JV Party Name: *\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_*ICB 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/Joint Venture Member's Name: *\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_*Date: *\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_*JV Party Name: *\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_*ICB No. and title: *\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_*Page *\_\_\_\_\_\_\_*of *\_\_\_\_\_\_\_*pages

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Similar Contract No.** | **Information** | | | | | |
| Contract Identification |  | | | | | |
| Award date |  | | | | | |
| Completion date |  | | | | | |
| Role in Contract | Prime Contractor  🞎 | | Member in  JV  🞎 | Management Contractor  🞎 | Sub-contractor🞎 | |
| Total Contract Amount |  | | | US$ *\** | | |
| If member in a JV or sub-contractor, specify participation in total Contract amount |  |  | | *\** | | |
| Employer's Name: |  | | | | | |
| Address:  Telephone/fax number  E-mail: |  | | | | | |
| 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 Party Name: *\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_*Sub-contractor's Name[[14]](#footnote-14) (as per ITB 34.2 and 34.3): *\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_*ICB No. and title: *\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_*

Page *\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_*of *\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_*pages

All Sub-contractors for key activities must complete the information in this form as per ITB34.2 and 34.3 and Section III, Qualification Criteria and Requirements, Sub-Factor 4.2.

1. Key Activity No One: *\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_*

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | **Information** | | | | |
| **Contract Identification** |  | | | | |
| **Award date** |  | | | | |
| **Completion date** |  | | | | |
| **Role in Contract** | Prime Contractor  🞎 | Member in  JV  🞎 | | ManagementContractor  🞎 | Sub-contractor  🞎 |
| **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:** |  | | | | | |

|  |  |
| --- | --- |
|  | **Information** |
| **Employer’s Name:** |  |
| **Address:**  **Telephone/fax number**  **E-mail:** |  |

2. Activity No. Two

3. …………………

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

|  |
| --- |
| Form of Bid Security |

**(Demand Guarantee)**

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Beneficiary:** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Invitation 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 Invitation for Bids No. \_\_\_\_\_\_\_\_\_\_\_ (“the IFB”).

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 supported by the Beneficiary’s statement, whether in the demand itself or a separate signed document accompanying or identifying the demand, stating either that the Applicant:

(a) has withdrawn its Bid during the period of bid validity specified by the Applicant in the Letter of Bid, or any extension thereto provided by the Applicant; or

(b) having been notified of the acceptance of its Bid by the Beneficiary during the period of bid validity, (i) fails to execute the Contract Agreement or (ii) fails to furnish the 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 issued to the Beneficiary upon the instruction of the Applicant; and (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 Validity Period, which date shall be established by presentation to us of copies of the Letter of Bid and any extension(s) thereto, accompanied by the bidding document; or (c) three years after the date of issue of this guarantee.

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)]*

**Note: All italicized text is for use in preparing this form and shall be deleted from the final product.**

Section V. Eligible Countries

1. In reference to ITB4.7 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 4.7(a) and 5.1: *“None”.*

Under ITB 4.7(b) and 5.1: *“None”.*

Section VI. Fund Policy - Corrupt and Fraudulent Practices

**“Fraud and Corruption”:**

1.16 It is the Fund’s policy to require that Beneficiary's (including beneficiaries of Fund loans), bidders, suppliers, contractors and their agents (whether declared or not), sub-contractors, sub-consultants, service providers or suppliers, and any personnel thereof, observe the highest standard of ethics during the procurement and execution of Fund-financed contracts.[[15]](#footnote-15) In pursuance of this policy, the Fund:

(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;[[16]](#footnote-16);

(ii) “fraudulent practice” is any act or omission, including a misrepresentation, that knowingly or recklessly misleads, or attempts to mislead, a party to obtain a financial or other benefit or to avoid an obligation;[[17]](#footnote-17)

(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;[[18]](#footnote-18)

(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;[[19]](#footnote-19)

(v) “obstructive practice” is

(aa) 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

(bb) acts intended to materially impede the exercise of the Fund’s inspection and audit rights provided for .

(b) will reject a proposal for award if it determines that the bidder recommended for award, or 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) will declare misprocurement and cancel the portion of the financing allocated to a contract if it determines at any time that representatives of the Beneficiary or of a recipient of any part of the proceeds of the financing engaged in corrupt, fraudulent, collusive, coercive, or obstructive practices during the procurement or the implementation of that contract, without the Beneficiary having taken timely and appropriate action satisfactory to the Fund to address such practices when they occur, including by failing to inform the Fund in a timely manner at the time they knew of the practices; and

(d) will sanction a firm or individual, at any time, in accordance with the prevailing Fund’s sanctions procedures,[[20]](#footnote-20) including by publicly declaring such firm or individual ineligible, either indefinitely or for a stated period of time: (i) to be awarded a Fund-financed contract; and (ii) to be a nominated[[21]](#footnote-21);

(e) will require that a clause be included in bidding documents and in contracts financed by a Fund loan, requiring bidders, suppliers and contractors, and their sub-contractors, agents, personnel, consultants, service providers, or suppliers, to permit the Fund to inspect all accounts, records, and other documents relating to the submission of bids and contract performance, and to have them audited by auditors appointed by the Fund.”

PART 2

Works Requirements

|  |
| --- |
| Section VII. Works Requirements |

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[Bill Of Quantities 163](#_Toc17891077)

|  |
| --- |
| Employer’s Requirements |

The Contract comprises of **Design and Build of** **Harbours B. Kudarikilu, B.Dhonfanu and B.Kihaadhoo** at Republic of Maldives for Ministry of National Planning and Infrastructure, together with all ancillary items except insofar as the Contract otherwise provides including the provision of all supervision, labor, materials, temporary works, false work, plant, machinery, equipment, parts, tools, supplies, transportation, utilities, and everything whether of a temporary or permanent nature, required in and for such construction, completion, commissioning and maintenance insofar as the necessity for providing the same is specified in or can reasonably be inferred from the Contract. The work consists of the following main items

Design and Construct new RC Quaywall with anchors, mooring hooks and expansion joints.

Design and Construct new Rubble mound breakwater.

Design and Construction of Rock Boulder Revetment

Design and Construction of Rock Boulder Groyns (if required)

Dredging of harbor basin and entrance channel

This chapter outlines the requirements for design and reconstruction of the harbours. The document is divided into the following parts:

1. Employer’s Requirement: Island Specific Data and Design Requirements
2. Employer’s Requirement: Construction Part 1: General Works
3. Employer’s Requirement: Construction Part 2: Concrete Works
4. Employer’s Requirement: Construction Part 3: Rubble Mound breakwaters
5. Employer’s Requirement: Harbour Layouts

Preparation of reports shall be as per EPA Guidelines. These documents will be available from Environmental protection Agency (E

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Island Specific Data Sheets  |  |  | | --- | --- | | **Island Name** | **B. Kudarikilu** | | **Type of Reconstruction** | **Full Reconstruction of harbour** | | **Population (2017)** | **533** | | **Existing harbor size** | **450ft x 200ft** | | **New Reconstructed harbor size** | **550ft x 200ft** | | **New Quaywall length** | **297m** | | **New Breakwater length** | **227m** | | **Etimated harbor dredging volume (-3m from MSL)** | **16,283 m3** | | **Etimated channel dredging volume (-3m from MSL)** | **2,552 m3** | | **Revetment and other rock work** | **TBD** |  * Quantities given above are estimates only. * All harbours should have 4m wide brick paving around quaywall * Adequate Drainage system near the quaywall * 11 x 11m Ramp at appropriate location * SS 316 L mooring hooks must be provided at 5m intervals * Harbour Lighting should be provided at 20m intervals * Channel protection should be provided to Entrance channel where required * Navigation light depending on the lenth of the channel * Adequate number of mooring bouys * Existing structures should be removed and disposed of to a location identified by council * The bidder should verify the estimated quantities of network lengths, and connections by carrying out own estimation and analysis and should check the completeness of the information.  Island Specific Data Sheets  |  |  | | --- | --- | | **Island Name** | **B. Dhonfanu** | | **Type of Reconstruction** | **Full Reconstruction of harbour** | | **Population (2017)** | **566** | | **Existing harbor size** | **500ft x 240ft** | | **New Reconstructed harbor size** | **550ft x 240ft** | | **New Quaywall length** | **313m** | | **New Breakwater length** | **167m** | | **Etimated harbor dredging volume (-3m from MSL)** | **19,539 m3** | | **Etimated channel dredging volume (-3m from MSL)** | **600 m3** | | **Revetment and other rock work** | **TBD** |  * Quantities given above are estimates only. * All harbours should have 4m wide brick paving around quaywall * Adequate Drainage system near the quaywall * 11 x 11m Ramp at appropriate location * SS 316 L mooring hooks must be provided at 5m intervals * Harbour Lighting should be provided at 20m intervals * Channel protection should be provided to Entrance channel where required * Navigation light depending on the lenth of the channel * Adequate number of mooring bouys * Existing structures should be removed and disposed of to a location identified by council * The bidder should verify the estimated quantities of network lengths, and connections by carrying out own estimation and analysis and should check the completeness of the information.  Island Specific Data Sheets  |  |  | | --- | --- | | **Island Name** | **B. Kihaadhoo** | | **Type of Reconstruction** | **Full Reconstruction of harbour** | | **Population (2017)** | **492** | | **Existing harbor size** | **350ft x 200ft** | | **New Reconstructed harbor size** | **550ft x 200ft** | | **New Quaywall length** | **285m** | | **New Breakwater length** | **185m** | | **Etimated harbor dredging volume (-3m from MSL)** | **16,830 m3** | | **Etimated channel dredging volume (-3m from MSL)** | **600 m3** | | **Revetment and other rock work** | **TBD** |  * Quantities given above are estimates only. * All harbours should have 4m wide brick paving around quaywall * Adequate Drainage system near the quaywall * 11 x 11m Ramp at appropriate location * SS 316 L mooring hooks must be provided at 5m intervals * Harbour Lighting should be provided at 20m intervals * Channel protection should be provided to Entrance channel where required * Navigation light depending on the lenth of the channel * Adequate number of mooring bouys * Existing structures should be removed and disposed of to a location identified by council * The bidder should verify the estimated quantities of network lengths, and connections by carrying out own estimation and analysis and should check the completeness of the information.  DESIGN REQUIREMENTS The Government of Maldives wishes to reconstruct the existing harbours in the following islands.   1. B. Kudarikilu 2. B. Dhonfanu 3. B. Kihaadhoo   The scope of works of the project includes (but not limited to):   1. Detailed design of the harbour based on the preliminary design as per the requirements 2. Detailed surveys 3. Carrying out an Environmental Impact Assessment (EIA) for the requirement of Environmental Protection Agency. 4. For islands with existing harbours, construction of harbours, which include, but not limited to reconstruction of breakwaters and quay walls and (if required) maintenance dredging of the existing harbour basin including the channel and if an expansion is proposed, capital dredging of any new basin area. If required by the work methodology proposed by the contractor, the scope of works should include removal/demolition, transportation and disposal of existing harbour structures. For islands without a harbour or if a harbour is constructed in a new location, the scope of works include, but not limited to construction of breakwaters and quay walls and capital dredging of harbour basin and channel.     **DESIGN CRITERIA**  The design layout and structural components of a harbour should be established after careful consideration of various operational, functional, navigational requirements, environmental and site conditions and physical constraints. Vessels’ using the harbours in Maldives come in all shapes and sizes such as fishing dhonis, passenger ferry vessels, powerboats, pleasure yachts, small cargo boats, and passenger-cum-cargo vessels. Such small craft harbours in the Maldives typically provide adequate draft to enable a boat to dock securely without risking damage. We can categorise these into six main functions in a typical harbour, such as:   1. Fish landing facility 2. Loading/unloading of cargo space 3. Passenger Ferry/Boat facilities 4. Mooring of mainly locally registered vessels 5. Recharging of fuel and water for the vessels 6. Boat beaching for repair and maintenance   It is noted that until now harbours in the Maldives were built with little thought on the above functionalities. The sizes of the harbours are not in essence determined based on vessel size, types and their numbers or usage of the harbour. Likewise, the structural elements of the harbour; quay walls, mooring facilities, passenger facilities, etc, are not adequately designed for the vessels using the harbour.  Current policy of the government in planning and design of the new harbours and reconstruction of existing harbours is that the design criteria of all the structures and the size of the harbour is followed from an evaluation of valid functional and operational requirement as well as site and environmental conditions. The materials and construction methods of various structures must reflect the usage of the structure. For example the quay wall structure used for mooring of the vessels necessarily need not be designed and built using the same material and methodology as that for a quay wall structure used for loading/unloading of cargo. Depending on the nature of each island, all 6 functions might not be required within the harbor (Eg. The island may have an existing beaching area in another part of the island). The following is a schematic diagram identifying different functionality of a typical harbour in the Maldives.    **Other factors that should be taken into account when designing the harbour are:**   * + - 1. New Harbour basin and entrance channel shall be dredged to a minimum depth of 3.5 metres below Mean Sea Level (MSL).       2. New Harbour entrance channel shall be dredged to a minimum depth of 4 metres below Mean Sea Level (MSL)       3. The vessel mooring area should be design such that it provides reasonable shelter from adverse weather conditions throughout the year.       4. Entrance channel shall be oriented in a direction that gives maximum safe usage during the year. Also the entrance channel shall have sufficient protection from waves.       5. The harbour shall be designed with proper water circulation within the basin.       6. Harbour design layout shall ensure minimum sediment accumulation at the entrance channel and inside the basin to allow for a maintenance dredging period of not less than 5 years.       7. Harbour component shall be designed for a minimum maintenance free period of 10 years. Design life of all structures shall not be less than 30 years.       8. Breakwater crest height shall be determined to provide reasonable shelter from adverse weather conditions throughout the year.       9. . amme – G.A NilandhA NilandhooTop of quay shall be the higher of the following   1. 1.4 m above MSL   2. 0.15m above ground level.  1. Appropriate number of access stairs shall be incorporated into the quay wall. Mooring Hooks at intervals not less than 4m shall be provided. 2. Pavement and drainage to be included around the quaywall perimeter. Width of pavement shall be 5m. 3. Harbour lights shall be placed at a distance of 20m along the pavement. 4. Adequate drainage must be placed taking into consideration topography of the harbour area. 5. Sand cement bag construction shall not be proposed for any component of the works. 6. Unless substantiated with relevant data soil properties shall be assumed as below.    1. Angle of friction of sand not greater than 32º.    2. Bearing capacity of sand not greater than 100 KN/m² 7. All reinforced concrete shall be a minimum of grade C35 and a minimum concrete cover of 50mm shall be provided to all steel reinforcement. 8. Mooring bouys tied to concrete blocks at sufficient distances. with high strength rope and epoxy coated hooks shall be proposed 9. Solar powered navigation beacons within minimum nominal light range of 2 nautical miles shall be proposed for lagoon entrance and/or harbour entrance, and at any critical vessel turning points, with a proper stable base. 10. The ramp for landing craft access shall be designed with a cope edge protector for protecting the concrete edge of ramp. 11. Based on the design, the contractor shall submit technical specification for evaluation and approval.   **The contractor shall submit the following with the tender:**   1. Layout drawing of the proposed harbour. 2. Preliminary design of quay wall section for a dredge depth of -3.5m below MSL. Contractor’s proposed equipments to carry out the works, including the proposed work methodology. Preliminary design calculations. 3. Preliminary design of the breakwater. Contractor’s proposed equipments to carry out the work, including the proposed work methodology. Preliminary design calculations. 4. Proposed equipment for dredging works and work methodology. 5. Project costing   The project is a lump sum contract, with bill of quantities. Provide linear meter or cubic metre rates for the individual components as given below. Any cost not detailed on the cost sheets (bill of quantities) shall be deemed covered by other rates and prices in the bill of quantities. The costing sheet shall show costs for the following major components (All costs related to these activities shall be included in the rate). The contractor shall provide costing as per the unit rates given below.   1. Quay wall (including supply, installation of quay wall elements, capping, anchor etc. Including labour cost) as a **linear metre rate** 2. Break water and Groyns (including supply and installation of material and including labour cost of all components) as a **linear metre rate** 3. Dredging (dredging and backfill) as a **cubic metre rate** 4. Revetment (including supply and installation of material and including labour cost of all components) as a **linear metre rate** 5. Harbour street lights as item quantities and electric cables required as **linear meter** 6. Pavement as **square meter rate** 7. Drainage related components as **item quantities** 8. Ramp as **square meter rate** 9. Mooring bouys as **item quantities** 10. Bridge/Walkway as **square meter rate** 11. EIA and Establishment of Permanent Survey Marks (PSM) as **item quantit (if required)** 12. Total cost for each island 13. Total cost of the project 14. Work schedule   The contractor shall submit proposed work schedule. The work schedule shall be subdivided into each island harbour and shall indicate the major works to be carried out under the scope of the project. The work schedule shall clearly show the proposed start and end date for each island harbour. Following points shall be taken into consideration when preparing the work schedule.   * + - 1. Detail design and EIA period shall be clearly specified and should be included within the total duration of the project       2. The total duration of the project shall not be more than 18 months.       3. Contractor shall allow for yearly climatic conditions in the Maldives.   **CONTRACTOR’S DOCUMENTS**  The following documents shall be submitted to the Employer by the winning contractor:  1. Project survey reports.  2. Detail Design Report including calculations.  3. Detail design drawings.  4. Final Schedule  5. EIA (to be submitted to EPA and should be done to EPA requirement)  6. Establishment of PSM should be according to the guideline of MLSA (if Required )  7. Information mentioned in the contract for approval of materials should be submitted to the client.  **OTHER INFORMATION**  Ground water shall not be used for any construction. Coral sand shall not be used for any concrete works. Sand shall not be taken from the island or the island lagoon except as specified under the scope of the project.  All designs shall be to the relevant and latest British Standards or an equivalent standard.  Quality of construction and materials shall be as specified in the technical specifications. Contractor shall submit manufacturers and / or suppliers specifications for any materials or works not covered in the technical specifications.  The contractor shall have his quality control measures in place and submit quality reports regularly. Apart from this the employer may at anytime without notice carry out independent quality assurance tests to verify the quality of materials and works. If the quality of materials or works is below the specified standard the contractor shall rectify the situation to the satisfaction of the employer at his own expense  The contractor shall provide the testing results provided by an independent third party.  Electricity and water required for the project shall be supplied by the contractor at his expense.  It is contractors’ responsibility to obtain all the permits required (from regulatory authorities, service providers etc.) for the designs, and for construction.  The metric system of units shall be used throughout.  The confirmation of the ground conditions is the responsibility of the contractor. The sub-surface soil condition in the coastal zone in the Maldives, relevant to harbour construction, is well known from previous harbour projects. Hence encounter of hard strata that cannot be removed from a standard excavator would not be considered as an unforeseeable condition. The contractor shall allow for the possible use of drop hammer or any other means to remove the hard strata, if encountered, in his dredging rate. Hence the cost of any such work would be deemed to have been covered in the contract price.    Technical Specifications |
|  |

# DREDGING AND EARTHWORKS

**1.1 Scope of Works**

The works specified in this section of the specifications comprise dredging for:

Dredging areas, dredging depths and dredging limits are as specified on drawings and / or specifications.

Dredging is limited to re-dredging of existing harbour basin and channel, and dredging of new harbour basin extension to the depths specified in the drawing. Contractor may need to carryout additional dredging elsewhere, in the event that sufficient fill material is not available within the basin and channel of existing harbour.

The dredging works consists of excavation of coral materials below the existing seabed regardless of the nature of the materials encountered during the course of dredging. Disposal of dredged material at either stockpile or as fill, backfill, reclamation filling or core and filter material in harbour structures, shall be carried out in accordance with these specifications and in compliance with the drawings as directed by the Engineer.

The works include supply of all materials and the provision of all labour, plant and equipment required for the actual dredging, reclamation and other reuse of dredged material as well as for all preparatory works, surveys and testing required for the proper execution and completion of the works. In addition the works shall include all required measures for reduction of the environmental impact of the dredging and be included in the Contractors Environmental Control Programme according to the specifications in Section 02.

* 1. **References**

The following Standards and Codes of Practice are referred to in this specification and fully or partly incorporated herein as specified:

Designation Title of Standards/Code of Practice

BS 812 Sampling and Testing of Mineral Aggregates, Sand and Fillers

BS 6349, Part 5 Maritime structures. Code of Practice for dredging and land reclamation

CIRIA/CUR: Manual on the use of rock in coastal and shoreline engineering. Report no. 83/154

CEM Coastal Engineering Manual. U.S. Army Crops of Engineers.

* 1. **Utilization of Dredged Material**

Fill is required for reclamation and backfill along quay walls. Graded variations of the dredged materials may be reused subject to the approval by the Engineer.

Dredged materials not being used for the harbour construction shall be deposited of at an area located less than 1000 m from the construction site in accordance with the Engineer’s instructions.

No materials from the dredging shall be dumped at sea unless approved by the Employer.

All suitable material removed from the dredging areas shall, subject to the approval by the Engineer mainly be used for reclamation or, either be initially sorted by excavator and manual labour or by means of a grizzly plant and/or hauled to a stockpile for screening, or shall be used for reclamation, sub-grade for paving work, backfill for structures, or for other purposes shown on the drawings and / or specifications or as directed. Materials which are otherwise suitable but contain excess moisture shall be processed and utilized for fill.

Material from the dredging determined by the Engineer as suitable for slope protection in revetments, filter or core material or other purposes shall be conserved and utilized as directed.

Materials from the dredging determined by the Engineer to be unsuitable for use in the Works shall be disposed of at the designated disposal areas or other areas approved by the Engineer. Unless otherwise specified, compaction will not be required. However, the materials taken to disposal areas shall be levelled and shaped attractively to the approval by the Engineer.

All excess material shall be delivered for other utilization on the island or disposed of as directed. It is the Contractor’s responsibility to determine if sufficient material is available for the completion of the works before delivering or disposing of any materials. Any shortage of suitable materials for completion of the work caused by premature disposal of materials by the Contractor shall be replaced by the Contractor at no cost to Employer.

* 1. **Materials**

The specific gravity of the coral sand may be ranging from 23 to 26 kn/m3. Actual geotechnical parameters including specific gravity and density of dredged materials reused in the harbour structures shall be verified according to the function of the materials used in the structures and the specified quality requirements. Fill and backfill shall consist of selected coral aggregate and sand surplus from the harbour dredging operation and complying with Highway Works, clause 804 Granular Subbase Material Type 2.

* 1. **Testing of Materials**

Testing will be required when the dredged material is reused in the harbour construction works. This testing shall provide sufficient documentation of the material quality and ensure fulfillment of all requirements specified for the material when used in the actual structures.

* 1. **Workmanship**
     1. *Setting out of Dredging Works*

All boundaries of dredging areas shall be established on the site by installation of markers in the appropriate reference lines or electronically established subject to the Engineer’s approval.

Markers shall be robust and clearly visible from all parts of the dredging area.

All setting out of dredging works shall be carried out by the Contractor.

* + 1. *Execution of Dredging*

All dredging works and earthworks shall be carried out in compliance with the criteria and environmental mitigating measures outlined in Section 02.

Prior to dredging or disposal of materials in any area, such area shall be cleared and its surface level shall be surveyed in the presence of the Engineer.

The survey shall be detailed sufficiently for the recording of any major irregularities in the surveyed surface.

No separate payments would be made for dredging the edge slopes. This dredging is deemed included in the contract price (shown on drawings and / or specifications).

Prior to any dredging and reclamation works, the Contractor shall submit and get the approval from the engineer for a detail dredging and reclamation plan including plant details, discharge and handling methods and mitigation measures to meet the requirements specified in section 02. The Contractor shall notify the Engineer min. 48 hours in advance of dredging or disposal of materials in any area.

Dredging shall be carried out by using a backhoe, or other dredging equipment with sufficient capacity to dredge the dredging classes 1 through 3.

The Contractor’s method and sequence of dredging and reclamation shall be such that localised deterioration of water quality is kept to a minimum. And the Contractor is responsible for undertaking at his own cost, all appropriate mitigation measures deemed necessary to protect the environment.

The supply, placement and compaction of fill and backfill shall be in accordance with the Specification for Highway Works: 1994 – Department of Transport, London.

Placement and compaction of fill and backfill shall be in accordance with clauses 801 and 802.

Unless otherwise permitted, fill and backfill materials from dredging work shall contain no organic or other deleterious matter. The contractor shall ensure that the reclamation is free from accumulation of fines, including pockets of silt. Rock or other solid matter may be placed in a reclamation area subject to the Engineer’s approval.

For reclamation below seawater level, dredged materials shall be placed directly in reclamation areas. Large pieces of coral deposited in reclamation areas shall be spread over the full width of the reclamation area with sufficient small coral pieces or other fine material used to fill the voids in order to produce a dense, compact reclamation.

For reclamation above the seawater level, coral material shall be placed in level, horizontal layers not exceeding 0.3 meter (loose measurement) thick and be compacted before the next layer is placed. Effective spreading equipment shall be used on each lift to obtain a uniform thickness prior to compacting.

As the compaction of each layer progresses, leveling and adjustments shall be performed continuously to ensure uniform density.

Material containing more than 25 per cent of large pieces of coral with the greatest diameter of more than 150 mm, and which cannot be placed in layers of the prescribed thickness without crushing, pulverizing or further breaking down the pieces, shall be removed and used for some other purpose.

* + 1. *Dredging in Front of Quay Walls*

In addition to the requirements of 6.1 and 6.2 the following shall apply for dredging in front of quay walls and breakwater structure:

1. All dredging involving application of equipment within a distance of 5 m from any new or existing structure shall be carried out with special care in order to avoid any damage or dislocation to the structure and only in the presence of the Engineer. The Contractor will be held responsible for any damage and dislocation caused to structures as a result of the dredging operations.
2. The maximum permissible over-dredging is limited to 0.2 m within a distance of 5 meters from any existing structure.
3. In case of excessive over-dredging the Contractor shall on his own account back-fill the over-dredged area and/or takes all necessary precautions as directed by the Engineer.
   1. **Tolerances**

Dredging shall be carried out to the designated depths in all parts of dredging areas with a maximum permissible over dredging of 0.3 m below the specified level (Maximum Depth) unless noted otherwise by or as agreed with the Engineer.

Excess dredging below Maximum Depth is not accepted unless approved by the Engineer and shall be replaced by suitable material at no cost to the Employer.

The tolerances relative to the Specified Depth for dredging of harbour areas in general is

+0 mm to 200 mm.

The natural profile of slopes resulting from the dredging has in general been indicated as 1:3 reflecting the expected result of dredging in sand and gravel exposed to moderate wave impact only.

The tolerance on the levels of the land reclamation fill is –100 mm to +100 mm.

* 1. **Inspection**
     1. *General*

The Contractor shall, prior to commencement and after completion of dredging works carry out surveys of the respective areas (in-survey and out-survey)

* + 1. *In-survey of Existing Bottom or Ground*

An area covering the entire working area, bid document shall be surveyed in the presence of the Engineers representative. Maps and “raw” data shall be submitted to the Engineer not later than one week after the scheduled execution of the in-survey. If the contractor fails to carry out this survey before the commencement of dredging operations (ANY DREDGING OR EXCAVATION WORKS) it would be deemed that the contractor accepts the survey information given and as such any in-surveys carried out would not be accepted.

* + 1. *Inspection after Completion*

Before the Work is handed over, an out-survey shall be made covering the entire working area.

The Contractor shall verify that the dredging has been carried out as required. Supplementary verification of areas dredged to a specified level shall be carried out by suspending a 6 to 10 m long straight edge (rail) from a boat, so that the underside of the straight edge is horizontal and level with the indicated dredging level. A sounding rod shall extend vertically above the water table in order to disclose the vertical movements of the straight edge. The boat shall move slowly across the area in a manner which ensures that the total area is covered by the straight edge. Areas where the straight edge can not pass freely shall be marked with buoys and the necessary corrections of the seabed carried out.

**The verification of slopes shall be made by soundings. Maps and “raw” data shall be submitted to the Engineer not later than two weeks after the execution of the respective survey.**

# ENVIRONMENTAL REQUIREMENTS

It is the Employer’s requirement that the Contractor prepare all documentation to the requirement of the Environment Protection Agency excluding any monitoring that maybe required and to obtain all necessary permits. The contractor shall follow all Environmental laws and regulations of Maldives in design and during implementation of the project. It is the responsibility of the contractor to follow the mitigation measures given in the Environmental Impact Assessment report for the project while undertaking the harbour construction works.

**3 BREAKWATERS AND REVETMENTS**

# 3.1 Scope of Works

The works specified in this Chapter of the Specifications compromises the construction of Breakwaters and revetments.

The works include supply or dredging of all materials required. According to Drawings, the specifications and the instructions from the Employer the Contractor shall furnish all materials, equipment, tools, and labour which are required for the construction, testing, measurement and completion of the works.

# 3.2 References

The following Standards and Codes of Practice are referred to in this specification:

Designation Title of Standards/Codes of Practice

BS 812 Parts 100-103 Sampling and Testing of Mineral Aggregates, Sand and Fillers

BS 6349 Part 1, Part 2 Maritime Structures

ISO 5081 Textiles- Woven Fabrics – Determination of Breaking Strength and Elongation (Strip Method)

CEM Coastal Engineering Manual. U.S. Army Crops of Engineers.

# 3.3 Materials

***3.3.1 General***

All stone materials specified in the following as stone class I, II and III shall be of granite, basalt or equal igneous rock. The material shall have an apparent specific gravity of not less than 26KN/m3 with 90% of the stones having a density of at least 25KN/m3 when saturated and surface dry, according to BS 812.

The average water absorption of quarry stone must be less than 2% and the water absorption of nine of the individual stones less than 2.5%.

The loss for magnesium sulphate soundness test must be less than 12% for all rock.

Deleterious secondary minerals shall not be present. For all rock types, this is taken to be indicated by Methylene Blue absorption values of less than (0.7 g/100g).

Average point load index in the planar direction of the most pronounced layering should any visible anisotropy exist and for sampling, testing and reporting in accordance with the ISRM 1986 recommended method must be at least 4.0 Mpa with the average minus the standard deviation of the point load index of at least 3.0 Mpa.

The mill abrasion resistance index must be less than 0.004.

Quarried rock shall not contain visually observable or chemically detectable impurities or foreign matters in such quantities that these are damaging for the constructive application of the quarried stone or for the environment in which the quarried stone is applied.

All stone materials specified in the following as stone class IV, V, VI and VII may as an alternative to the above mentioned rock be obtained from sound coral rock or beach rock. The material shall have an apparent specific gravity of not less than 24KN/m3 when saturated and surface dry.

The stone materials shall be sound, compact, hard, durable and resistant to action of seawater and free of cracks and fissures determined for the proper performance of the material in quest on.

All fill material shall be dredge and stored to suit the specific demands in the structure.

***3.3.2 Source of Stone Materials***

The contractor shall select the source or sources of rock and shall be responsible for quarrying, supply and transport to the Site of suitable rock in sufficient quantities.

The suitability of the source or sources of rock selected by the Contractor shall be subject to the approval of the Employer. Approval of the quarry is only supplementary to other requirement of the rock.

The Contractor shall submit for the approval of the Employer an experiences geologist’s determination of the type of stones based on visual inspection of 10 respective samples.

The coral rock or beach rock dredged may be used for stone classes IV, V, VI and VII if the testing shows it comply with these specifications.

***3.3.3 Classification of Stone Materials***

Armour layer in the break waters and filters overlaying sand fill and unspecified coral rock fill shall be constructed from the following stone classes specifying the minimum mean weight (or size) and the lower and the upper limit.

Granite:

I: Weight range: 2t to 8t

Mean weight: Min. 4t

II: Weight range: 1t to 4t

Mean weight: Min. 2t

III: Weight range: 350 kg to 1400 kg

Mean weight: 700 kg.

Granite or coral rocks.

IV: Weight range: 100 kg to 400 kg

Mean weight: 200 kg

V (filter): 150 – 300 mm

VI (filter): 75 – 150 mm

VII (filter): 50 – 100 mm

Stone materials shall be well graded between the specified limit and comply with the following filter criteria

*d85* ≥ *D15/4*

*d15* ≥ *D15/7*

*d50* ≥ *D50/7*

In which d represents the finer material and D represents the coarser material.

Dnn means that nn% of the material by weight passes a sieve having a square mesh width of D.

For stones used as armour stones or filter stones the following additional requirements shall apply:

* The stones shall be rough and angular in shape
* The maximum stone dimension (length) shall not exceed 2.5 times the minimum dimension (thickness) of the stone.

**3.4 Testing of Materials**

Inspection and testing of rock materials shall be carried out as an integral part of the Contractor’s quality control programme with the objective to ensure the quality of all parts of the work. The requirement in the following subsection shall be understood as minimum requirements. Extended testing of properties shall always be when opening new quarry fronts and in connection with any significant change in the material properties from an existing quarry front.

The test specifications given in the following subsections shall be understood as ‘State of art’

specifications. Other test standards may, subject to the Engineers acceptance, be introduced for compliance with the Contractor’s test procedures or procedures used by existing procedures. Test procedures related to possible stockpiling of rock materials near the construction site and in connection with placement of materials in the permanent works are not covered by this section of the Specification.

***3.4.1 Basic Procedures***

From each quarry front the following properties shall be tested and fully documented prior to

commencement of any production, in connection with any significant change of materials in the opinion of the engineer and as a minimum for every 5 000 m3 of delivery (all classifications ) from the quarry front should be tested for the following:

- density

- water absorption

- resistance to weathering

- resistance to impact

- resistance to abrasion

The tests shall be carried out in accordance with the test specification accepted by the Engineer.

***3.4.2 Testing of Stone Weights and Stone Gradation***

The Contractor shall at any time during working hours at the direction of the Engineer carry out test weighing of stones and the determination of the gradation of stones as indicated below:

**Stone Class I, II and III**

Test weighing of armour stones will be carried out at random. The Contractor shall include in

his unit prices one control weighing per 80m3 of armour stones. Stones which do not meet

the weight requirements shall not count.

**Stone Class IV and V**

A test of the weight distribution of stone classes IV and V will be carried out on a

representative sample of not less than 3.0 m3 which is spread out on a clean, hard surface (

e.g. a floor of wooden boards or a concrete floor) provided by the Contractor. The Engineer

selects 10 largest and the 20 smallest stones are then weighed/measured individually. The

remaining stones are then weighed and counted and the mean weight determined.

The Contractor shall include in his unit prices the cost of one weight distribution test as the

one described above per 1 000 m3 of stones. Tests which do not meet the requirements shall not be counted.

**Stone Classes VI and VII**

A test of the weight distribution of the stones in classes VI and VII shall be carried out as

described under Stone Classes IV and V above, except the sample shall not be less than 1.5 m3.

***3.4.3 Testing of Coral Rock and Beach Rock Durability***

One durability test shall be made for each 1 000 m3 of coral rock and beach rock to be used as Stone Classes IV, V, VI and VII.

The test result shall be made available for the Engineer’s immediate approval.

**3.5 Workmanship**

***3.5.1 Placing of Stone Materials***

Placing of stones shall take place in a manner which will not damage the under laying layers of stones. When placing stones up to a theoretical boundary as defined by lines in the cross sections the Drawing, the Contractor shall aim at having the stones protrude the theoretical boundary over one third of its area.

The construction of rubble mound structures must be planned and carried out with due regard to the weather and sea conditions. The responsibility for the stability of the breakwaters and revetments under the various stages of completion rests solely with Contractor.

Construction of filters shall not commence prior to the Engineer’s acceptance of the fill and the filter materials. The responsibility for the stability and integrity of the breakwaters and revetments under the various stages of completion tests solely with Contractor. To protect the structures against the wave action the Contractor shall place a shield of stone material in front of the structures. The individual filter layers shall be built up and trimmed from the bottom in such a manner, that the underlying layer is completed before commencing the overlying layer. The filter materials shall be placed with caution in order to ensure that the underlying layers already completed will not by disturbed. All materials shall be placed and compacted firmly in such a manner that the filter materials will remain fixed at the site.

***3.5.2 Amour Stones***

When completed the armour layer shall be in a thoroughly stable condition and with the exposed surfaces reasonably uniform in appearance.

Haphazard dumping of armour stones will not be permitted. Above level of –0.5m armour stones shall be carefully place by crane. Below this level armour stones – one piece at the time- may be dumped at the waterline immediately over their final position and care shall be taken to produce as dense and stable layer as possible.

Elongated stones shall be placed with their long axis perpendicular to the slope.

Voids in armour layers shall not be filled with small rocks.

***3.5.3 Other Stones and Core Material***

All materials not forming part of the armour layers may be dumped, but undue segregation shall be

prevented.

**3.6 Tolerances**

At the time for completion the following tolerances shall be respected unless otherwise indicated or directed by the Engineer.

Slope of core/fill ±0.1

Filter layer, thickness of individual layer +100/-50 mm

The surface of each layer shall be leveled before construction of the next layer in order to ensure that excess thickness of one layer shall not reduce the thickness of the next beyond the tolerance above.

# 5. CONCRETE QUAY WALL

# 5.1 Concrete formwork

**1 : General**

1.1 Description

This section covers formwork for all concrete.

All forms shall be accurately and properly placed and finished, so that concrete may be placed as indicated on the Approved Design Drawings, the Approved Shop Drawings and as specified. The forms shall produce a smooth concrete finish, free from offsets, or irregularities.

1.1.1 Coordination.

Work performed, and materials used, in conjunction with formwork, for concrete, shall be coordinated with work under the Concrete Works Section.

1.2 Applicable Codes and Standards:

The Codes and Standards, generally applicable to the work under this section, are listed. Codes and Standards current at the time of bid shall be used. In case of contradictions between different standards, the BS shall prevail.

1.2.1 DIN - Deutches Institute fur Normung

DIN 1045

1.2.2 BSI - British Standard Institute

1.2.3 ASTM - American society for Testing and Materials

**2 : Products**

2.1 Materials:

2.1.1 Material List.

Material used shall be:

* Forms
* Steel - Straight, uniform and free of surface defects.
* Plywood - Product Standard PS 1, Waterproof, resin-bonded.
* Lumber - Straight, uniform width and thickness, and free from knots,

offsets, holes, dents, and other surface defects.

* Chamfer Strips - Clear lumber, surface against concrete planed.
* Form Coating - Single component, pigmented copolymer resin type, applied

in accordance with the manufacturer’s recommendations.

2.2 Design Criteria:

Forms, for cast in place or precast concrete, shall be designed to produce hardened concrete, having the shape, lines, and dimensions indicated on the approved Drawings. For all structures, forms for surfaces shall be prefabricated plywood panel forms, steel, or forms that are lined with plywood of fibreboard. Forms for exposed surfaces shall be laid out in a regular and uniform pattern, and all joints aligned. The forms shall produce finished surface that are free from offsets, ridges, waves, and concave, or convex areas, the maximum deviation from a true plane shall not exceed 3mm in 2m.

Formwork shall be constructed to attain the required surface texture of the structures and to be such accuracy, strength and rigidity as to carry the weight and pressure from the concrete to be placed without any deformation, and remaining grout tight during the placing and setting of concrete. When required by engineer, joints between shutter facing boards shall be sealed with foam rubber, sealing strips or other approved material.

Formwork shall be sufficiently rigid so as to prevent any grout loss during concreting and shall not distort due to environmental effects and concreting operations so that member dimensions, shape, required finish and texture are within the tolerances specified Walers, studs, internal ties, and other form supports shall be sized and spaced so that acceptable working stresses are not exceeded. Plywood or lined forms will not be required for surface of concrete not required to fair faced.

Wherever the top of a wall will be exposed to weathering, the forms on at least one side shall not extend above the top of the wall, and shall be brought to true line and grade. At other locations, forms for concrete, which is to be finished to a specified elevation, slope, or contour, shall be brought to a true line grade; otherwise, or a wooden guide strip shall be provided at the proper location on the forms so that the top surface can be finished with a screed or template. At horizontal construction joints in walls, the forms on one side shall not extend more than 0.6 meters above the joint.

Temporary openings shall bee provided at the bottom of wall forms and at other points, where necessary, to facilitate cleaning and inspection.

Face of framework shall be free of projecting nails, adhering grout and other imperfections or defects which would prevent the specified surface finish from being attained. Before each concreting operation is commenced, form work shall be carefully examined and cleaned out and the concrete contact faces of the works shall be treated with an approved release agent comes in contact with reinforcement.

Forms for all exposed surfaces shall be constructed of plywood, metal or glass reinforced plastics at the option of the Contractor.

No concreting shall commence until the Engineer has inspected and approved the erected formwork. Shooting height of concrete shall not be greater than 2 meters. The formwork shall be designed accordingly.

2.2.1 Form Ties.

Forms ties shall be of the removable or permanently embedded body type, and shall have sufficient strength and rigidity to support and maintain the form in proper position and alignment without the use of auxiliary spreaders. Cones, for the permanent embedded type shall be provided on the outer ends of each tie and the permanently embedded portion shall be at least 25mm back from adjacent outer concrete faces shall not be nearer the surface than the specified thickness of cover to the reinforcement. Form ties for indirect tutch with water walls, shall be provided with waterseal washers located on the permanently embedded portions of form ties, and approximately at the centre of the wall. Permanently embedded portions of form ties, which are not provided with threaded ends, shall be constructed so that the removable ends are readily broken off without damage to the concrete. The type of form ties used shall be acceptable to the Engineer.

Form ties in exposed surface shall be uniformly spaced and aligned in horizontal and vertical rows.

2.2.2 Edges and Corners.

Chamfer strips shall be placed in forms to bevel all salient edges and corners, for all vertical and horizontal corners, unless specifically shown otherwise on the Approved Drawings. Unless otherwise noted, bevels shall be 25mm wide.

2.3 Formed Surfaces – Class of Finish:

Finishes to formed concrete surfaces shall be classified as F1, F2, or F3. Where the class of finish is not specified, the concrete shall be finished to class F2. All reinforced concrete shall have a F AIR-F ACED finishing. Concrete surfaces for the various classes of formed finishes specified, shall comply with the tolerances shown in Table 1.

TABLE 1: MAXIMUM TOLERANCE (mm)

*Class of Abrupt Gradual*

*Finish Line and Level Irregularity Irregularity Dimension*

F1 -15 to +15 5 5 +15 to -5 F2 -5 to +5 5 5 +15 to -5

F3 -5 to +5 0 5 - 5 to +5

In Table 1, “Line and level” and “Dimension” shall mean the lines, levels, and cross- sectional dimensions indicated on the drawings.

Surface irregularities shall be classified as “abrupt” or “gradual”. Abrupt irregularities shall be tested by direct measurement. They include, but are not limited to, offsets and fins caused by displaced or misplaced formwork, and loose knots and other defects in formwork materials. Gradual irregularities shall be tested by means of a 1.5 meter length straight template, for plane surfaces, or its suitable equivalent for curved surface.

2.3.1 Class F3.

Formwork for class F3 finish shall be lined with panels of non-staining material, with a smooth unblemished surface, such as sand plywood, or hard compressed fibre-board. The panels shall be as large as possible, and shall e arranged in a uniform acceptable pattern, and fixed to the back of formwork by oval nails. Unfaced wrought boarding or standard steel panels shall not be permitted.

2.3.2 Class F2.

Formwork for class F2 finish shall be faced with wrought tongue and groove boards, plywood or metal panels arranged in a uniform acceptable pattern, free from defects likely to detract from the appearance of the surface.

2.3.3 Class F1.

Formwork for class F1 finish shall be constructed of timber, sheet metal, or any suitable material which will prevent loss of grout when the concrete is vibrated. Surfaces, subsequently to be rendered, plastered, or tiled shall be adequately scabbled, or roughened, as soon as the formwork is removed to reduce the irregularities to no more than half the thickness of such rendering, plastering, or bedding for tiles, and to provide a satisfactory key.

**3 : Products**

3.1 Inspection:

3.1.1 Preplacement Inspection.

Prior to rigidly securing all forms, reinforcement, anchor bolts, and embedded parts in their proper position, all dirt, mud, water, and debris shall be removed from the space to be occupied by concrete and all surfaces encrusted with dried concrete from previous placement operations shall be cleaned.

3.2 Installation:

3.2.1 Execution.

Forms shall be constructed to ensure that the finished concrete members will have true surfaces free of offset, waviness, or bulges, and will conform to the indicated shapes, dimensions, lines, elevations, and positions, within the specified tolerances. For the pre-cast units the Contractor shall prepare and submit to the Engineer for approval.

# 5.2 Concrete reinforcement

**1 : General**

1.1 Description

This section covers steel reinforcement, for all concrete.

The contractor shall provide all bars, bar supports, ties, spacers, bolsters, inserts, screeds, and other accessories required to maintain fabricated reinforcement in its proper position, and permit proper placement of concrete.

1.1.1 Coordination.

All reinforcing material and work shall be coordinated with related work specified in the Cast-in-Place Concrete Section.

A. Work Specified Elsewhere:

Other items of work that relate to and are referenced in this section include, but are not limited to the requirement shown.

1.2 Applicable Codes and Standards:

The Codes and Standards, generally applicable to the work under this section, are listed. Codes and Standards current at the time of bid shall be used. In case of contradictions between different standards, the British Code Standard shall prevail.

1.2.1 DIN - Deutsches Institut fur Normung

DIN 1045

1.2.2 BSI - British Standard Institute

1.2.3 ASTM - American society for Testing and Materials

1.2.4 AASHTO- American Association of State Highway and

Transportation Officials.

1.2.5 ACI - American Concrete Institute.

Generally all clauses mentioned in BSI 8007, BSI 8110 shall be thoroughly followed for all types of joints as well as ACI, ASTM, AASHTO & DIN Requirements.

1.3 Product handling:

1.3.1 Protection:

Material shall be delivered, stored, and handled in accordance with the General Equipment and Material Stipulations.

Rubber and plastic materials shall be stored in a cool place and shall not be exposed to direct sunlight.

**2 : Products**

Unless otherwise specified in other sections of these specifications, the following products shall be utilized:-

2.1.1 Material List.

* Expansion Joint Filler.
* Preformed sponge rubber.

2.2 Performance and Design Requirements:

2.2.1 Construction Joints:

Construction joints, shall be made at locations indicated on the Approved Design Drawings and Shop Drawings, or as specified or directed by the engineer.

Construction joints, shall not be made at other locations, without the concurrence of the Engineer. All joints shall be provided in compliance with the structural Engineer Practice and shall comply with BS 8007 and 8110.

1. Location:

Construction joints shall be located as follows:

1. In beam and Girders:

At the middle of the span, unless a beam intersects a girder at that point, in which case the joint in girder shall be offset a distance equal to twice the width of the beam. Provisions satisfactory to the Engineer shall be made for transfer of shear and other forces through the construction joint.

1. Watertight Joints:

2.2.2 Contraction Joints:

Contraction joints shall be provided at the locations indicated on the Approved Drawings. Also, they shall comply with BS 8007 and 8110 requirements and according to Engineering Structural calculations and Practice to the satisfaction of Engineer. Accessible edges of each contraction joint shall be sealed as specified in the Sealants and Caulking Section.

2.2.3 Expansion Joints:

Expansion joints shall be provided at the locations indicated on the Approved Drawings. Also, they shall comply with BS 8007 and 8110 requirements and according to Engineering Structural calculations and Practice to the satisfaction of the Engineer. Expansion joint filler shall be firmly bonded to the previously poured joint face with a suitable adhesive, and the new concrete shall be poured directly against the joint filler. Accessible edge of each expansion joint shall be sealed as specified in the Sealants and Caulking Section.

**3 : Execution:**

3.1 Installation:

3.1.1 Placement sequence:

Construction joints not indicated on the Design Drawings shall be spaced at intervals for reducing, (to a minimum), the effect of shrinkage in production cracks as recommended by the cement manufacturer, and acceptable to the Engineer.

No two abutting sections shall be placed within a period of 72 hours, unless otherwise authorized by the Engineer. Works shall comply with BS 807 and BS 8110.

**4 : Measurement:**

Expansion joint filler shall be measured per linear meter, complete in place, and will be paid for at the contract unit price per linear meter working drawings with method statement for the executing of these units. Form surfaces that will be in contact with concrete shall be thoroughly cleaned before each use. No concreting shall commence until the Engineer has inspected and approved the erected formed.

3.2.2 Form Removal:

Forms shall not be removed or disturbed until the concrete has attained sufficient strength to safely support all dead loads, live loads and to be lifted, transported installed. Forms for beam and girder sides, columns, and similar vertical structural members, may be removed after 48 hours, provided concrete is sufficiently hard, not to be injured thereby.

Care shall be taken to avoid spoiling the concrete surface or damaging concrete edges. Wood forms shall be completely removed.

3.2.2 –B Tie Rods.

Toe rods, to be entirely removed from the wall, shall be loosened 24 hours after concrete is placed, and form ties, except for a sufficient number to hold forms in place, may be removed at that time. Ties wholly withdraw from the wall, shall be pulled toward the face that will be concealed from view, in the permanent work.

# 5.3 Concrete Works

**1 : General**

1.1 Description

This section covers all concrete works, which shall be completely provided by the Contractor, including labour materials, proportioning, batching, mixing, delivering, testing, receiving, placing, compacting, finishing, curing, and other appurtenant work.

The Concrete shall be proportioned and mixed as specified herein.

All concrete shall be accurately formed and properly placed and finished as indicated on the Drawings, and as specified herein.

The contractor shall inform the Engineer at least 24 hours in advance of the times and places at which he intends to place concrete, for inspection and approval, and shall present and approve the works by Concrete Cast Permits as per the requirements of the Engineer.

1.1.1 Related Work

Other items of work that relate to and are referenced to work specified in this section are included in the following sections:

Concrete Formwork

Concrete Reinforcement

Concrete Accessories

1.2 Applicable Codes and Standards:

The Codes and Standards, generally applicable to the work under this section, are listed. Codes and Standards current at the time of bid shall be used. In case of contradictions between different standards, British Code Standard shall prevail.

1.2.1 DIN - Deutsches Institut fur Normung

DIN 1045

1.2.2 BSI - British Standard Institute

1.2.3 ASTM - American society for Testing and Materials

1.2.4 AASHTO- American Association of State Highway and

Transportation Officials.

1.2.5 ACI - American Concrete Institute.

1.3 Quality Assurance:

1.3.1 Tolerances:

Tolerances formed surfaces shall be as specified in BSI, ASTM & ACI code.

1.4 Submittals:

1.4.1 Material Report:

At least 31 days prior to start of concrete delivery, the following shall be submitted by the contractor to the Engineer for review.

Submittals should be as specified below.

* + 1. Recommended suppliers and sources of all ingredients for making concrete, including cement, water, fine (sand) and coarse aggregates, and additives. (Item 1 Schedule 2).
    2. Recommended suppliers and product data of the following:
       1. Materials for curing concrete
       2. Joint sealants
       3. Joint filler
       4. Bonding compound
       5. Non-shrink grout
       6. Reinforcement supports

* + 1. A quality inspection plan to ensure continuing quality control of ingredients by periodic sampling, testing, and reporting to the Engineer on the quality of materials being supplied. (Item 2 Schedule 2).
    2. All design mixes, using the “Standard mix Design Presentation”, Schedule 3, for each class of concrete, indicating that the concrete ingredients and proportions will result in a concrete mix meeting requirements specified (Item 3 Schedule 2).
    3. The proposed program, methods, and details of plant and equipment to be used for batching and mixing of concrete. (Item 5 Schedule 2).

The Contractor shall submit the mix design as a report with his recommendation to obtain Engineer’s acceptance prior to commencement of concreting work. This report shall compare the proposed mix design with specified requirements and shall be summarized on a form similar to that shown in schedule 3.

1.4.2 Hot Weather concreting:

A report shall be submitted for proposed methods of compliance wit hot weather concreting requirements. (Item 6 Schedule 2).

1.4.3 Certificates:

Laboratory test reports and mill or manufacturer’s certificates attesting to conformance of ingredients with the specifications shall be submitted with each mix design. (Item 8 Schedule 2).

In case the source, brand or characteristics properties of the ingredients need to be varied during the term of the Contract, a revised laboratory mix report shall be submitted. (Item 1, 2, & 3 of Schedule 2).

1.4.4 Test Reports:

The Contractor shall keep (or obtain from his concrete supplier if any) copies of the results of all tests, which shall become part of the Contractors Weekly Quality Control report to the Engineer.

1.4.5 Summary of Submittals:

Schedule 2 is the complete list and frequency of reports which the Contractor shall prepare (or obtain from his concrete supplier if any) and submit.

1.4.6 Field Report:

Filed test reports shall be submitted as specified in this section, and in accordance with the Submittals and Quality Control Sections.

1.4.7 Reinforcements:

Certifications of tests on reinforcements shall be submitted for review as specified in the Concrete Reinforcement Section.

1.4.8 Layout of Joints and Lifts:

The Contractor shall submit to the Engineer for review as soon as practicable after the Issue of Order to Commence and not less than three weeks before the commencement of concreting, detailed drawings showing his proposals for placing concrete on which the position of all construction joints shall be indicated. These shall take into account any specific requirements detailed on the Drawings and specified in the Concrete Accessories Section. No concreting shall be started until the Engineer has accepted the method of placing, the positions and form of the construction joints.

1.5 Delivery storage and handling:

Do not deliver concrete until vapor barriers, forms, reinforcement, embedded items, and chamfer strips are in place and ready for concrete placement.

Materials shall be handled and stored as follows:-

1.5.1 Aggregates:

Coral aggregates shall not be accepted to be used for producing concrete.

Aggregates shall be transported and stockpiled separately according to their sources and gradations. Aggregates shall be handled in manner which will prevent segregation and contamination with earth or foreign materials.

If aggregates show segregation, or if the different grades become mixed, the aggregates shall be re-screened before placing in the proportioning bins. Contaminated aggregates will not be used.

Muddy or oil-leaking equipment shall not be allowed to operate on the stockpiles. The moisture content in the aggregate shall be frequently checked and taken in consideration during mixing to fulfil the design mix water content.

1.5.2 Package Cement:

If the cement is delivered in bags it shall be stored in a dry and waterproof shed or building. The bags shall not be laid directly on ground, to prevent deterioration or contamination from any cause, a 20cm gap shall be maintained from ground by wooden platforms. Any bag that contains lumps of hardened cement it will not be used and will be removed from the Site.

Bags of cement which vary in weight by more than 3 percent shall not be accepted.

The bags shall be made of several layers (more than 4) to be strong enough for handling and storing. Any bag that found broken will be removed from stores and will not be used.

Cement shall be fresh when delivered to site and the consignments shall be used in the order of their delivery. The manufacturer name and brand of cement and weight shall be written on each bag.

1.5.3 Bulk Cement:

Bulk cement shall be stored separately from package cement. Bulk cement shall be stored in dry, weather-tight, well-ventilated bins with provisions for prevention of moisture absorption or the intrusion of foreign matter.

Facilities for sampling of cement shall be provided at the weighing hopper, or at the feed line immediately before entering the hopper.

Different brands of cement, or the same brand of cement from different sources, shall not be used without prior notification by the Contractor.

1.5.4 Admixtures:

Dry admixtures shall be stored in dry, weather-tight, well-ventilated housing or silos. Liquid admixtures shall be stored in clean, weather-tight tanks.

1.5.5 Temperature Limits:

TABLE 1.5.5: Temperature Under Limits at Point of Placement

*Concrete Thickness Temperature of Concrete*

*(mm) at time of Placement (in ºC)*

Not greater than 400mm 38 ºC

Not greater than 750mm 32 ºC

Greater than 750mm 25 ºC

1.5.6 Temperature Control:

The concrete supplier shall provide procedures and facilities to control or reduce the temperature of all materials used in the concrete mix during “hot weather” as defined by air temperature over 32 ºC. Some hot weather concreting difficulties can be reduced by the use of concrete with up to 100 percent flaked ice lieu of mixing water. The Contractor shall place concrete with as much ice as deemed necessary by the Engineer to surmount hot weather concreting difficulties. Separate payment shall not be made for any ice.

The following may also have to be used to assist in lowering the temperature of concrete to meet the temperature limits at the point of placement.

1. Exposed water tanks and piping, the roofs and vertical walls of cement storage silos or buildings, the tops and vertical walls of mixer discharge hoppers, and the sides of truck bodies carrying batched aggregate or mixed concrete may be painted white or silver.
2. Weighing hoppers, mixer drums, and tops of mixer discharge hoppers may be shaded from the ray of the sun when it is 30 ºC or more above the horizon, and may also be protected from drying winds by screens.
3. Water for concrete may be chilled by the use of heat exchanger coils, or by the addition of flaked ice.
4. Shade may be used to cover the aggregates and elevating conveyor of the batching plant from direct sun.

1.6 Quality Assurance:

1.6.1 Concrete Mixture Design:

At least 30 days prior to concrete placement, submit proportions for a concrete mixture for each strength and type of concrete. Submit a complete list of materials including type; brand; source and amount of cement, aggregate, fly ash, (or slag pozzolans), silica fume, ground slag, polypropylene fibers, anti-washout and other admixtures for underwater concreting, corrosion inhibitors; and applicable reference specifications. Submit additional data regarding concrete aggregates if the source of aggregate changes. Submittal shall clearly indicate where each mixture will be used when more than one mix design is submitted. An identical concrete mixture previously approved within the past 12 months by MCPI may be used without further approval within further approval, if copies of the previous approval and aggregate, fly ash, silica fume, and pozzolan test results are submitted. The approval of aggregate, fly ash, silica fume, and pozzolan tests results shall have been within 6 months of submittal date. Obtain acknowledgement of receipt prior to concrete placement. The mixture shall be prepared under the direction of a licensed/ registered civil engineer, who shall sign all reports and designs.

1.6.2 Drawings:

1.6.2.1 Reinforcing Steel:

Provide bending and cutting diagrams, assembly diagrams, splicing placement and laps of bars, shapes, dimensions, and concrete cover. Do not scale dimensions from structural drawings to determine lengths of reinforcing bars. Only complete drawings will be accepted.

1.6.2.2 Formwork:

Include design calculations indicating arrangement of forms, sizes and grade of supports (lumber), panels, and related components. Indicate placement schedule, construction, and location and method of forming control joints. Include locations of inserts, pipework, conduit, sleeves, and other embedded items.

1.6.3 Certificates:

1.6.3.1 Curing concrete elements:

Submit proposed materials and methods for curing concrete elements.

1.6.3.2 Form removal schedule:

Submit schedule for form removal indicating element and minimum length of time for form removal. Submit technical literature of forming material or liner, form release agent, form ties, and gasketing to prevent leakage at form and construction joints. Provide a full description of materials and methods to be used to patch form-tie holes.

1.6.3.3 Concrete Placement and Compaction:

1. Submit technical literature for equipment and methods proposed for use in placing concrete. Include pumping or conveying equipment including type, size and material for pipe, valve characteristics, and the maximum length and height concrete be pumped. No adjustments shall be made to the mixture design to facilitate pumping and or placing.
2. Submit technical literature for equipment and methods proposed for vibrating and compacting concrete. Submittal shall include technical literature describing the equipment including vibrator diameter, length, frequency, amplitude, centrifugal force, and manufacturer’s description of the radius of influence under load. Where flat work is to be cast, provide similar information relative to the proposed compacting screed or other method to ensure dense placement.

1.6.3.4 Quality Assurance:

Develop and submit for approval a quality control plan in accordance with the guidelines as specified herein. The plan shall include plans for the concrete supplier, the reinforcing steel supplier, and installer.

1.6.3.5 Field Testing Technician and Testing Agency:

Submit data on qualifications of proposed testing agency and technicians for approval by the Contracting Officer to performing any work.

1.6.3.6 Mixture Designs:

Provide a detailed report of materials and methods used, test results, the field test strength (fcr) for marine concrete required to meet durability requirements.

1.6.4 Test reports:

1.6.4.1 Concrete Mixture Proportions:

Submit copies of test reports by independent test labs showing that the mixture has been successfully tested to produce concrete with the properties specified and that mixture will be suitable for the job conditions. Test reports shall be submitted along with the concrete mixture proportions. Obtain approval before concrete placement.

1.6.4.2 Aggregates:

Submit test results for aggregate quality in accordance with ASTM C 33, and the combined graduation curve for grading proposed for use in the work and used in the mixture qualification. Where there is potential for alkali-silica reaction, provide results of tests conducted in accordance with ASTM C 227 or ASTM C 1260. Submit results of all tests during progress of the work in tabular and graphical form as noted above, describing the cumulative combined aggregate grading and the percent of the combined aggregate retained on each sieve.

1.6.4.3 Cement:

Submit current mil data

1.6.5 Field Samples:

Install minimum of 4m of quay wall and finish as required by the specifications.

1. Products:

2.1 Materials:

2.1.1 General:

Generally, all materials used shall comply with the requirements of the BS (12), ASTM, AASHTO, ACI or DIN requirements of each material. The Engineer shall be provided with Reports of Laboratory Tests or samples assuring this compliance.

The Reports shall clearly record that the materials comply with the mentioned standards to the satisfaction of the Engineer.

2.1.2 Cement:

The cement used for all reinforced concrete works shall be:

A low heat Portland pulverised fuel ash cement complying with BS 6588.

Equivalent cement suitable for marine environment and the actual works subject to the Engineers approval.

The cement used for lean concrete C20 may be ordinary Portland cement shall comply with BS (12) except otherwise mentioned.

Sulphate resisting cement shall be used for embedded concrete as mentioned on Contract drawings.

Each consignment of cement shall be accompanied by the manufacturer’s certificate documenting the following:

Specific surface (fineness)

Setting time (Vicat apparatus)

Bending strength and compression strength of motor prism,

Cement: Aggregate = 1:3, w/c = 0.5

Chemical Composition

Heat of hydration ( Solution method ).

If his certificate is not made available, then samples may be taken from different bags or of the consignments suitably packed and send for testing to any approved laboratory or the laboratory on site, at the Contractors expense.

2.1.3 Admixtures and Additives:

Chemical admixtures are not to be used until the supplier has verified their use in accordance with the Specifications and has also demonstrated by trail batches that two (2) times the admixture proposed can be used and still meet the specified concrete strength without noticeable deleterious effect.

The admixtures shall comply with BS (81110 & 5075), ASTM and DIN Requirements.

Chemical admixtures may be:

1. Type A. Water reducing admixtures.
2. Type D. Water reducing and retarding admixture (Acceptance based on Contractor’s report and recommendation shall be obtained from the Engineer before using).
3. Type F. High range water reducer (super plasticizers) based upon sulfonated melamine or mapthelens formaldehyde condensates.

Provide minimum concentration of corrosion-including chemicals as shown in Table below.

Limits on Corrosion-Inducing Chemicals

Chemical \* Limits, Percent \*\* Test Method

Chlorides 0.01 ASTM D 512

Fluorides 0.01 ASTM D 1179

Sulphites 0.13 ASTM D 1339

Nitrates 0.17 ASTM D 3867

\* Limits refers to water-soluble chemicals

\*\* Limits are expressed as a percentage of the mass of the total cementitious

materials.

2.1.4 Water:

Water to be used for cooling and washing aggregates and for mixing and curing concrete, shall be clean and free from injurious amounts of oil, acid, salt, alkali, organic matter or other deleterious substances. Concreting water shall not be used until tested and until the report of testing has been reviewed by the Engineer showing its compliance with BS (3148), BS (5328), ASTM and DIN Standards.

Mixing water for use with cement shall be suitable to ensure that the salts content of the total concrete mix does not exceed the limitations set out in Table 2-2.5A “TOTAL ALLOWABLE SALTS CONTENT”. Mixing water shall not contain more than 500 parts per million of chlorides as C1 and not more than 100 parts per million of sulfates as SO4.

2.1.5 Fine Aggregate:

Fine aggregate shall consist of natural sand, and shall be composed of clean, hard, durable spherical particles in conformance with BSI, ASTM and DIN Specifications. CORAL SAND SHOULD NOT BE USED FOR ANY CONCRETE WORKS.

The salt content of fine aggregate shall not exceed the limitations as set out in Table 2-1.5A “ TOTAL ALLOWABLE SALTS CONTENT” as well as all the given standards specified.

TABLE 2-1.05A

Total Allowable Salts Content, and

Maximum Allowable Percentages

Salt In fine aggregate In coarse Total by weight

By weight of fine aggregate by of cement

Aggregate weight of coarse

Aggregate

Chlorides 0.06 0.10 0.20\* for OPC

(NaCl)\*\* 0.40\* for OPC

Sulphates 0.40 0.50 4.00\* BS (8110)

(SO3)

\* Include salts in cement and water.

\*\* Equipment determined by chloride ion x 1.6

The total chloride content of the concrete mix arising from the aggregate together with that from any admixtures and any other source expressed as a percentage of chloride ion shall not in any circumstances exceed 0.1 %.

Deleterious substances shall be limited in fine aggregate to the amounts shown in TABLE 2-1.5B, “ALLOWABLE DELETERIOUS SUBSTANCES IN FINEWE AGGREGATE”.

TABLE 2-1.5B

Allowable Deleterious Substances in Fine Aggregate.

Item Maximum Allowable

Percentage by Mass

Clay lump and friable particles 1.0

deleterious substances (such as shale,

alkali, mica, coated grains, soft 5.0

particles)

Material finer than 75 micron, 5.0

ASTM (No . 200) sieve

Fineness module for fine aggregate shall be between (2.3 – 3.1) + 0.2 . the grading of fine aggregate shall comply with BS 812, BS(882 and 120 I), BS 8007, BS 8110, BS 5328, ASTM 04.02 and DIN 1045.

2.1.6 Coarse Aggregate:

Coarse aggregate shall consist of crushed gravel, crushed stone or a combination of the two, and shall be composed of clean, hard, uncoated particles. The Laboratory Test Report shall prove its compliance with all requirements of BS 812, BS 882 and 1201, BS 8007, BS 8110, BS 5328, ASTM 04.02 and Din 1045. CORAL AGGREGATES SHOULD NOT BE USED FOR ANY CONCRETE WORKS.

The salt content of coarse aggregate shall not exceed the limitations as set out in TABLE 2-1.5A “TOTAL ALLOWABLE SALTS CONTENT”.

Deleterious substances shall be limited in coarse aggregate to the amount shown in TABLE 2-1.6A “ALLOWABLE DELETERIOUS SUBSTANCES IN COARSE AGGREGATE”.

TABLE 2-1.06A

Allowable Deleterious Substances in Coarse and Medium Aggregate

Item Maximum Allowable Percent by Mass

(Coarse) (Medium)

Clay lumps 2.00 1.5

Material passing

0.075mm (No. 200) sieve 1.50 4.0

Other deleterious substances

(such as shale, alkali, mica, 5.00

Coated grains, soft particles)

Wearing Resistance of aggregate when tested in accordance with Los Angeles abrasion test, AASHTO (T96) should not exceed 40%.

Water absorption of aggregate should not exceed 6% when tested in according with AASHTO (T84).

Specification gravity of aggregate should be minimum of (2.5) when tested in accordance with AASHTO (T19) .

Sodium and Magnesium Sulphate soundnesses, when tested according to AASHTO (T-104), should not exceed 10% and 16% respectively.

Flakeness and Elongation when determined according to BS 812 should not exceed 25% for each.

The grading of combined aggregate shall comply with BS (812, 882 and 1201, 8007 & 5238).

The maximum aggregate size to be used for Reinforced Concrete shall be 20mm (3/4 inch); through a size may be used (32mm) upon the special approval of Engineer foe specific places, in BOTH cases special compliance with BS 812 BS 882 and BS 5328 Grading and Sieve Analysis is compulsory.

2.2 Performance and Design Requirements:

Generally concrete shall be specified, produced and tested for compliance with BS 5328 or Equipment ASTM, DIN standards, unless other clauses of this section are more strict or higher standards.

2.2.1 Classes of Concrete:

Classes of concrete are denoted by designations which consist of a letter followed by a numeral indicating the 28-day compressive strength in mega Pascal (MPa) as determined by BS 1881, BS 5328 and BS 8110, and as shown in Schedule 1.

Each class of concrete may consist of one or more mixes determined by the maximum size of aggregate, slump and types of admixtures used.

Each mix within a class shall be considered a specific type, requiring acceptance of the design mix.

2.2.2 Concrete Mix Design Criteria:

Design concrete mixes shall have minimum cement content per cubic meter of concrete consistent with the required slump, a water content corresponding to the appropriate water-cement ratio, the specified maximum size of coarse aggregate, and the required grading of aggregates, in accordance with those limits as set forth in Schedule 1. Design mix proportions shall be as recommended by BSI, ASTM & DIN Specifications, unless otherwise specified herein. Trail mix water= cement ratio shall be used ion accordance with BS (5328), ASTM & DIN Specifications, or the supplier’s previously obtained field data for proportioning the design mix, as determined by the type of structure and exposure conditions, and shall be adjusted to meet specified design mix requirements. Design mixes shall be tested and reported on as specified herein.

The design mixes for each class of concrete shall be as determined by the Contractor through an acceptable design laboratory and accepted by the Engineer to produce the results as specified herein.

For each class of concrete there shall be as many mix designs as there are different combinations of ingredients anticipated to cover the requirements of the work Mix designs may vary to meet field conditions, but after acceptance by the Engineer no change shall be made without notice to and acceptance by the Engineer based on the Contractors report and recommendation.

Unless otherwise specified, strength requirements shall be based on 28-day compressive strength determined on 150mm cubic specimens.

1. Design Mix

When a design mix for any class of concrete has been accepted by the Engineer, it shall not be changed as to source, quality, proportioning, grading of materials, or in any other way that reduces durability.

All proposed changes shall be accomplished by preparing a new design mix as specified herein.

1. Sampling and Testing

Prior to use, all concrete ingredients shall be sampled and tested by a laboratory acceptable to the Engineer in accordance with the methods specified to determine compliance with this Section. Sampling and testing of fresh and hardened concrete shall be done in accordance with BS 1881 & DIN 1048 with all equipment, material transport & labour shall be provided by the contractor.

1. Slump

The slump range as specified shall be maintained for concrete at the point of delivery.

1. Minimum Cement Content

The minimum cement content per cubic meter shall be as specified in Schedule 1 for each class of concrete as determined by analysis of fresh concrete.

2.2.3 Structural Concrete:

Coarse aggregate shall be Class C35A, C30, C25, and C20 Concrete.

2.2.4 Concrete Fill:

Concrete fill shall be provided in the locations indicated on the Design Drawings and shall be Class C20 concrete.

2.2.5 Cement Mortar:

Cement mortar shall be composed of fine aggregate and cement in the proportions of 3 to1 by volume.

The ingredients shall be thoroughly mixed while dry by machine or hand until the cement colour can no longer be distinguished from the fine aggregate in any part of the mass and then shall be uniformly wetted by means of hose while undergoing further thorough mixing.

The mortar shall be prepared and used in quantities such that no longer than 30 minutes shall elapse between the first wetting and complete use of mortar in the Works and, if mixed by hand, no single batch shall exceed ¼ cubic meter.

2.2.6 Blinding Concrete:

Blinding concrete (mud mat) shall be Class C20 concrete and shall be as specified and not less than 75mm thick. In aggressive soil conditions Class C25 concrete shall be used for blinding (Reference should be made to the Soil Investigation Report).

2.3 Proportioning:

2.3.1 Mix Design:

Mix design shall be determined by one of two methods:

1. Proportioning on the basis of field experience.
2. Proportioning by laboratory trail batches.
3. Proportioning on the Basis of Field Experience
   1. where a concrete production facility has a record, based on at least 30 consecutive strength test results that represent similar materials and conditions to those expected, required average compressive strength used as the basis for selecting concrete proportions shall exceed required design strength at designated test age by at least the following required margins based on standard deviation of existing strength test result:

Required Margin Standard Deviation

(MPa) (MPa)

4.1 2.0 to 3

5.7 3.1 to 4

7.4 4.1 to 5

9.0 5.1 to 6

11.5 6.1 to 8

* 1. Strength test data for determining standard deviation shall be considered to comply with Subsection (2.3.1 A.1), if data represents a group of at least 30 consecutive results.
  2. Strength test results used to establish standard deviation shall represent concrete produced to meet a specified strength or strength within 5.0 MPa of that specified for the proposed class.
  3. Variation of materials and proportions within the population of background test results used to establish standard deviation shall not have been more tightly controlled than for the proposed.

1. Proportioning on the Basis of Laboratory Trail Batches.
   1. When laboratory trail batches are used as the basis for selecting concrete proportions, strength tests shall be made in accordance with BS 1881, on cubes prepared in accordance with BS 1881.
   2. A curve shall be established showing the relationship between the water content and the compressive strength. The curve shall be based on at least three points, each point being the average of at least three cubes tested at 28 days, and representing batches which produce strengths above and below the required average compressive strength. The required average compressive strength shall be 30% greater than the design strength (i.e. the minimum characteristic concrete strength).
   3. the minimum cement content for any concrete shall be that show by the curve to produce the average compressive strength required for that class, unless a higher cement content is required by the value shown in Schedule I.
2. Reduction of Margin Based on Field Data

After sufficient test data becomes available from the job, the margin (the amount by which the average strength must exceed the design strength) can be reduce below those values indicated in Subsection 3. 0 I, A.1, in accordance with ACI 214 “Recommended Particle for Evaluation of Compressive Test Results of Concrete”, provided:

* 1. That the probable frequency of strength tests falling more than 3.5 MPa below the design strength will not exceed 1 in 100.
  2. That the probable frequency of the average of three consecutive strength tests falling below he design strength will not exceed 1 in 100.
  3. That the acceptance of the Engineer has been obtained for such reduction on the basis of the Contractor’s report and recommendation.

2.3.2 Plant and Mixture Trail Runs:

Prior to the delivery of any concrete to the Work Site, the Contractor shall demonstrate the suitability of the mix designs by plant trail mixes.

Trail batches of concrete shall be produced for all the classes of concrete proposed, and shall be designed in accordance with Subsection 2.3.01. Trail mixtures shall be designed for maximum permitted slump, air content, and ambient temperature range of use.

A minimum of six (6) test cubes shall be made and cured in accordance with BS 1881, for each water-cement ratio, using mix materials all of which shall be in the same temperature range of the materials which will be used in the concrete to be delivered to the Work Site. Ambient temperatures and the temperature of each trail batch shall be recorded and made part of the test report.

The report shall be submitted to the Engineer for acceptance based on the Contractorls recommendation (Item 9 Schedule 2).

2.3.3 Batching and Mixing:

Concrete shall be either batched and mixed at a central batching and mixing plant, or batched at a central batching plant and mixed in a truck mixer. The amount of concrete mixed in anyone batch shall not be more than the rated capacity of the mixer, nor less than the mixer manufacturer’s recommended minimum mix volume.

1. Batching

Batching of cement in any plant shall be by weight.

Batching of aggregates shall be by weight in any plant whose noted capacity id less than100 cu.m/hr.

Batching of water and of admixtures may be by weight or volume.

The accuracy of the measuring equipment shall be:

Cement (+/-) 1 percent

Water (+/-) 1 percent

Aggregates (+/-) 3 percent

Admixtures (+/-) 3 percent

Batching accuracy shall be assured by the Contractor by calibration test of all measuring devices. Reports of calibration and of adjustments made shall be obtained, and also accompanied by a statement as to the accuracy of all measuring devices. This record shall be maintained at all times by the Contractor, and shall be available for inspection by the Engineer at any time.

1. Mixing

Central Mixing Plant:

Measuring tolerances, and mixing capability and time shall be as stated herein.

The fine and coarse aggregates and the cement shall be mixed for not less than four turns of the drum or paddle before the water is added. Water is to be added gradually while the drum or paddle remains in motion, and the concrete shall be mixed until a uniform consistency and colour have been obtained.

The quality of water added to each batch shall be the net water, excluding moisture content for aggregate and free water, if any, but including water that will be absorbed by the aggregate, dependent on absorption and moisture content values determined daily and before any mixing takes place.

Water shall be added to the batch of concrete by means of a measuring device with an automatic cut-off of entry water while emptying into the mixer. All valves, etc. shall be regularly maintained to ensure there is no leakage of water into the mixing drum. The gauging receptacle shall be kept clean and must be completely emptied after each batch.

The whole of the mixed batch shall be removed before materials for a fresh batch enter the drum, unless the plant is designed for continuous mixing.

Retempering of concrete which has partially hardened by the addition of cement aggregate or water shall not be allowed. Concrete which has been overmixed to the extent that addition of water is necessary to preserve the required consistency during discharge shall not be used.

1. Transportation

The temperature of concrete leaving the mixing plant shall be such that at the time of placement, the maximum temperature does not exceed that specified for is placement, in Subsection 1-5. 05.

Concrete shall be so transported and placed that contamination, segregation, or loss of the constituent materials does not occur.

Concrete shall be compacted in its final position within 30 minutes from the time of introduction of the cement into the aggregates, but in all cases at least ninety (90) minutes less than the certified initial set time of the cement.

The slump of delivered concrete shall be determined on-site and shall not exceed the working limit shown below:

Working Limit Margin for Error Rejection Limit

100mm 20mm 120mm

The margin for error can only be used for a maximum of one truckload out of ten consecutive truckloads of concrete.

Contractor is to assess slump at jobsite for acceptable workability special high slump easily worked mixes shall be used as required provided prior acceptance by the engineer has been granted as based on the contractor’s report and recommendations.

Where the slump is deemed in appropriate for acceptable workability, the contractorls quality control supervisor can authorized adding additional admixture and/or water to the mix to obtain acceptable workability, but within the limitations of the water-cement ratio as required by this specification. However, plasticizers shall be used upon the convenience of the engineer.

1. Execution:
   1. Inspection:
      1. Preplacement Inspection.

Before concrete is placed, forms, reinforcements, water stops, anchor bolts, and embedment shall be rigidly secured in proper position. Furthermore, dirt, sand, water, and debris shall be removed from the space to be occupied by concrete. All surfaces encrusted with dried concrete from previous placement operations shall be cleaned, and the entire installation shall be subjected to the approval of to the Engineer.

* 1. Preparation:
     1. Limit of Pours.

The limits of each concrete pour shall be predetermined by the Contractor and shall be acceptable to the Engineer. All concrete within such limits shall be placed in one continuous operation.

* + 1. Embedments.

Anchor bolts, castings, steel shapes, sleeves, and other materials that are to be embedded in the concrete shall be accurately positioned in the forms and securely anchored.

Unless installed in pipe sleeves, anchor bolts shall have sufficient threads to permit a nut to be installed on the concrete side of the form or template. A second nut shall be installed on the other side of the form or template, and the two nuts shall be adjusted so that the bolt will be held rigidly in proper position.

Embedments shall be clean when installed. After concrete placement, surfaces not in contact with concrete shall be cleaned of concrete spatter and other foreign substances.

* + 1. Bonding to hardened concrete.

The surface of the hardened concrete upon which fresh concrete is to be placed shall be rough, clean, and damp. Surface mortar shall be removed to expose the aggregate. The hardened surface shall be cleaned of all foreign substances (including curing compound ), washed with clean water, and kept saturated during the 24 hour period preceding placement of fresh concrete.

* 1. Installation:
     1. Placement.

The limits of each concrete pour shall be predetermined by the contractor and shall be acceptable to the Engineer. All concrete within such limits shall be placed in one continuous operation.

Before concrete is placed, forms, reinforcements, anchor bolts, and embedments shall be rigidly secured in proper position; all dirt, mud, water, and debris shall be removed from the space to be occupied by concrete; all surfaces encrusted with dried concrete from previous placement operations shall be cleaned; and entire installation shall be acceptable to the Engineer.

All horizontal and sloping excavated surfaces on which concrete is to be placed and excavated shall be covered with blinding concrete immediately after completion of the final trimming of excavation.

Place concrete as soon as practicable after the forms and the reinforcement have been inspected and approved. Do not place concrete when weather conditions prevent proper placement and consolidation; in uncovered areas during periods of precipitation; or in standing water. Prior to placing concrete, remove dirt, construction debris, water from within the forms. Deposit concrete as close as practicable to the final position in the forms. Do not exceed a free vertical drop of one m from the point of discharge. Place concrete in one continuous operation from one end of the structure towards the other lifts for vertical construction.

1. Conveying Concrete.

Concrete shall be conveyed to the point of final deposit by methods which will prevent separation or loss of ingredients. Concrete shall be placed in final position without being moved laterally in the forms more than 1.5 m.

1. Placing Concrete.

Concrete shall be placed in approximately horizontal layers of proper depth for effective compaction; however, the depth of a layer shall not exceed 0.5 In Each layer of concrete shall be plastic when covered with the following layer and the forms shall be filled at a rate of vertical rise of not more than 0.5 m per hour. Vertical construction joints shall be provided as necessary to comply with these requirements.

Concrete shall be thoroughly settled when top finished. All laitance, debris, and surplus water shall be removed from concrete surfaces, scraping, or other effective means. Wherever the top the finished concrete will be exposed to weathering, the forms shall be filled completely and after the concrete has settled, the excess shall be screeded off and the top surface shall be finished smoothly.

Unless otherwise agreed by the Engineer on the basis of satisfactory site trails, concrete shall not be dropped in to place from a height exceeding 2 meters. Chutes or funnel tubes shall be used where heights exceed 2 meters.

The top part of all reinforced concrete walls shall be given special consideration to avoid segregation of fine and coarse aggregates, that may occur during vibration and gives lowered compression strength in the wall crest. To avoid this effect the concrete shall be filled to at least 3.0 cm over the final wall crest elevation before the concrete is hardened the upper surplus layer of the wall crest has to be drawn off to the final elevation.

3.3.2 Compaction.

During and immediately after placement, concrete shall be thoroughly compacted and worked around all reinforcements and embedments and into the corners of the forms. Mechanical vibrators shall be used which will maintain at least 9,000 cycles per minute when immersed in the concrete. Each vibrator shall be driven by a motor not smaller than 1.1 KW. Number and type of vibrators shall be acceptable to the Engineer.

Compaction by hand may be used only with the prior approval of the Engineer.

3.3.3 Hot Weather Concreting.

Except as modified herein, hot weather concreting shall comply with ACI 305. At air temperature of the concrete when placed in the work shall kept as cool as possible during placement and curing. The temperature of the concrete when placed in the work shall not exceed 32° C. If the ambient temperature reaches 40° C, which is unlikely happen in Maldives Concentrating operations shall be discontinued the Contractor has the adequate means of cooling the ingredients and keeping the temperature of mixed concrete below 32° C.

Plastic shrinkage cracking, due to rapid evaporation of moisture, shall be prevented Concrete shall not be placed when the evaporation rate (actual or anticipated) equals or exceeds I kg per square meter per hour.

To achieve the specified requirements, the Contractor shall provide sunshades over stockpiles of aggregate, cement silos, mixing water tanks, parked concrete trucks,   
in addition shall carry out one or more of the following procedures which shall be submitted to the Engineer for review.

1. Cool the mixing water and/or replace part of the water by chipped ice. The ice shall be completely melted by the time mixing is completed. Shade or wet the outside of the formwork.

3. Apply a fine moisture (fog) spray of clean cool water to shaded areas immediately prior to placing concrete.

4. Pour concrete at night.

Water used for cooling purposes shall be as specified.

In all times the surface of freshly placed concrete shall be protected against drying by covering it with wet hessian cloth or burlaps and where practical continuous water curing shall be applied during the first few hours after placement. In addition to DIN 1045 it has to be considered that spraying cold water for ulterior treatment of concrete in hot weather leads to quenching and surface cracks. Only fine sprinklers will be allowed.

3.3.5 Underwater Concrete.

Structural reinforced concrete shell not be placed under water. Instead, proper dewatering system shall be used to avoid such Concrete shall not be deposited under water except with the specific written permission of the Engineer. For concrete deposited under water, the limiting requirements shall be adjusted to provide not more than 150 mm of slump and to increase the cement factor by 50 kilograms per cubic meter.

Underwater concreting shall be carried out through tremies having hoppers at the upper end. After the flow of concrete is started, the lower end of the tremie shall be kept below the surface of the deposited concrete. Stirring of the deposited concrete shall be avoided. The tremie shall be moved by lifting it free of the concrete and lowering it vertically at the new location. The entire mass of concrete shall be placed as quickly as possible so that it will flow into place without the necessity of horizontal shifting below water.

The water shall be quiescent when concrete is deposited therein. Velocity of water flow shall not exceed 0.6 m per minute in any direction within the space where the concrete is placed. After concrete is placed, the water level in the space shall be kept static until the concrete has hardened.

3.3.6 Concrete Placement in Large Pours.

Subject to the requirements for construction and movement joints and for preliminary test blocks specified herein, the Contractor shall not be limited to the size of individual pours of concrete. With large pours, defined as a pour where the least dimension is greater than 1.5 meters, the following precautions shall be taken to limit thermal gradients and internal stresses:

1. The temperature of the concrete at the time of placing shall not bemore than 32°C and, in any event, shall be such as to ensure that the maximum internal temperature attained during setting does not exceed 70 ° C.

2. Final batch of concrete in a large pour shall be a layer approximately 150 mm thick, the placing of which shall be completed within one hour of placing of the concrete at any point beneath it.

3. Concrete shall be protected as soon as practicable, after placing, by covering the surface with a minimum thickness of either100 mm of water of 50 mm of sand (kept wet) and by shading from direct sunlight.

4. Sets of thermometers shall be provided in the concrete to measure the temperature at the centre and near each face of the concrete, the sets being at centers not exceeding 5m or as otherwise agreed with the Engineer.

5. Formwork shall be at least 19 mm thick, or such other combination of materials having an equivalent insulation value, which shall not be removed until there has been sufficient time for the temperature difference between the centre and any face of the concrete to drop to less than 20°C.

3.4 Finishing Unformed Surfaces:

Concrete encasement will require no finishing except that necessary to obtain the required surface elevations or contours. The unformed surfaces of loading unloading area at the top shall be screeded and given an initial float finish followed by additional floating, and toweling where required. All top of walls shall have a Class U3 finish.

3.4.1 Class of Finish.

Finishes to unformed surfaces of concrete shall be classified as Ui, U2, U3, “spaded” or “bonded concrete”. Where the class of finish is not specified or indicated on the Drawings the concrete shall be finished to Class tJ2.

A. Screeding (Class Ul).

Screeding Class Ui shall provide a concrete surface conforming to the proper elevation and contour with all aggregates completely embedded in mortar. All screeded surfaces shall be free of surface irregularities with a height or depth in excess of 15 mm as measured from a 3 m straightedge.

B. Floating: (Class U2).

Screeded Class Ui surfaces shall be given an initial float finish as soon as the concrete has stiffened sufficiently for proper working. Any piece of coarse aggregate which is disturbed by the float or which causes a surface irregularity shall be removed and replaced with mortar. Initial floating shall produce a  
surface of uniform texture and appearance with no unnecessary working of the surface.

Initial floating shall be followed by a second floating at the time of initial set. The second floating shall produce a finish of uniform texture and colour.

Floating shall be performed with hand floats or suitable mechanical compactor- floats.

C. Towelling: (Class U3)

Interior floor surfaces which will be exposed after construction is completed, surfaces to be covered with floor coverings, the exposed portion of the top of equipment bases, the top of curbs, and other surfaces designated on the Drawings shall be steel trowel finished. Towelling shall be performed after the second floating when the surface has hardened sufficiently to prevent an excess of fines being drawn to the Towelling shall produce a dense, smooth, uniform surface free from blemishes and trowel marks.

D. Finishing: Surfaces for Bonding.

All surfaces to be covered with concrete or topping shall be float finished. All laitance, surface mortar, and unsound material shall be removed by brushing or air blasting at the time of initial set. Surfaces shall be rough, clean, and sound. Floors and other flatwork surfaces to receive topping shall be given a broom finish following the second floating.

E. Spaded Finish.

A spaded finish shall be a surface free from voids and brought to a uniform appearance by the use of shovels as it is placed in the work.

F. Edging.

Unless specified to be bevelled, exposed edges of floated or towelled surfaces shall be edged with a tool having 6mm corner radius.

G. Concrete Surface Tolerances

Concrete surfaces for the various classes of uniformed finishes specified shall comply with the tolerances shown in Table 3-4.1 except where different tolerances are expressly required by the specifications or indicated on the Drawings.

TABLE 3-4.1

Maximum Tolerance (mm)

|  |  |  |  |
| --- | --- | --- | --- |
| Class of Finish | Line and level | Abrupt irregularity | Gradual Irregularity |
| U1 | (+ / -) 15 | 5 | 5 |
| U2 | (+ / -) 5 | 0 | 5 |
| U3 | (+ / -) 5 | 0 | 5 |

In table 3-4.1, “Line and level” shall mean the lines, and levels, indicated on the Drawings.

Surface irregularities shall be classified as “abrupt” or “gradual” Abrupt irregularities include, but shall not be limited to, offsets and fins caused by displaced or misplaced form work materials, and shall be tested by direct measurement.

Gradual irregularities shall be tested by means of a straight template for plane surfaces or its suitable equivalent for curved surfaces, the template being 3.0m long for unformed surfaces.

Defects in unformed surfaces shall be repaired in accordance with the relevant requirements of this section.

3.5 Finishing Formed Surfaces:

Fins and other surface projections shall be removed from all formed surfaces except exterior surfaces that will be in contact with sand backfill and surfaces not specified to be damp-proofed. A power grinder shall be used, if necessary, to remove projections and provide a flush surface. Surfaces to be damp-proofed shall have fins removed and tie holes filled, but no additional finishing will be required.

All reinforced formed concrete shall have a fairface surface finish.

3.3.1 Tie Holes.

Tie holes in all formed surfaces shall be cleaned, wetted, and filled with patching mortar. Tie hole patches shall be finished flush and shall match the texture of the adjacent concrete.

3.6 Curing:

Concrete shall be protected from loss of moisture for at least 14 days after placement (according to DIN.1045) Curing of concrete shall be by methods which will keep the concrete surfaces adequately wet during the specified curing period. Precast members should not be placed in seawater before completion of specified curing.

3.6.1 Water Curing.

Water saturation of concrete surfaces shall begin as quickly as possible after initial set of the concrete and shall e continuous for an initial curing period of 14 days. The rate of water application shall be regulated to provide complete surface coverage with a minimum of runoff. The application of water to walls may be interrupted for grout cleaning only over the areas being cleaned at the time, and the concrete surface shall not be permitted to become dry during such interruption. Horizontal concrete surface shall be cured by ponding and vertical surfaces shall be wrapped with met Hessian. Other means can be used to the approved of the Engineer. Only portable water should be used for wet curing.

3.6.2 Membrane Curing.

Membrane curing compound may be used in lieu of water curing on concrete which will not be covered later with topping, mortar, or additional concrete.

Membrane curing compound shall be spray applied at coverage of not more than 5.0 square meters per litre. A second coat shall be applied within 4 hours of initial coating or as recommended by the manufacturer. Unformed surfaces shall be covered with curing compound within 30 minutes after final finishing or following the initial 7 day water curing period. If forms are removed before the end of the specified curing period, curing compound shall be immediately applied to the formed surfaces before they dry out.

Curing compound shall be suitably protected against exposure to direct sunlight and abrasion during the curing period. The curing compound shall be degradable pigmented type.

3.7 Field Quality Control:

3.7.1 Testing.

Field control tests, consisting of aggregate tests, slump tests, air content tests, and making compression tests, shall be performed as directed by the Engineer.

All tests to be performed according to BSI and ASTM and DIN standards and results shall not be approved unless proving its compliance with given specifications and standards.

All tests required for preliminary review shall be made at the expanse of the contractor. Tests required during the progress of the work shall also be made at the expense of the contractor.

The frequency specified herein for each field control tests is a minimum. If additional field control tests are necessary, in the opinion of the Engineer, all such tests shall be made.

1. Aggregate:

Aggregate tests shall be performed as specified by the Engineer and to comply with BSI, ASTM and DIN requirements. The test shall include crushing, abrasion, absorption, grading and chemical composition.

2. Sampling Concrete:

Representative samples of fresh concrete shall be obtained in the field, according with BS 1881 or equivalent standards.

1. Slump:

A slump test shall be made for each 5 to 7 cu.m. of concrete or as directed by the Engineer. Slump shall be determined in accordance with ASTM, AASHTO and BSI Specifications. Tolerances shall not exceed 20 mm.

1. Air Content:

An air content test shall be made from one of the first three batches mixed each day, and from each batch of concrete from which concrete compression test cubes are made. Air content shall be determined in accordance with ASTM, AASHTO and BSI Specifications.

1. Water:

Water shall be tested as specified by the Engineer and according to ASTM and BS (3148) Standards.

1. Compression tests:

One set of six concrete compression test cubes shall be made each day when less than 10 cubic meters of concrete are placed. If quantity placed per day within 50 MC then two sets of six cubes will be taken, or a set for each type of concrete. If quantity of placed concrete per day is more than 50 MC then, one set of six cubes will be taken for every 25 MC and for every type of concrete, or as directed by the Engineer. Two cubes of each set shall be tested at age of 7 days, another two cubes shall be tested an age of 28 days. The third two will be crushed if the 28 days results are odd and need to be verified. Compression tests will be evaluated in accordance with BS 1881.

Test specimens shall be made, cured and tested in accordance with BS 1881. While still in the field, the test cubes shall be stored and cured after transport to the laboratory, in accordance with BS 1881.

Each set of compression test specimens shall be marked of tagged with the date and time of day the specimens were made, the location in the work where the concrete represented by the specimens was placed, the delivery truck or batch number, the air content, and the slump.

* + 1. Test Reports.

Test reports shall be prepared and distributed by the Contractor in accordance with the Quality Control Section.

* 1. Adjust and clean:
     1. Repairing Defective Concrete

Defects in formed Concrete surfaces shall be repaired within 24 hours, to the satisfaction of the Engineer, defective concrete shall be replaced within 48 hours after the adjacent forms have been removed. All concrete which is honeycombed or otherwise defective shall be cut out and removed to sound concrete, with edges square cut to avoid feathering.

Concrete repair work shall be performed in a manner that will not interfere with through curing of surrounding concrete. Repair work shall be adequately cured.

3.9 cracks:

All cracks over 0.2 mm wide in concrete surfaces shall be cut out and the groove filled with epoxy grout.

3.10 Protection of buried concrete:

All concrete surface of walls and anchor block in contact with soil shall be protected by applying a waterproofing layer to it. The waterproofing material used shall comply with B.S and ASTM requirements and the other given specifications to the satisfaction of the Engineer.

**SCHEDULE 1**

**Concrete Mix Design Standard Parameters**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Concrete Class Designations | 28 day Minimum Characteristic Compressive Strength MPa | Minimum Cement Content kg/cu.m | Maximum Free water Cement Ratio (ByWei@t) | Maximum Slump mm | Max Chloride ion content by wt of cement % |  |
| \*\*C35A | 35 | 370 | 0.40 | 110 | 0.20 | R.C structures |
| C30 | 30 | 360 | 0.50 | 100 | 0.20 | R.C structures |
| C25 | 25 | 310 | 0.55 | 100 | 0.30 | Blinding in aggressive soils |
| C20 | 20 | 280 | 0.55 | 120 | 0.40 | Blinding and Fill Concrete |
| C15 | 15 | 220 | 0.60 | 120 |  | Concrete Fill material |

\*\* Super plasticizer or plasticizer admixture shall be used to achieve slump. This concrete shall comply with BS 8007 requirements. Slump may be increased upon the Engineer and to his convenience.

Notes for above table:

1. Water-reducing admixtures shall be used as required to meet the limits specified in this table.
2. Special high slump easily worked mixes may be used, if required, provided the other limits of this table are not exceeded and prior Engineer acceptance has been granted, as based on the contractors report and recommendation.
3. Cement content shall not be less than quantities specified in BS8110 table 6.1 and 6.2.
4. (SRPC) Sulphate Resistant Portland Cement shall be used for buried concretes where mentioned.
5. Slump may be increased upon the convenience of the Engineer and shall be increased by means of water reducing / plasticizing admixture.
6. 28 day characteristic compressive strengths shown are based on cube samples according to BSI Standards.
7. Nominal maximum aggregate size shall be 20 mm.

**SCHEDULE 2**

**Reports to be submitted by the contractor in regard to concrete works**

|  |  |  |  |
| --- | --- | --- | --- |
| **NO.** | **TITLE** | **REPORT SUBMITTED** | **FREQUENCY OF REPORT** |
| 1 | Sources of Materials | 1. 31 days prior to delivery of concrete.   b) On apparent change. | a) One time.  b) As required. |
| 2 | Supplier Quality (if any) | 1. 31 days prior to delivery of concrete. | a) One time. |
| 3 | Mix design for all classes of concrete (Reference Schedule 3) | a) 31 days prior to delivery of concrete.  b) When mix is redesigned for any purpose. | a) One time.  b) As required. |
| 4 | Certificate for cement from manufacturer | a) 31 days prior to delivery of concrete.  b) For each new delivery from manufacturer. | a) One time.  b) As required. |
| 5 | Certificate for admixtures from manufacturer | a) 31 days prior to delivery of concrete.  b) If any changes occurs. | a) One time.  b) As required. |
| 6 | Report on plant trial mixes with 7 day & 28 day test results for all classes of concrete required for the work. | a) 31 days prior to delivery of concrete.  b) If changed. | a) One time.  b) As required. |
| 7 | Reports on concrete cube strength Tests. | a) 7+7 days after casting  b) 28+7 days after casting | a) After each 25m3 of casting.  b) As required. |
| 8 | Concrete casting check list | 24 hours before casting | Before each casting |
| 9 | Reports of the following tests on water (if it is not from the public service) for mixing concrete, washing and/ or cooling aggregates and curing:  1) Sulphates (as SO3)  2) Chlorides (as NaCl) | a) 31 days prior to delivery of concrete.  b) During production of concrete. | a) One time.  b) Monthly. |

|  |
| --- |
| Drawings |

(Separately attached)

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|  |

Bill Of Quantities

PART 3

Conditions of Contract and Contract Forms

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| **Section VIII.**  **General Conditions (GC)** |

MINISTRY OF NATIONAL PLANNING AND INFRASTRUCTURE, MALDIVES

The Conditions of Contract comprise the “General Conditions”, which form part of the “Conditions of Contract for Plant and Design-Build” First Edition 1999 published by Fédération Internationale des Ingénieurs-Conseils (FIDIC), and the following “Particular Conditions”, which include amendments and additions to such General Conditions.

*Copies of FIDIC Conditions of Contract, referred to above, may be obtained from:*

*FIDIC Secretariat*

*P.O. Box 86*

*CH 1000 Lausanne 12*

*Switzerland*

*Fax No: +41 21 653 5432*

Refer to above FIDIC document which is an integral part of this Contract.

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| --- |
| Section IX.    Particular Conditions (PC) |

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

**Part A - Contract Data**

| **Conditions** | **Sub-Clause** | **Data** |
| --- | --- | --- |
| **Employer’s name and address** | 1.1.2.2 & 1.3 | Ministry of National Planning and Infrastrucutre,  Ameenu Magu,  Male’, Republic of Maldives. |
| **Contractor’s name and address** | 1.1.2.3 & 1.3 | *To be filled by the contractor* |
| **Engineer’s name and address** | 1.1.2.4 & 1.3 | *(Name of Engineer)*  Ministry of National Planning and Infrastrucutre,  Ameenu Magu,  Male’, Republic of Maldives. |
| **Fund’s name** | 1.1.2.11 | OPEC FUND FOR INTERNATIONAL DEVELOPMENT(OFID) |
| **Beneficiary’s name** | 1.1.2.12 | Government of Maldives |
| **Time for Completion** | 1.1.3.3 | 24 Months |
| **Defects Notification Period** | 1.1.3.7 | 365 days |
| **Sections** | 1.1.5.6 | *NA* |
| **Electronic transmission systems** | 1.3 | Email, Fax, |
| **Governing Law** | 1.4 | The law is that in force in the Republic of Maldives. |
| **Ruling language** | 1.4 | English |
| **Language for communications** | 1.4 | English |
| **Time for the Parties entering into a Contract Agreement** | 1.6 | 30 days |
| **Inspections and Audit by the Fund** | 1.15 | This clause shall be amended as follows:  The Contractor shall permit, and shall cause its agents (whether declared or not), sub-contractors, sub-consultants, service providers, or suppliers and any personnel thereof, to permit, the Fund and/or persons appointed by the Fund to inspect the Site and all accounts and records relating to the performance of the Contract and the submission of the bid, and to have such accounts and records audited by auditors appointed by the Fund if requested by the Fund. The Contractor’s attention is drawn to Sub-Clause 15.6 [Corrupt or Fraudulent Practices] which provides, inter alia, that acts intended to materially impede the exercise of the Fund’s inspection and audit rights provided for under Sub-Clause 1.15 constitute a prohibited practice subject to contract termination (as well as to a determination of ineligibility pursuant to the Fund’s prevailing sanctions procedures. |
| **Time for access to the Site** | 2.1 | No later than the Commencement Day. |
| **Engineer’s Duties and Authority** | 3.1(b)(ii) | The Engineer shall obtain the specific approval of the Employer before ordering any works involving delay or any extra payment by the Employer or to make variation of or in the Works or Contract |
| **Performance Security** | 4.2 | The performance security will be in the form of a “performance bond” in the amount(s) of *15* percent of the Accepted Contract Amount and in the same currency(ies) of the Accepted Contract Amount. |
| **Period for notifying unforeseeable errors, faults and defects in the Employer’s Requirements** | 5.1 | 14 days |
| **Normal working hours** | 6.5 | 08:00 to 17:00 or as may be suited for the works |
| **Commencement of Works** | 8.1 | Within 30 Days of Contract Signing. |
| **Delay damages for the Works** | 8.7 & 14.15(b) | 0.25 % of the Contract Price per day, in the currencies and proportions in which the Contract Price is payable |
| **Maximum amount of delay damages** | 8.7 | 10 % of the final Contract Price. |
| **Provisional Sums** | 13.5.(b)(ii) | Not Applicable |
| **Adjustments for Changes in Cost** | 13.8 | Not Applicable |
| **Total advance payment** | 14.2 | The Employer shall make an advance payment, as an interest free loan for mobilization and cash flow support, when the Contractor submits a guarantee in accordance with this Sub Clause. The total advance payment and the applicable currencies and proportions shall be as stated in the Contract Data.  a) The Employer shall make an advance payment to the Contractor exclusively for the costs of mobilization in respect of the Works in the amount equivalent to **15% (fifteen) percent of the Accepted Contract Amount** named in the Letter of Acceptance (less Provisional Sums & Contingencies) payable in proportions of foreign and local currencies of the Accepted Contract Amount. Payment of such advance amount will be due under separate certification by the Engineer after:  (i) Provision by the Contractor of the performance security in accordance with Sub-Clause 4.2; and signing of agreement.  (ii) Submission of program, methodology and cash flow estimates as per Clauses 8.3 and 14.4; and  (iii) Provision by the Contractor of a “performance security in the form of a “performance bond” acceptable to the Employer in the amount(s) and currencies equal to the advance payment including the percentage of GST payments related to the advance payment.  b) The performance bond shall be obtained from:  (i) Bank or Financial Institution located in Maldives and approved by Maldives Monitory Authority; or  (ii) A bank located outside Maldives, which shall have a correspondent financial institution located in the country of Maldives regulated by Maldives Monitory Authority |
| **Repayment amortization rate of advance payment** | 14.2(b) | 15 % |
| **Percentage of Retention** | 14.3 | 5 % |
| **Limit of Retention Money** | 14.3 | 5 % of the Accepted Contract Amount |
| **Plant and Materials** | 14.5(c)(i) | If Sub-Clause 14.5 applies:  Plant and Materials for payment when delivered to the Site 80% |
| **Minimum Amount of Interim Payment Certificates** | 14.6 | 2.5 % of the Accepted Contract Amount. |
| **Publishing source of commercial penalty rates for financial charges in case of delayed payment** | 14.8 | NOT APPLICABLE |
| **Maximum total liability of the Contractor to the Employer** | 17.6 | The amount of the maximum total liability shall be 110% the Accepted Contract Amount |
| **Periods for submission of insurance:** | 18.1 |  |
| a. evidence of insurance. |  | 14 days |
| b. relevant policies |  | 28 days |
| **Maximum amount of deductibles for**  **insurance of the Employer's risks** | 18.2(d) | *USD 30,000.00 per occurrence* |
| **Minimum amount of third party insurance** | 18.3 | *USD 1,000,000.00* |
| **Date by which the DB shall be appointed** | 20.2 | 28 days after the Commencement date |
| **The DB shall be comprised of** | 20.2 | Three Members |
| **Appointment (if not agreed) to be made by** | 20.3 | National tender Board (Maldives) to appoint 3 impartial members. Can be from MoFT, Tender Section, GoM directorates, or Private sector |
| **Rules of arbitration** | 20.6(a) | *Maldives* |

**Part B - Specific Provisions**

|  |  |
| --- | --- |
| Sub-Clause 14.1The Contract Price | *(Alternative paragraph)*  (e) 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 that 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. |

# SECTION 3 – PARTICULAR CONDITIONS

The Conditions of Contract comprise the “General Conditions”, which form part of “Conditions of Contract for Plant and Design” First Edition 1999 published by the International Federation of Consulting Engineers (FIDIC), and the following “Particular Conditions” , which include amendments and additions to such General Conditions.

| **Item** | **Sub-Clause** | **Data** |
| --- | --- | --- |
| ***Clause 1*** |  |  |
| ***Interpretation*** | 1.2 | *At the end of Sub-Clause 1.2, insert:*  In these Conditions, provisions including the expression “Cost plus reasonable profit” require this profit to be one-twentieth (5%) of this Cost. |
| ***Priority of Documents*** | 1.5 | *Delete Sub-Clause 1.5 and substitute:*  The documents forming the Contract are to be taken as mutually explanatory of one another. If an ambiguity or discrepancy is found, the priority shall be such as may be accorded by the governing law. The Engineer has authority to issue any instruction which he considers necessary to resolve an ambiguity or discrepancy. |
| ***Other Definitions*** | 1.1.6.10 | *Add after 1.1.6.9*  “Employer’s Representative” means an entity or a person assigned by the entity for the monitoring of Works under the under Contract. |
| ***Clause 3*** |  |  |
| ***Employer’s Representative*** | 2.6 | *Insert Additional sub-Clause 2.6 after Sub-Clause 2.5*  The Employer’s Representative shall:   * monitor the works on site daily and prepare daily sheets for the work progress. * hold monthly site meetings with the project team * Inform the employer of any issue to be rectified or requiring immediate attention. * Assist the Engineer in resolving issues at site which need the intervention of Employer. |
| ***Clause 3*** |  |  |
| ***Engineer’s Duties and Authority*** | 3.1 | *Insert this at the end of Sub- Clause 3.1 as (d):*  “The Engineer shall obtain the specific approval of the Employer before ordering any works involving delay or any extra payment by the Employer or to make variation of or in the Works or Contract.” |
| ***Management Meetings*** | 3.6 | *Insert this additional Sub-Clause 3.6 at the end of Sub-Clause 3.5:*  The Engineer or the Contractor’s Representative may require the other to attend a management meeting in order to review the arrangements for future work. The Engineer shall record the business of management meetings and supply copies of the record to those attending the meeting and to the Employer. In the record, responsibilities for any actions to be taken shall be in accordance with the Contract. |
| ***Clause 4*** |  |  |
| ***Performance Security*** | 4.2 | *At the end of second paragraph, insert the following:*  If the Performance Security is in the form of a bank guarantee, it shall be issued either (a) by a local bank, or (b) by a foreign bank located in the country, acceptable to the Employer. |
| ***Contractor’s Representative*** | 4.3 | *At the end of the second paragraph of Sub-Clause 4.3:*  The Contractor’s Representative and all these persons shall also be fluent in English Language. |
| ***Subcontractors*** | 4.4 | Prior consent shall not be required if the value of the subcontract is less than one percent (1%) of the Accepted Contract Amount. |
| ***Protection of the Environment*** | 4.18 | *add sub paragraph as follows;*  Contractor must comply with Environment Protection and Preservation Act 1993, and prepare any documents deemed necessary by the Environment Impact Assessment Regulations 2007, and receive consent to the document from the Environment Protection Agency before executing contractual Works and temporary works under this Contract. |
| ***Clause 5*** |  |  |
| ***General Design Obligations*** | 5.1 | The outline design provided as part of the Employer’s Requirement is a basic requirement. Detail design must be prepared taking into consideration this concept design without deviation. |
| ***Clause 6*** |  |  |
| ***Engagement of Staff and Labour*** | 6.1 | *Add to this Sub-Clause*  The Contractor is encouraged, to the extent practicable and reasonable, to employ staff and labour with appropriate qualification and experience from sources within the Country of Works. |
| ***Alcoholic Liquor or Drugs*** | 6.12 | *Add this Sub-Clause*  The Contractor shall not, otherwise than in accordance with the Laws of the Maldives, import, sell, give, barter or otherwise dispose of any alcoholic liquor or drugs, or permit or allow importation, sale, gift, barter or disposal by Contractor’s personnel. |
| ***Arms and Ammunition*** | 6.13 | *Add this Sub-Clause*  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. |
| ***Festivals and Religious Customs*** | 6.14 | *Add this Sub-Clause*  The Contractor shall respect the recognized festivals, days of rest, and local and religious customs of the Maldives. |
| ***Clause 8*** |  |  |
| ***Commencement of Work*** | 8.1 | The Commencement Date shall be the date of signing of the Agreement . |
| ***Clause 13*** |  |  |
| ***Provisional Sums*** | 13.5 | *This Sub-Clause is not applicable.* |
| ***Clause 14*** |  |  |
| ***The Contract Price*** | 14.1 | Add the following sub-paragraph   1. if any part of the Works is to be paid according to works completed, Engineer shall use the rate specified in the Contractor’s priced Schedule. |
| ***Plant and Materials intended for the Works*** | 14.5 | Sub-paragraph (b) is not applicable. |
| ***Clause 15*** |  |  |
| ***Corrupt or Fraudulent Practices*** | 15.6 | Sub Clause 15.6 is amended to read as under:  If the Employer determines that the Contractor and Financier has engaged in corrupt, fraudulent, collusive or coercive practices, in competing for or in executing the Contract, then the Employer may, after giving 14 days notice to the Contractor, terminate the Contractor’s employment under the Contract and expel him from the Site, and the provisions of Clause 15 shall apply as if such expulsion had been made under Sub- Clause 15.2 [Termination by Employer].  Should any employee of the Contractor or Financier be determined to have engaged in corrupt, fraudulent or coercive practice during the execution of the work then that employee shall be removed in accordance with Sub-Clause 6.9 [Contractor’s Personnel].  The Employer requires that all Contractors adhere to the Employer’s Policies for the Procurement of Works and Goods. In particular, the Employer requires that the executing agencies and contracting agencies, as well as all firms, entities and individuals bidding for or participating in this project, including, inter alia, applicants, bidders, contractors, consulting firms and individual consultants (including their respective officers, employees and agents) adhere to the highest ethical standards, and report to the Employer all suspected acts of fraud or corruption of which it has knowledge or becomes aware, during the Bidding Process and throughout the negotiation or execution of a Contract. Fraud and corruption are prohibited. Fraud and corruption include acts of: (a) bribery, (b) extortion or coercion, (c) fraud and (d) collusion.  The definitions of actions set forth below cover the most common types of corrupt practices, but are not exhaustive. For this reason, the Employer shall also take action in the event of any similar deed or complaint involving alleged acts of corruption, even when these are not specified in the following list. The Employer shall in all cases proceed in accordance with Sub-Clause 15.6.  In pursuance of this policy:   1. The Employer defines the terms set forth below as follows: 2. "Bribery" meaning the offering or giving of anything of value to influence the actions or decisions of third parties or the receiving or soliciting of any benefit in exchange for actions or omissions related to the performance of duties; 3. "Extortion" or "Coercion" meaning the act of obtaining something, compelling an action or influencing a decision through intimidation, threat or the use of force, where potential or actual injury may befall upon a person, his/her reputation or property; 4. "Fraud" meaning any action or omission intended to misrepresent the truth so as to induce others to act in reliance thereof, with the purpose of obtaining some unjust advantage or causing damage to others; and 5. "Collusion" meaning a secret agreement between two or more parties to defraud or cause damage to a person or entity or to obtain an unlawful purpose; 6. If the Employer, in accordance with its administrative procedures, demonstrates that any firm, entity or individual bidding for or participating in this project including, inter alia, applicants, bidders, contractors, consulting firms, individual consultants, purchasers, executing agencies and contracting agency (including their respective officers, employees and agents) engaged in an act of fraud or corruption in connection with this project, the Employer may: 7. decide not to accept any proposal to award a contract or a contract awarded; 8. suspend the operation if it is determined at any stage that evidence is sufficient to support a finding that an employee, agent or representative of the Employer, Executing Agency or Contracting Agency has engaged in an act of fraud or corruption. |
| ***Clause 18*** |  |  |
| ***General Requirements for Insurances*** | 18.1 | Add the following at the end of Sub-Clause 18.1:  Acceptable to the Employer. |
| ***Insurance against Damage to Property*** | 18.3 | Add the following sentence at the end of the Sub-Clause 18.3  Prior to commencing any excavation or using any heavy equipment in close proximity to third party properties, the Contractor shall at his own expense arrange his insurers to inspect such properties. He shall also prepare pre-operation condition reports of such properties including any photographs, as deemed appropriate, for future reference. |
| ***Clause 20*** |  |  |
| ***Arbitration*** | 20.6 | At the end of sub-paragraph (a), insert the following:  “in Male’” |

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| Section X. Annex to the Particular Conditions - Contract Forms |

Table of Forms

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Notification of Award

# Letter of Acceptance

*[letter head 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 of the equivalent of *[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 the Performance Security within 28 days in accordance with the Conditions of Contract, using for that purpose one of the Performance Security Form*s* included in Section IX, Annex to the Particular Conditions - Contract Forms, of the Bidding Documents

Authorized Signature:

Name and Title of Signatory:

Name of Agency:

**Attachment: Contract Agreement**

|  |
| --- |
| Contract Agreement |

THIS AGREEMENT made the \_\_\_\_\_\_\_\_ day of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, \_\_\_\_\_, between [*insert name and address of Employer*]of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ (hereinafter “the Employer”), of the one part, and [ *insert name and address of Contractor*] 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.

1. The Letter of Acceptance
2. The Letter of Bid
3. the addenda Nos \_\_\_\_\_\_\_\_(if any)
4. the Particular Conditions
5. the General Conditions;
6. the Specification
7. the Drawings*;* and
8. the completedSchedules,

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)**

*\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_*

**Beneficiary:** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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

**PERFORMANCE GUARANTEE No.:** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Guarantor:** *\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_*

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 \_\_\_\_\_\_\_\_\_\_\_   
(),[[22]](#footnote-22)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… [[23]](#footnote-23)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.

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_   
*[signature(s)]*

**Note: All italicized text (including footnotes) is for use in preparing this form and shall be deleted from the final product.**

**Option 2: Performance Bond**

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 his hand and affixed his seal, and the Surety has caused these presents to be sealed with his corporate seal duly attested by the signature of his 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

|  |
| --- |
| Advance Payment Security |

**Demand Guarantee**

*\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_*

**Beneficiary:** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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

**ADVANCE PAYMENT GUARANTEE No.:** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Guarantor:** *\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_*

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 \_\_\_\_\_\_\_\_\_\_\_   
()*[[24]](#footnote-24)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:

* + 1. has used the advance payment for purposes other than the costs of mobilization in respect of the Works; or
    2. 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 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_..

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\_\_\_,[[25]](#footnote-25)2 whichever is earlier.Consequently, any demand for payment under thisguarantee 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.**

|  |
| --- |
| Retention Money Security |

**Demand Guarantee**

*\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ [Guarantor letter head 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 thesecond half of the Retention Moneyor if the amount guaranteed under the Performance Guarantee when the Taking-Over Certificate is issued is less than half of the Retention Money,thedifference between half of the Retention Money and the amount guaranteed under the 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][[26]](#footnote-26)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.

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 expireno later than the …. day of ……, 2… [[27]](#footnote-27)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.**

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 or 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 Beneficiary. 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. [↑](#footnote-ref-1)
2. Non performance, 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. Non performance shall not include contracts where Employers decision was overruled by the dispute resolution mechanism. Non performance 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. [↑](#footnote-ref-2)
3. This requirement also applies to contracts executed by the Bidder as JV member. [↑](#footnote-ref-3)
4. The Bidder shall provide accurate information on the letter of Bid about any litigation or arbitration resulting from contracts completed or ongoing under its execution over the last five years. A consistent history of court/arbitral awards against the Bidder or any member of a joint venture may result in disqualifying the Bidder. [↑](#footnote-ref-4)
5. The similarity shall be based on the physical size, complexity, methods/technology and/or other characteristics described in Section VII, Work’s Requirements. Summation of number of small value contracts (less than the value specified under requirement) to meet the overall requirement will not be accepted. [↑](#footnote-ref-5)
6. Substantial completion shall be based on **80%** or more works completed under the contract. [↑](#footnote-ref-6)
7. For contracts under which the Bidder participated as a joint venture member or sub-contractor, only the Bidder’s share, by value, shall be considered to meet this requirement. [↑](#footnote-ref-7)
8. 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. [↑](#footnote-ref-8)
9. For contracts under which the Bidder participated as a joint venture member or sub-contractor, only the Bidder’s share shall be counted to meet this requirement. [↑](#footnote-ref-9)
10. 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. The rate of production shall be the annual production rate for the key construction activity (or activities). [↑](#footnote-ref-10)
11. Requirement can be met through a Specialized Sub-contractor [↑](#footnote-ref-11)
12. *Bidder to use as appropriate* [↑](#footnote-ref-12)
13. 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. [↑](#footnote-ref-13)
14. If applicable [↑](#footnote-ref-14)
15. In this context, any action to influence the procurement process or contract execution for undue advantage is improper. [↑](#footnote-ref-15)
16. For the purpose of this sub-paragraph, “*another party*” refers to a public official acting in relation to the procurement process or contract execution. In this context, “*public official*” includes OFID fund staff and employees of other organizations taking or reviewing procurement decisions. [↑](#footnote-ref-16)
17. For the purpose of this sub-paragraph, “party” refers to a public official; the terms “benefit” and “obligation” relate to the procurement process or contract execution; and the “act or omission” is intended to influence the procurement process or contract execution. [↑](#footnote-ref-17)
18. For the purpose of this sub-paragraph, “parties” refers to participants in the procurement process (including public officials) attempting either themselves, or through another person or entity not participating in the procurement or selection process, to simulate competition or to establish bid prices at artificial, non-competitive levels, or are privy to each other’s bid prices or other conditions. [↑](#footnote-ref-18)
19. For the purpose of this sub-paragraph, “party” refers to a participant in the procurement process or contract execution. [↑](#footnote-ref-19)
20. A firm or individual may be declared ineligible to be awarded a Fund financed contract upon: (i) completion of the Fund’s sanctions proceedings as per its sanctions procedures, including, inter alia, cross-debarment as agreed with other International Financial Institutions, including Multilateral Development Funds; and (ii) as a result of temporary suspension or early temporary suspension in connection with an ongoing sanctions proceeding. See footnote 14 and paragraph 8 of Appendix 1 of these Guidelines. [↑](#footnote-ref-20)
21. A nominated sub-contractor, consultant, manufacturer or supplier, or service provider (different names are used depending on the particular bidding document) is one which has either 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 Beneficiary. [↑](#footnote-ref-21)
22. *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.* [↑](#footnote-ref-22)
23. *2 Insert the date twenty-eight days after the expected completion dateas described in GC Clause 11.9. The Employer should note that in the event of an extension of thisdate 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.”* [↑](#footnote-ref-23)
24. 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.* [↑](#footnote-ref-24)
25. 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.”* [↑](#footnote-ref-25)
26. 1 *The Guarantor shall insert an amount representing the amount of the second half of the Retention Money or 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.* [↑](#footnote-ref-26)
27. *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 thisdatefor 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.”* [↑](#footnote-ref-27)