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| Republic of the Maldives |
| Volume 1  Bidding Documents  Civil Works Small |
| Construction of 1 New Domestic Violence/ Gender Based Violence Shelter at Addu  TES/2023/W-076 |
| Project Name:  Strengthening Gender Inclusive Initiatives Project  Project Number: 54373-001  **22mm_BB** |
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**Issued By”**

**National Tender**

**Ministry of Finance**

Preface

This Bidding Document for the Procurement of Works has been prepared by [*insert name of Executing Agency*] and is based on the Standard Bidding Document for the Procurement of Works–Small Contracts (*SBD Works-Small 1S1E*) issued by the Asian Development Bank dated [*DEC 2021*].

ADB’s *SBD Works-Small* has the structure and the provisions of the Master Procurement Document entitled “Bidding Documents for the Procurement of Works–Small Contracts”, prepared by multilateral development banks and other public international financial institutions except where ADB-specific considerations have required a change.

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Part 1

Bidding Procedures

Section 1: Instructions to Bidders

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| 1. GENERAL | |
| 1. Scope of Bid | * 1. In connection with the Invitation for Bids (IFB) indicated in the Bid Data Sheet (BDS), the Employer, as indicated in the BDS, issues this Bidding Document for the procurement of the Works as specified in Section 6 (Employer’s Requirements). The name, identification, and number of contracts of this bidding are provided in the BDS. |
|  | * 1. Throughout this Bidding Document,      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. |
| 1. Source of Funds | * 1. The Borrower or Recipient (hereinafter called “Recipient”) indicated in the BDS has applied for or received financing (hereinafter called “funds”) from the Asian Development Bank (hereinafter called “ADB”) toward the cost of the project named in the BDS. The Recipient intends to apply a portion of the funds to eligible payments under the contract(s) for which this Bidding Document is issued. |
|  | * 1. Payments by ADB will be made only at the request of the Recipient and upon approval by ADB in accordance with the terms and conditions of the Financing Agreement between the Recipient and ADB (hereinafter called “Financing Agreement”), and will be subject in all respects to the terms and conditions of that Financing Agreement. No party other than the Recipient shall derive any rights from the Financing Agreement or have any claim to the funds. |
| 1. Fraud and Corruption | * 1. ADB requires Recipients (including beneficiaries of ADB-financed activity) and their personnel, as well as firms and individuals participating in an ADB-financed activity, including but not limited to, Bidders, Suppliers, and Contractors, agents, subcontractors, Consultants, service providers, subsuppliers, manufacturers (including their respective officers, directors, employees and personnel) under ADB-financed contracts to observe the highest standard of ethics during the procurement and execution of such contracts in accordance with ADB’s Anticorruption Policy (1998, as amended from time to time). In pursuance of this policy, ADB      1. defines, for the purposes of this provision, the terms set forth below as follows:  “corrupt practice” means the offering, giving, receiving, or soliciting, directly or indirectly, anything of value to influence improperly the actions of another party;“fraudulent practice” means any act or omission, including a misrepresentation, that knowingly or recklessly misleads, or attempts to mislead, a party to obtain a financial or other benefit or to avoid an obligation;“coercive practice” means 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;“collusive practice” means an arrangement between two or more parties designed to achieve an improper purpose, including influencing improperly the actions of another party;“abuse” means theft, waste, or improper use of assets related to ADB-related activity, either committed intentionally or through reckless disregard;“conflict of interest” means any situation in which a party has interests that could improperly influence that party’s performance of official duties or responsibilities, contractual obligations, or compliance with applicable laws and regulations; and“integrity violation" is any act, as defined under ADB’s Integrity Principles and Guidelines (2015, as amended from time to time), which violates ADB’s Anticorruption Policy, including (i) to (vi) above and the following: obstructive practice, violations of ADB sanctions, retaliation against whistleblowers or witnesses, and other violations of ADB's Anticorruption Policy, including failure to adhere to the highest ethical standard.  * + 1. will reject a proposal for award if it determines that the Bidder recommended for award or any of its officers, directors, employees, personnel, Consultants, subcontractors, service providers, suppliers or manufacturers has, directly or through an agent, engaged in corrupt, fraudulent, collusive, coercive, or obstructive practices or other integrity violations in competing for the Contract;     2. will cancel the portion of the financing allocated to a contract if it determines at any time that representatives of the Recipient or of a beneficiary of ADB financing engaged in corrupt, fraudulent, collusive, coercive, or obstructive practices or other integrity violations during the procurement or the execution of that contract, without the Recipient having taken timely and appropriate action satisfactory to ADB to remedy the situation, including by failing to inform ADB in a timely manner at the time they knew of the integrity violations;     3. will impose remedial actions on a firm or an individual, at any time, in accordance with ADB’s Anticorruption Policy and Integrity Principles and Guidelines, including declaring ineligible, either indefinitely or for a stated period of time, to participate**[[1]](#footnote-1)** in ADB-financed, -administered, or -supported activities or to benefit from an ADB-financed, -administered, or -supported contract, financially or otherwise, if it at any time determines that the firm or individual has, directly or through an agent, engaged in corrupt, fraudulent, collusive, coercive, or obstructive practices or other integrity violations; and |
|  | * + 1. will have the right to require that a provision be included in bidding documents and in contracts financed, administered, or supported by ADB, requiring Bidders, suppliers, and contractors, Consultants, manufacturers, service providers and other third parties engaged or involved in ADB-related activities, and their respective officers, directors, employees and personnel, to permit ADB or its representative to inspect the site and their assets, accounts and records and other documents relating to the bid submission and contract performance and to have them audited by auditors appointed by ADB. |
|  | * 1. All Bidders, Consultants, contractors, suppliers, manufacturers, service providers, and other third parties engaged or involved in ADB-related activities, and their respective officers, directors, employees and personnel, are obliged to cooperate fully in any investigation when requested by ADB to do so. As determined on a case by case basis by ADB, such cooperation includes, but is not limited to, the following:      1. being available to be interviewed and replying fully and truthfully to all questions asked;      2. providing ADB with any items requested that are within the party’s control including, but not limited to, documents and other physical objects;      3. upon written request by ADB, authorizing other related entities to release directly to ADB such information that is specifically and materially related, directly or indirectly, to the said entities or issues which are the subject of the investigation;      4. cooperating with all reasonable requests to search or physically inspect their person and/or work areas, including files, electronic databases, and personal property used on ADB activities, or that utilizes ADB’s Information and Communications Technology (ICT) resources or systems (including mobile phones, personal electronic devices, and electronic storage devices such as external disk drives);      5. cooperating in any testing requested by ADB, including but not limited to, fingerprint identification, handwriting analysis, and physical examination and analysis; and      6. preserving and protecting confidentiality of all information discussed with, and as required by, ADB. |
|  | * 1. All Bidders, Consultants, contractors and suppliers require their officers, directors, employees, personnel, agents to shall ensure that, in its contracts with its Consultants, Subcontractors and other third parties engaged or involved in ADB-related activities, such Consultants, Subcontractors and other third parties similarly are obliged to cooperate fully in any investigation when requested by ADB to do so. |
|  | * 1. The Employer hereby puts the Bidder on notice that the Bidder or any Joint Venture partner of the Bidder (if any) may not be able to receive any payments under the Contract if the Bidder or any of its Joint Venture partners, as appropriate, is, or is owned (in whole or in part) by a person or entity subject to applicable sanctions. |
|  | * 1. Furthermore, Bidders shall be aware of the provisions of GCC 28.3 and 73.2 (i). |
| 1. Eligible Bidders | * 1. A Bidder may be a natural person, private entity, or government-owned enterprises subject to ITB 4.5-or any combination of them with a formal intent to enter into an agreement or under an existing agreement in the form of a Joint Venture. In the case of a Joint Venture:      1. all partners shall be jointly and severally liable; and      2. the Joint Venture shall nominate a Representative who shall have the authority to conduct all business for and on behalf of any and all the parties of the Joint Venture during the bidding process and, in the event the Joint Venture is awarded the Contract, during contract execution. |
|  | * 1. A Bidder, and all parties constituting the Bidder, shall have the nationality of an eligible country, in accordance with Section 5 (Eligible Countries). A Bidder shall be deemed to have the nationality of a country if the Bidder is a citizen or is constituted, incorporated, or registered, and operates in conformity with the provisions of the laws of that country. This criterion shall also apply to the determination of the nationality of proposed Subcontractors or Suppliers for any part of the Contract including related services. |
|  | * 1. A Bidder shall not have a conflict of interest. All Bidders found to have a conflict of interest shall be disqualified. A Bidder may be considered to be in a conflict of interest with one or more parties in this bidding process if any of, including but not limited to, the following apply:      1. they have controlling partners in common; or      2. they receive or have received any direct or indirect subsidy from any of them; or      3. they have the same legal representative for purposes of this bid; or      4. they have a relationship with each other, directly or through common third parties, that puts them in a position to have access to material information about or improperly influence the Bid of another Bidder, or influence the decisions of the Employer regarding this bidding process; or      5. a Bidder participates in more than one bid in this bidding process, either individually or as a partner in a Joint Venture, except for alternative offers permitted under ITB 13 of the Bidding Document. This will result in the disqualification of all Bids in which it is involved. However, subject to any finding of a conflict of interest in terms of ITB 4.3 (a)–(d) above, this does not limit the participation of a Bidder as a Subcontractor in another Bid or of a firm as a Subcontractor in more than one Bid; or      6. a Bidder, Joint Venture partner, associates, parent company, or any affiliated entity, participated as a Project Manager in the preparation of the design or technical specifications of the works that are the subject of the Bid; or      7. a Bidder was affiliated with a firm or entity that has been hired (or is proposed to be hired) by the Employer or Recipient as Engineer for the Contract; or      8. a Bidder would be providing goods, works, or nonconsulting services resulting from or directly related to consulting services for the preparation or implementation of the project specified in the BDS ITB 2.1 that it provided or were provided by any affiliate that directly or indirectly controls, is controlled by, or is under common control with that firm; or      9. a Bidder that has a financial or familial relationship with staff of the Employer including project implementing/executing agency, or of a recipient of a part of the loan 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 ADB throughout the procurement process and execution of the contract. |
|  | * 1. A firm will not be eligible to participate in any procurement activities under an ADB-financed, -administered, or -supported project while under temporary suspension or debarment by ADB pursuant to its Anticorruption Policy (see ITB 3), whether such debarment was directly imposed by ADB, or enforced by ADB pursuant to the Agreement for Mutual Enforcement of Debarment Decisions. A bid from a temporarily suspended or debarred firm will be rejected and such bid may be in breach of debarment conditions, thereby subject to further ADB’s investigation. |
|  | * 1. Government-owned enterprises in the Recipient’s country shall be eligible only if they can establish that they (i) are legally and financially autonomous, (ii) operate under commercial law, and (iii) are not a dependent agency of the Recipient. |
|  | * 1. A Bidder shall not be under suspension from Bidding by the Employer as the result of the execution of a Bid–Securing Declaration. |
|  | * 1. Bidders shall provide such evidence of their continued eligibility satisfactory to the Employer, as the Employer shall reasonably request. |
|  | * 1. Bidders shall be excluded if, by an act of compliance with a decision of the United Nations Security Council taken under Chapter VII of the Charter of the United Nations, the Recipient’s country prohibits any import of goods from, or payments to, a particular country, person or entity in respect of goods or services originating in that country. Where the Recipient’s country prohibits payments to a particular person or entity or for particular goods or services by such an act of compliance, that firm shall be excluded. |
| 1. Eligible Materials, Equipment, and Services | * 1. The materials, equipment, and services to be supplied under the Contract shall have their origin in eligible source countries as defined in ITB 4.2 above and all expenditures under the Contract will be limited to such materials, equipment, and services. At the Employer’s request, Bidders may be required to provide evidence of the origin of materials, equipment, and services. |
|  | * 1. For purposes of ITB 5.1 above, “origin” means the place where the materials and equipment are mined, grown, produced, or manufactured, and from which the services are provided. Materials and equipment are produced when, through manufacturing, processing, or substantial or major assembling of components, a commercially recognized product results that differs substantially in its basic characteristics or in purpose or utility from its components. |
| 1. CONTENTS OF BIDDING DOCUMENT | |
| 1. Sections of Bidding Document | * 1. The Bidding Document consists of Parts I, II, and III, which include all the sections indicated below, and should be read in conjunction with any addenda issued in accordance with ITB 8.   **PART I Bidding Procedures**  Section 1 Instructions to Bidders (ITB)  Section 2 Bid Data Sheet (BDS)  Section 3 Evaluation and Qualification Criteria (EQC)  Section 4 Bidding Forms (BDF)  Section 5 Eligible Countries (ELC)  **PART II Requirements**  Section 6 Employer’s Requirements (ERQ)  **PART III Conditions of Contract and Contract Forms**  Section 7 General Conditions of Contract (GCC)  Section 8 Particular Conditions of Contract (PCC)  Section 9 Contract Forms (COF) |
|  | * 1. The IFB issued by the Employer is not part of the Bidding Document. |
|  | * 1. The Employer is not responsible for the completeness of the Bidding Document and their addenda, if they were not obtained directly from the source stated by the Employer in the IFB. |
|  | * 1. The Bidder is expected to examine all instructions, forms, terms, and specifications in the Bidding Document. Failure to furnish all information or documentation required by the Bidding Document may result in the rejection of the bid. |
| 1. Clarification of Bidding Document, Site Visit, Pre-Bid Meeting | * 1. A prospective Bidder requiring any clarification on the Bidding Document shall contact the Employer in writing at the Employer’s address indicated in the BDS or raise his inquiries 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 prior to the deadline for submission of bids, within a period given in the BDS. The Employer shall forward copies of its response to all Bidders who have acquired the Bidding Document in accordance with ITB 6.3, including a description of the inquiry but without identifying its source. Should the Employer deem it necessary to amend the Bidding Document as a result of a request for clarification, it shall do so following the procedure under ITB 8 and ITB 22.2. |
|  | * 1. The Bidder is advised to visit and examine the Site of Works and its surroundings and obtain for itself, on its own risk and 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. |
|  | * 1. The Bidder and any of its personnel or agents will be granted permission by the Employer to enter 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. |
|  | * 1. The Bidder’s designated representative is invited to attend a pre-bid meeting, if provided for in the BDS. The purpose of the meeting will be to clarify issues and to answer questions on any matter that may be raised at that stage. |
|  | * 1. The Bidder is requested to submit any questions in writing, to reach the Employer not later than 1 week before the meeting. |
|  | * 1. Minutes of the pre-bid meeting, including the text of the questions raised, without identifying the source, and the responses given, together with any responses prepared after the meeting, will be transmitted promptly to all Bidders who have acquired the Bidding Document in accordance with ITB 6.3. Any modification to the Bidding Document that may become necessary as a result of the pre-bid meeting shall be made by the Employer exclusively through the issue of an addendum pursuant to ITB 8 and not through the minutes of the pre-bid meeting. |
|  | * 1. Nonattendance at the pre-bid meeting will not be a cause for disqualification of a Bidder. |
| 1. Amendment of Bidding Document | * 1. At any time prior to the deadline for submission of Bids, the Employer may amend the Bidding Document by issuing addenda. |
|  | * 1. Any addendum issued shall be part of the Bidding Document and shall be communicated in writing to all who have obtained the Bidding Document from the Employer in accordance with ITB 6.3. |
|  | * 1. To give prospective Bidders reasonable time in which to take an addendum into account in preparing their Bids, the Employer may, at its discretion, extend the deadline for the submission of Bids, pursuant to ITB 22.2. |
| 1. PREPARATION OF BIDS | |
| 1. Cost of Bidding | * 1. The Bidder shall bear all costs associated with the preparation and submission of its Bid, and the Employer shall in no case be responsible or liable for those costs, regardless of the conduct or outcome of the bidding process. |
| 1. Language of Bid | * 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. |
| 1. Documents Comprising the Bid | * 1. The Bid shall comprise the following:      1. Letter of Bid;      2. completed Schedules, in accordance with ITB 12 and ITB 14, or as stipulated in the BDS;      3. Bid Security or Bid-Securing Declaration, in accordance with ITB 19;      4. alternative Bids, at Bidder’s option and 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 qualifications to perform the contract;      7. Technical Proposal in accordance with ITB 16;      8. any other document required in the BDS.   2. In addition to the requirements under ITB 11.1, Bids submitted by a Joint Venture shall include a copy of the Joint Venture Agreement entered into by all partners. Alternatively, a Letter of Intent to execute a Joint Venture Agreement in the event of a successful Bid shall be signed by all partners and submitted with the Bid, together with a copy of the proposed agreement. |
| 1. Letter of Bid and Schedules | * 1. The Letter of Bid, Schedules, and all documents listed under Clause 11, shall be prepared using the relevant forms in Section 4 (Bidding Forms), if so provided. The forms must be completed without any alterations to the text, and no substitutes shall be accepted. All blank spaces shall be filled in with the information requested and as required in the BDS. |
| 1. Alternative Bids | * 1. Unless otherwise indicated in the BDS, alternative Bids shall not be considered. |
|  | * 1. 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. |
|  | * 1. When specified in the BDS pursuant to ITB 13.1, and subject to ITB 13.4 below, Bidders wishing to offer technical alternatives to the requirements of the Bidding Document must first price the Employer’s design as described in the Bidding Document and shall further provide all information necessary for a complete evaluation of the alternative by the Employer, including drawings, design calculations, technical specifications, breakdown of prices, and proposed construction methodology, and other relevant details. Only the technical alternatives, if any, of the lowest evaluated Bidder conforming to the basic technical requirements shall be considered by the Employer. |
|  | * 1. When specified in the BDS, Bidders are permitted to submit alternative technical solutions for specified parts of the Works. Such parts will be identified in the BDS and described in Section 6 (Employer’s Requirements). The method for their evaluation will be stipulated in Section 3 (Evaluation and Qualification Criteria). |
| 1. Bid Prices and Discounts | * 1. The prices and discounts quoted by the Bidder in the Letter of Bid and in the Schedules shall conform to the requirements specified below. |
|  | * 1. The Bidder shall submit a bid for the whole of the works described in ITB 1.1 by filling in prices for all items of the Works, as identified in Section 4 (Bidding Forms). In case of admeasurement contracts, 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 will not be paid for by the Employer when executed and shall be deemed covered by the rates for other items and prices in the Bill of Quantities. Unit rates and prices for all items of the Works described in the Bill of Quantities shall be expressed in positive values. If unit rates and prices are expressed in negative values, the bid will be rejected. |
|  | * 1. The price to be quoted in the Letter of Bid shall be the total price of the Bid, excluding any discounts offered. Absence of the total bid price in the Letter of Bid may result in the rejection of the Bid. |
|  | * 1. The Bidder shall quote any discounts and the methodology for their application in the Letter of Bid, in accordance with ITB 12.1. |
|  | * 1. The prices shall be either fixed or adjustable as specified in the BDS.      1. In the case of Fixed Price, prices quoted by the Bidder shall be fixed during the Bidder’s performance of the contract and not subject to variation on any account. A Bid submitted with an adjustable price will be treated as nonresponsive and rejected.      2. In the case of Adjustable Price, prices quoted by the Bidder shall be subject to adjustment during performance of the contract to reflect changes in the cost elements such as labor, material, transport, and contractor’s equipment in accordance with the provisions of the Conditions of Contract. A Bid submitted with a fixed price will be treated as nonresponsive and be rejected. The Bidder shall furnish the indexes and weightings for the price adjustment formulas in the Tables of Adjustment Data included in Section 4 (Bidding Forms) and the Employer may require the Bidder to justify its proposed indexes and weightings. Any bid that omits indexes and weightings shall be subject to clarification with the Bidder. |
|  | * 1. If so indicated in ITB 1.1, bids are invited for individual contracts or for any combination of contracts (packages). Bidders wishing to offer any price reduction 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. Price reductions or discounts shall be submitted in accordance with ITB 14.4, provided the Bids for all contracts are submitted and opened at the same time. |
|  | * 1. 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. |
| 1. Currencies of Bid and Payment | * 1. The currency(ies) of the Bid and payment shall be as specified in the BDS. |
|  | * 1. 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 prices shown in the appropriate form(s) of Section 4, in which case a detailed breakdown of the foreign currency requirements shall be provided by Bidders. |
| 1. Documents Comprising the Technical Proposal | * 1. The Bidder shall furnish a Technical Proposal including a statement of work methods, equipment, personnel, schedule, environmental, health and safety (EHS) management plan commensurate with the proposed scope of works, EHS Code of Conduct, and any other information as stipulated in Section 4 (Bidding Forms), in sufficient detail to demonstrate the adequacy of the Bidders’ proposal to meet the work requirements and the completion time. |
| 1. Documents Establishing the Qualifications of the Bidder | * 1. To establish its qualifications to perform the Contract in accordance with Section 3 (Evaluation and Qualification Criteria) the Bidder shall provide the information requested in the corresponding information sheets included in Section 4 (Bidding Forms). |
|  | * 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 as described in ITB 33. |
| 1. Period of Validity of Bids | * 1. Bids shall remain valid for the bid validity period specified in the BDS. The bid validity period starts from the date fixed for 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 nonresponsive. |
|  | * 1. 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 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. |
| 1. Bid Security/Bid-Securing Declaration | * 1. Unless otherwise specified in the BDS, the Bidder shall furnish as part of its Bid, in original form, either a Bid-Securing Declaration or a bid security as specified in the BDS. In the case of a bid security, the amount and currency shall be as specified in the BDS. |
|  | * 1. If a Bid-Securing Declaration is required pursuant to ITB 19.1, it shall use the form included in Section 4 (Bidding Forms). The Employer will declare a Bidder ineligible to be awarded a Contract for a specified period of time, as indicated in the BDS, if the Bid-Securing Declaration is executed |
|  | * 1. If a bid security is specified pursuant to ITB 19.1, the bid security shall be, at the Bidder’s option, in any of the following forms:      1. an unconditional bank guarantee (hard copy of the bank guarantee or in the form of SWIFT message MT760), or      2. an irrevocable letter of credit, or      3. a cashier’s or certified check.   all from a reputable source from an eligible country as described in Section 5 (Eligible Countries). In the case of a bank guarantee, the bid security shall be submitted either using the Bid Security Form included in Section 4 (Bidding Forms) or another form acceptable to the Employer. The form must include the complete name of the Bidder. The bid security shall be valid for 28 days beyond the original validity period of the bid, or beyond any period of extension if requested under ITB 18.2. |
|  | * 1. Unless otherwise specified in the BDS, any Bid not accompanied by a substantially compliant bid security or Bid-Securing Declaration, if one is required in accordance with ITB 19.1, shall be rejected by the Employer as nonresponsive. |
|  | * 1. If a bid security is specified pursuant to ITB 19.1, the bid security of unsuccessful Bidders shall be returned promptly upon the successful Bidder’s furnishing of the performance security pursuant to ITB 44. |
|  | * 1. If a bid security is specified pursuant to ITB 19.1, the bid security of the successful Bidder shall be returned promptly once the successful Bidder has signed the Contract and furnished the required performance security. |
|  | * 1. The bid security may be forfeited or the Bid-Securing Declaration executed, if      1. notwithstanding ITB 24.3, a Bidder withdraws its bid during the period of bid validity specified by the Bidder on the Letter of Bid, except as provided in ITB 18.2; or      2. the successful Bidder fails to  sign the Contract in accordance with ITB 43;furnish a performance security in accordance with ITB 44;accept arithmetical corrections in accordance with ITB 31; orfurnish a domestic preference security, if applicable, in accordance with ITB 44.3. |
|  | * 1. If the bid security is required as per ITB 19.1, the bid security of a Joint Venture shall be in the name of the Joint Venture that submits the Bid. If the Joint Venture has not been legally constituted at the time of bidding, the bid security shall be in the name of any or all of the Joint Venture partners. If the Bid-Securing Declaration is required as per ITB 19.1, the Bid-Securing Declaration of a Joint Venture shall be in the name of the Joint Venture that submits the Bid. If the Joint Venture has not been legally constituted at the time of bidding, the Bid-Securing Declaration shall be in the names of all future partners as named in the letter of intent mentioned in ITB 4.1. |
| 1. Format and Signing of Bid | * 1. The Bidder shall prepare one original set 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 theBDS**,** and clearly mark each of them “COPY.” In the event of any discrepancy between the original and the copies, the original shall prevail. |
|  | * 1. 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. If a Bidder submits a deficient authorization, the Bid shall not be rejected in the first instance. The Employer shall request the Bidder to submit an acceptable authorization within the number of days as specified in the BDS. Failure to provide an acceptable authorization within the period stated in the Employer’s request shall cause the rejection of the Bid. If either the Letter of Bid or the Bid-Securing Declaration (if applicable) is not signed, the Bid shall be rejected. |
|  | * 1. Any amendments such as interlineations, erasures, or overwriting shall be valid only if they are signed or initialed by the person signing the Bid. |
| 1. SUBMISSION AND OPENING OF BIDS | |
| 1. Sealing and Marking of Bids | * 1. Bidders shall submit their Bids as specified in the BDS. Procedures for submission, sealing, and marking are as follows:      1. Bidders submitting Bids by mail or by hand shall enclose the original and each copy 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. The rest of the procedure shall be in accordance with ITB 21.2 and ITB 21.3.      2. Bidders submitting Bids electronically shall follow the electronic bid submission procedures specified in the BDS**.** |
|  | * 1. The inner and outer envelopes shall      1. bear the name and address of the Bidder;      2. be addressed to the Employer as provided in BDS 22.1;      3. bear the specific identification of this bidding process indicated in BDS 1.1; and      4. bear a warning not to open before the time and date for bid opening. |
|  | * 1. 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. |
| 1. Deadline for Submission of Bids | * 1. Bids must be received by the Employer at the address and no later than the date and time indicated in the BDS. |
|  | * 1. The Employer may, at its discretion, extend the deadline for the submission of Bids by amending the Bidding Document in accordance with ITB 8, in which case all rights and obligations of the Employer and Bidders previously subject to the deadline shall thereafter be subject to the deadline as extended. |
| 1. Late Bids | * 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. |
| 1. Withdrawal, Substitution, and Modification of Bids | * 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 for withdrawal notices, which 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 for withdrawal notices, which 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. |
|  | * 1. Bids requested to be withdrawn in accordance with ITB 24.1 shall be returned unopened to the Bidders. |
|  | * 1. 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. |
| 1. Bid Opening | * 1. The Employer shall open the Bids in public at the address, on the date, and time 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 21.1, shall be as specified in the BDS. |
|  | * 1. 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. 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 envelopes that are opened and read out at bid opening shall be considered further. |
|  | * 1. All other envelopes shall be opened one at a time, reading out the name of the Bidder; the Bid Price(s), including any discounts and alternative bids and indicating whether there is a modification; the presence of a bid security or Bid-Securing Declaration, if required; and any other details as the Employer may consider appropriate. Only discounts and alternative offers read out at bid opening shall be considered for evaluation. Unless otherwise specified in the BDS, all pages of the Letter of Bid and Schedules are to be initialed by at least three representatives of the Employer attending the bid opening. No Bid shall be rejected at bid opening except for late Bids, in accordance with ITB 23.1. |
|  | * 1. 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 contract if applicable, including any discounts and alternative offers; and the presence or absence of a bid security or a Bid-Securing Declaration, 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 who submitted Bids on time, and posted online when electronic bidding is permitted. |
| 1. EVALUATION AND COMPARISON OF BIDS | |
| 1. Confidentiality | * 1. Information relating to the examination, evaluation, comparison, and postqualification of Bids and recommendation of contract award, shall not be disclosed to Bidders or any other persons not officially concerned with such process until the publication of Contract award. |
|  | * 1. 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. |
|  | * 1. Notwithstanding ITB 26.2, from the time of bid opening to the time of Contract award, if any Bidder wishes to contact the Employer on any matter related to the bidding process, it may do so in writing. |
| 1. Clarification of Bids | * 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. 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 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. |
|  | * 1. 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. |
| 1. Deviations, Reservations, and Omissions | * 1. During the evaluation of Bids, the following definitions apply:      1. “Deviation” is a departure from the requirements specified in the Bidding Document;      2. “Reservation” is the setting of limiting conditions or withholding from complete acceptance of the requirements specified in the Bidding Document; and      3. “Omission” is the failure to submit part or all of the information or documentation required in the Bidding Document. |
| 1. Determination of Responsiveness | * 1. The Employer’s determination of a Bid’s responsiveness is to be based on the contents of the Bid itself, as defined in ITB 11. |
|  | * 1. A substantially responsive Bid is one that meets the requirements of the Bidding Document without material deviation, reservation, or omission. A material deviation, reservation, or omission is one that,      1. if accepted, would:  affect in any substantial way the scope, quality, or performance of the Works specified in the Contract; orlimit in any substantial way, inconsistent with the Bidding Document, the Employer’s rights or the Bidder’s obligations under the proposed Contract; or  * + 1. if rectified, would unfairly affect the competitive position of other Bidders presenting substantially responsive Bids. |
|  | * 1. 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 6 (Employer’s Requirements) have been met without any material deviation, reservation, or omission. |
|  | * 1. If a Bid is not substantially responsive to the requirements of the Bidding Document, it shall be rejected by the Employer and may not subsequently be made responsive by correction of the material deviation, reservation, or omission. |
| 1. Nonmaterial Nonconformities | * 1. Provided that a Bid is substantially responsive, the Employer may waive any nonconformities in the Bid that do not constitute a material deviation, reservation, or omission. |
|  | * 1. 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. |
|  | * 1. 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 may 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 methods indicated in Section 3 (Evaluation and Qualification Criteria). |
| 1. Correction of Arithmetical Errors | * 1. Provided that the Bid is substantially responsive, the Employer shall correct arithmetical errors on the following basis:      1. Only for admeasurement contracts, 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.      2. 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.      3. If there is a discrepancy between the bid price in the Summary of Bill of Quantities and the bid amount in item (c) of the Letter of Bid, the bid price in the Summary of Bill of Quantities will prevail and the bid amount in item (c) of the Letter of Bid will be corrected.      4. 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), (b) and (c) above. |
|  | * 1. If the Bidder that submitted the lowest evaluated bid does not accept the correction of errors, its bid shall be disqualified and its bid security may be forfeited or its Bid-Securing Declaration executed. |
| 1. Conversion to Single Currency | * 1. For evaluation and comparison purposes, the currency(ies) of the Bid shall be converted into a single currency as specified in the BDS. |
| 1. Domestic Preference | * 1. Unless otherwise specified in the BDS, domestic preference shall not apply. |
| 1. Subcontractors | * 1. Unless otherwise stated in the BDS, the Employer does not intend for the contractor to execute any specific elements of the Works through nominated Subcontractors.   2. If Subcontractors are proposed for any of the key activities listed in Section 3 (Evaluation and Qualification) Criteria 2.4.2, they shall be considered as “Specialist Subcontractors” and shall meet qualification requirements for the relevant key activities. |
| 1. Evaluation and Comparison of Bids | * 1. The Employer shall use the criteria and methodologies listed in this Clause. No other evaluation criteria or methodologies shall be permitted. |
|  | * 1. To evaluate a Bid, the Employer shall consider the following:      1. the bid price, excluding Provisional Sums and the provision, if any, for contingencies in the Summary Bill of Quantities for admeasurement contracts, or Schedule of Prices for lump sum contracts, but including Daywork items, where priced competitively;      2. price adjustment for correction of arithmetic errors in accordance with ITB 31.1;      3. price adjustment due to discounts offered in accordance with ITB 14.4;      4. converting the amount resulting from applying (a) to (c) above, if relevant, to a single currency in accordance with ITB 32;      5. adjustment for nonmaterial nonconformities in accordance with ITB 30.3;      6. assessment whether the bid is abnormally low in accordance with ITB 36; and      7. application of all the evaluation factors indicated in Section 3 (Evaluation and Qualification Criteria). |
|  | * 1. 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. |
|  | * 1. If this Bidding Document allows Bidders to quote separate prices for different contracts, and to award multiple contracts to a single Bidder, the methodology to determine the lowest evaluated price of the contract combinations, including any discounts offered in the Letter of Bid, is specified in Section 3 (Evaluation and Qualification Criteria). |
|  | * 1. The Employer shall compare all substantially responsive Bids to determine the lowest evaluated Bid, in accordance with ITB 35.2. |
| 1. Abnormally Low Bids | * 1. An abnormally low bid is one where the bid price, in combination with other elements of the bid, appears to be so low that it raises concerns as to the capability of the Bidder to perform the contract for the offered bid price.   2. When the offered bid price appears to be abnormally low, the Employer shall undertake a three-step review process as follows:      1. identify abnormally low costs and unit rates by comparing them with the engineer’s estimates, other substantially responsive bids, or recently awarded similar contracts;      2. clarify and analyze the bidder’s resource inputs and pricing, including overheads, contingencies and profit margins; and      3. decide whether to accept or reject the bid.   3. With regard to ITB 36.2 (b) above, the Employer will seek a written explanation from the bidder of the reasons for the offered bid price, including a detailed analysis of costs and unit prices, by reference to the scope, proposed methodology, schedule, and allocation of risks and responsibilities. This may also include information regarding the economy of the manufacturing process; the services to be provided, or the construction method to be used; the technical solutions to be adopted; and any exceptionally favorable conditions available to the bidder for the works, equipment or services proposed.   4. After examining the explanation given and the detailed price analyses presented by the bidder, the Employer may:      1. accept the bid, if the evidence provided satisfactorily accounts for the low bid price and costs, in which case the bid is not considered abnormally low;      2. accept the bid, but 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. The amount of the performance security shall generally be not more than 20% of the contract price; or      3. reject the bid if the evidence provided does not satisfactorily account for the low bid price, and make a similar determination for the next ranked bid, if required. |
| 1. Unbalanced or Front-Loaded Bids | * 1. 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, as well as the pricing and sources of materials, equipment and labor.   2. After the evaluation of the information and detailed price analyses presented by the Bidder, the Employer may as appropriate:      1. accept the Bid; or      2. accept the Bid, but require that the total 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 subject to ITB 44.2; or      3. reject the Bid and make a similar determination for the next ranked bid. |
| 1. Qualification of the Bidder | * 1. The Employer shall determine to its satisfaction whether the Bidder that is selected as having submitted the lowest evaluated and substantially responsive Bid meets the qualifying criteria specified in Section 3 (Evaluation and Qualification Criteria). |
|  | * 1. 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. Unless permitted in the BDS, the determination shall not take into consideration the qualifications of other firms such as the Bidder’s subsidiaries, parent entities, or affiliates. |
|  | * 1. An affirmative determination shall be a prerequisite for award of the Contract to the Bidder. The Employer reserves the right to reject the bid of any bidder found to be in circumstances described in GCC 73.2(c). 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. |
| 1. Employer’s Right to Accept Any Bid, and to Reject Any or All Bids | * 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. |
| 1. Notice of Intention for Award of Contract | * 1. If Standstill provisions apply as specified in the BDS, the standstill period shall be defined in the BDS to specify the duration subsequent to notification of intention for award of contract (before making the actual contract award) within which any unsuccessful bidder can challenge the proposed award. |
| 1. AWARD OF CONTRACT | |
| 1. Award Criteria | * 1. The Employer shall award the Contract to the Bidder whose offer has been determined in line with ITB 35 to ITB 37 above, to be the lowest evaluated Bid and is substantially responsive to the Bidding Document, provided further that the Bidder is determined to be qualified to perform the Contract satisfactorily. |
| 1. Notification of Award | * 1. Prior to the expiration of the period of bid validity and upon expiry of the standstill period specified in ITB 40.1, or upon satisfactory resolution of a complaint filed within standstill period, if applicable, the Employer shall transmit the Notification of Award through issuance of Letter of Acceptance using the form included in Section 9 (Contract Forms) to the successful Bidder, in writing, that its Bid has been accepted. At the same time, the Employer shall also notify all other Bidders of the results of the bidding.   2. Unless standstill period applies, upon notification of award through issuance of Letter of Acceptance, unsuccessful Bidders may request in writing to the Employer for a debriefing seeking explanations on the grounds on which their Bids were not selected. The Employer shall promptly respond in writing and/or in a debriefing meeting to any unsuccessful Bidder who, after publication of contract award, requests a debriefing.   3. Until a formal contract is prepared and executed, the notification of award through issuance of Letter of Acceptance shall constitute a binding Contract. |
|  | * 1. Within 2 weeks of the award of contract or expiry of the standstill period, where such period applies, or, if a complaint has been filed within the standstill period, upon receipt of ADB’s confirmation of satisfactory resolution of the complaint, the recipient shall publish in an English language newspaper or widely known and freely accessible website the results identifying the bid and lot or package numbers, as applicable and the following information:      1. name of each Bidder who submitted a Bid;      2. bid prices as read out at bid opening;      3. name and evaluated prices of each Bid that was evaluated;      4. name of Bidders whose bids were rejected and the reasons for their rejection; and      5. name of the winning Bidder, and the price it offered, as well as the duration and summary scope of the contract awarded. |
| 1. Signing of Contract | * 1. Promptly after notification, the Employer shall send the successful Bidder the Contract Agreement. |
|  | * 1. Within 28 days of receipt of the Contract Agreement, the successful Bidder shall sign, date, and return it to the Employer. |
| 1. Performance Security | * 1. Within 28 days of the receipt of notification of award through issuance of Letter of Acceptance from the Employer, the successful Bidder shall furnish the performance security in accordance with the Conditions of Contract, subject to ITB 36 and ITB 37, using for that purpose the Performance Security Form included in Section 9 (Contract Forms), or another form acceptable to the Employer. If the bank issuing performance security is located outside the Employer’s country, it shall be counter-guaranteed or encashable by a bank in the Employer’s country. |
|  | * 1. Failure of the successful Bidder to submit the abovementioned performance security or to sign the Contract Agreement shall constitute sufficient grounds for the annulment of the award and forfeiture of the bid security or execution of the Bid-Securing Declaration. 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. |
|  | * 1. The above provision shall also apply to the furnishing of a domestic preference security, if so required. |
| 1. Bidding-Related Complaints | * 1. The procedures for dealing with Bidding-Related Complaints arising out of this bidding process are specified in the BDS. |

Section 2: Bid Data Sheet

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|  | A. GENERAL |
| **ITB 1.1**  **Scope of Bid** | The number of the Invitation for Bids (IFB) is:  (IUL)13-K/13/2023/247 |
| **ITB 1.1**  **Scope of Bid** | The Employer is: **Ministry of National Planning, Housing and Infrastructure** |
| **ITB 1.1**  **Scope of Bid** | The name of the OCB is: **Construction of 1 new Domestic Violence/Gender Based Violence Shelter at Addu**  The identification numberof the bidding process is:  **TES/2023/W-076**  The number and identification of lots comprising this bidding process is: **N/A** |
| **ITB 2.1**  **Source of Funds** | The Recipient is: **Government of The Republic of Maldives** |
| **ITB 2.1**  **Source of Funds** | The name of the Project is: **Strengthening Gender Inclusive Initiatives (SGII)**  Project Number: 54373-001. Please refer to <https://www.adb.org/projects/54373-001/main> |
|  | B. CONTENTS OF BIDDING DOCUMENTS |
| ITB 7.1  Clarification of Bidding Document, Site Visit, Pre-Bid Meeting | For **clarification purposes** only, the Employer’s address is:   |  |  | | --- | --- | | Attention: | Ms. Fathimath Rishfa Ahmed, Chief Procurement Executive, National Tender, Ministry of Finance | | Street address: | Ameenee Magu, | | Floor/Room number: | Ground Floor/ Meeting Room | | City: | Male’, 20379 | | Country: | Republic of Maldives | | Telephone: | (+960) 3349113, (+960) 3349106, (+960) 3349147 | | E-mail: | [tender@finance.gov.mv](mailto:%20tender@finance.gov.mv)  [mohamed.mafaaz@finance.gov.mv](mailto:Mohamed.mafaaz@finance.gov.mv) |   Requests for clarification should be received by the Employer no later than: **14 days before the bid Submission deadline.** |
| **ITB 7.4**  **Clarification of Bidding Document, Site Visit, Pre-Bid Meeting** | A pre-bid meeting will be held online, details provided below.  Date: **21st August 2023**  Time: **11:00 hrs Maldivian Time**  Link to Join: [Pre-bid Meeting - Addu GBV Shelter](https://teams.microsoft.com/l/meetup-join/19%3ameeting_MTI4MmYxYjgtNmE4OC00YTJlLTlkOGEtM2I5NTE4ZWEwNTlm%40thread.v2/0?context=%7b%22Tid%22%3a%2242574d6e-387c-4791-9a63-d01d7bea16bf%22%2c%22Oid%22%3a%2272622f4e-67dc-4937-8a70-a427e058fd60%22%7d)  A site visit conducted by the Employer **will** **be** organized. |
|  | C. PREPARATION OF BIDS |
| ITB 10.1  **Language of Bid** | The language of the Bid is: **English** |
| **ITB 11.1 (b)**  **Documents Comprising the Bid** | In accordance with ITB 12 and ITB 14, the following schedules shall be submitted with the Bid, including the Activity Schedules for lump sum contracts:   * Priced Activity Schedules (as per provided format) * Schedule of Equipment * Key Personnel and Subcontractors * Data on Financial Resources for the required financial resources requirement * Documentary evidence in support of all claims both technical (methodology statement, work schedule), past experience and financials |
| **ITB 11.1 (h)**  **Documents Comprising the Bid** | The Bidder shall submit with its Bid the following additional documents:   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/>   1. Environmental Health and Safety Management Plan ([ESHMP](#EHSMP)) 2. [HS-C19 COVID](#COVID) Health Plan   **The Employer may request submission of additional documents after the bid opening.** |
| **ITB 12.1**  **Letter of Bid and Schedules** | The units and rates in figures entered into the Activity Schedule should be typewritten or if written by hand, must be in print form. Activity Schedule not presented accordingly may be considered nonresponsive. |
| **ITB 13.1**  **Alternative Bids** | Alternative bids **shall not be** permitted. |
| **ITB 13.2**  **Alternative Bids** | Alternative times for completion **shall not be** permitted. |
| **ITB 13.4**  **Alternative Bids** | Alternative technical solutions shall be permitted for the following parts of the Works: **Not Applicable** |
| **ITB 14.5**  **Bid Prices and Discounts** | The prices quoted by the Bidder shall be fixed and not subject to adjustment during the performance of the Contract. |
| **ITB 14.7**  **Bid Prices and Discounts** | All bids shall be quoted inclusive of all applicable local taxes and GST. |
| **ITB 15.1**  **Currencies of Bid and Payment** | The prices shall be quoted by the bidder and shall be paid in:  **Maldivian Rufiyaa (MVR)** |
| **ITB 16.1**  **Documents for the Technical Proposal** | The Technical Proposal shall also include a [Health and Safety COVID-19 Plan (HS-C19 Plan](#COVID)), in accordance with the relevant government regulations and guidelines on COVID-19 prevention and control, or in the absence thereof, to international good practice guidelines, such as World Health Organization. 2020. Considerations for public health and social measures in the workplace in the context of COVID-19. Geneva. Available here: <https://www.who.int/publications-detail/considerations-for-public-health-and-social-measures-in-the-workplace-in-the-context-of-covid-19> .  If a Bidder submits a HS-C19 Plan that does not provide sufficient information in accordance to the required submission information listed in the bidding document by the Employer, the Employer shall issue a clarification to request for further information from the Bidder. The Bidder must submit the requested information within 5 working days of receiving such a request.  Furthermore, non-submission of HS-C19 plan is not grounds for disqualification but the bidder if awarded would need to submit the document and get approval from the employer before contract award. |
| **ITB 18.1**  **Period of Validity of Bids** | The bid validity period shall be **120** days. |
| **ITB 19.1**  **Bid Security/Bid-Securing Declaration** | The Bidder shall furnish a bid security in the amount of  **MVR 265,000.00** |
| **ITB 19.2**  **Bid Security/Bid-Securing Declaration** | The ineligibility period will be: **Not Applicable** |
| **ITB 19.3**  **Bid Security/Bid-Securing Declaration** | A Bid Security **shall be** required  If a bid security is specified pursuant to ITB 19.1, the bid security shall be, at the Bidder’s option, in any of the following forms:   * + 1. an unconditional guarantee in hard copy issued by a bank, or financial institution such as an insurance, bonding or surety company or     2. a cashier’s or certified check.   All from a reputable source from an eligible country as described in Section 5 (Eligible Countries). In the case of a bank guarantee, the bid security shall be submitted either using the Bid Security Form included in Section 4 (Bidding Forms) or another form acceptable to the Employer. The form must include the complete name of the Bidder. The bid security shall be valid for 28 days beyond the original validity period of the bid, or beyond any period of extension if requested under ITB 18.2.  Bid Security in the form of SWIFT message MT760 will not be accepted. |
| **ITB 19.4**  **Bid Security/Bid-Securing Declaration** | Subject to the succeeding sentences, any bid not accompanied by an irrevocable and callable bid security shall be rejected by the Employer as nonresponsive. If a Bidder submits a bid security that (i) deviates in form, amount, and/or period of validity, or (ii) does not provide sufficient identification of the Bidder (including, without limitation, failure to indicate the name of the Joint Venture or, where the Joint Venture has not yet been constituted, the names of all future Joint Venture Partners), the Employer shall request the Bidder to submit a compliant bid security within 14 days of receiving such a request. Failure to provide a compliant bid security within the prescribed period of receiving such a request shall cause the rejection of the Bid. |
| **ITB 20.1**  **Format and Signing of Bid** | In addition to the original Bid, the number of copies is:  **1 authentic hard copy (stamped),**  **1 authentic soft copy of the original, on a virus free flash drive or disc in accessible and pdf files)**  **Note:** The Bidder is advised only an original Letter of Bid signed in ink by the authorized representative will be accepted – Photocopies are not acceptable nor are digital signature. |
| **ITB 20.2**  **Format and Signing of Bid** | The written confirmation of authorization to sign on behalf of the Bidder shall consist of:  “An organizational document, board resolution or its equivalent, or power of attorney specifying the representative’s authority to sign the Bid on behalf of, and to legally bind, the Bidder. If the Bidder is an intended or an existing Joint Venture, the power of attorney should be signed by all partners and specify the authority of the named representative of the Joint Venture to sign on behalf of, and legally bind, the intended or existing Joint Venture. If the Joint Venture has not yet been formed, also include evidence from all proposed Joint Venture partners of their intent to enter into a Joint Venture in the event of a contract award in accordance with ITB 11.2” |
| **ITB 20.2**  **Format and Signing of Bid** | The Bidder shall submit an acceptable authorization within **14 days.** |
|  | D. SUBMISSION AND OPENING OF BIDS |
| **ITB 21.1**  **Sealing and Marking of Bids** | Bidders shall submit their Bids by mail or by hand. Electronic submissions are ***not*** acceptable |
| **ITB 21.1 (b)**  **Sealing and Marking of Bids** | Electronic bidding submission procedures shall be: **Not Applicable** |
| **ITB 22.1**  **Deadline for Submission of Bids** | For **bid submission purposes** only, the Employer’s address is:   |  |  | | --- | --- | | Attention: | Ms. Fathimath Rishfa Ahmed, Chief Procurement Executive, National Tender, Ministry of Finance | | Street address: | Ameenee Magu, | | Floor/Room number: | Ground Floor/ Meeting Room | | City: | Male’, 20379 | | Country: | Republic of Maldives |   **The deadline for bid submission is:**  Date: **19th SEPTEMBER 2023**  Time: **11:00:00 hours Maldivian Time** |
| **ITB 25.1**  **Bid Opening** | The bid opening shall take place at:   |  |  | | --- | --- | | Attention: | Ms. Fathimath Rishfa Ahmed, Chief Procurement Executive, National Tender, Ministry of Finance | | Street address: | Ameenee Magu, | | Floor/Room number: | Ground Floor/ Meeting Room | | City: | Male’, 20379 | | Country: | Republic of Maldives |   Date: Same as ITB 22.1  Time: Immediately after Bid Submission Deadline |
| **ITB 25.1**  **Bid Opening** | Electronic bid opening procedure shall be as follows: **Not Applicable** |
| **ITB 25.3**  **Bid Opening** | The Letter of Bid and Schedules shall be initialed by three (03) representatives of the Employer attending the Bid opening. |
|  | E. EVALUATION AND COMPARISON OF BIDS |
| **ITB 32.1**  **Conversion to Single Currency** | The currency that shall be used for bid evaluation and comparison purposes is: **MVR (Maldivian Rufiyaa).** |
| **ITB 33.1**  **Domestic Preference** | Domestic preference **shall not** apply. |
| **ITB 34.1**  **Subcontractors** | The Employer **does not intend** for the contractor to execute any specific elements of the Works through nominated subcontractors. |
| **ITB 38.2**  **Qualification of the Bidder** | The qualifications of other firms such as the Bidder’s subsidiaries, parent entities, or affiliates shall not be permitted. |
| **ITB 40.1**  **Notice of Intention for Award of Contract** | Standstill provisions shall apply. The duration of standstill period will be **10 business days** from the date of notice of intention for award of contract.  The Employer shall, at the start of the standstill period, notify in writing each Bidder that submitted a bid, of its intention to award a contract to the successful Bidder at the end of standstill period. The notification using the form included in Section 9 (Contract Forms) shall include the following information:   1. the name of each Bidder who submitted a Bid; 2. the bid prices as read out at bid opening; 3. the name and evaluated prices of each Bid that was evaluated; 4. the name of Bidders whose bids were rejected and the reasons for their rejection; 5. the name of the winning Bidder, and the price it offered, as well as the duration and summary scope of the contract awarded; and 6. a statement of the reason(s) the bid of the unsuccessful Bidder to whom the notification is addressed was unsuccessful, unless the price information under (e) of this paragraph already reveals the reason. |
| **ITB 44**  **Performance Security** | **Performance security should be in the form of bank guarantee.** |
|  | F. AWARD OF CONTRACT |
| **ITB 45.1** | The procedures for Bidding-Related Complaints are referenced in the Procurement Regulations for ADB Recipients (Appendix 7). The Bidder should submit its complaint following these procedures, in writing, to:   |  |  | | --- | --- | | Attention: | Chief Procurement Executive, National Tender, Ministry of Finance | | Street address: | Ameenee Magu, | | Floor/Room number: | Ground Floor/ Meeting Room | | City: | Male’, 20379 | | Country: | Republic of Maldives | | Telephone: | (+960) 3349296 | | E-mail: | [tender@finance.gov.mv](mailto:tender@finance.gov.mv)  [mohamed.mafaaz@finance.gov.mv](mailto:Mohamed.mafaaz@finance.gov.mv) | |

Section 3: Evaluation and Qualification Criteria

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1. Evaluation

In addition to the criteria listed in ITB 35.2 (a)–(f), other relevant factors are as follows:

# 1.1 **Adequacy of Technical Proposal**

Evaluation of the Bidder’s Technical Proposal will include an assessment of the Bidder’s technical capacity to successfully implement the contract considering its proposed site organization, method statement, mobilization, and construction schedule (to be described by the Bidder in sufficient detail to demonstrate the adequacy of its work methods, scheduling, and material sourcing) including the extent to which they are presented in a consistent manner and comply with requirements stipulated in Section 6 (Employer’s Requirements) without material deviation, reservation, or omission.

Noncompliance with equipment and personnel requirements described in Section 6 (Employer’s Requirements) shall not normally be a ground for bid rejection, and such noncompliance will be subject to clarification during bid evaluation and rectification prior to contract award.

# 1.2 Completion Time

An alternative Completion Time, if permitted under ITB 13.2, will be evaluated as follows:

**Not Applicable**

# 1.3 Technical Alternatives

Technical alternatives, if permitted under ITB 13.4, will be evaluated as follows:

**Not Applicable**

**1.4 Specialist Subcontractors**

**Not Applicable**

# 1.5 Quantifiable Nonconformities and Omissions

Subject to ITB 14.2 and ITB 35.2, 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.”

# 1.6 Domestic Preference

If domestic preference shall apply under ITB 33.1, the procedure will be as follows as:

**Not Applicable**

# 1.7 Other Criteria

***COVID 19 Health and Safety Plan (HS-C19)***

The Employer will consider the quality of the Health and Safety COVID -19 Plan (‘the Plan’) attached to the Technical Proposal in its evaluation of the Adequacy of the Technical Proposal.

1.7.1.1 The bidder should demonstrate in the Plan the health and safety measures they will put in place on site in relation to COVID-19 prevention and controls, including but not limited to, PPE requirements, site set up, training, induction and mobilization of new personnel, equipment and plants cleaning and other hazard management measures while undertaking site work activities, site visitors health and safety protocols, as well as the approach to the monitoring and reporting of the Plan. The Plan should be fit for purpose for the particular construction works of this contract and be aligned with any relevant government regulations and guidelines on COVID-19 prevention and controls, as well as workplace safety requirements, or in the absence thereof, to international good practice guidelines, such as World Health Organization. 2020. Considerations for public health and social measures in the workplace in the context of COVID-19. Geneva. Available here: <https://www.who.int/publications-detail/considerations-for-public-health-and-social-measures-in-the-workplace-in-the-context-of-covid-19> . Also refer to ADB SDCC’s advisory in relation to COVID-19 health and safety and international good practices.

1.7.1 Environmental, Health and Safety Management Plan (EHSMP)

If a Bidder submits a EHSMP that is not commensurate with the risks and impacts of the proposed works and activities in the bidding document, the Employer shall issue a request for clarification to request for further information from the Bidder. The Bidder must submit the requested information within ten (10) days of receiving such a request. Failure to provide a satisfactory response to the request for further information within the prescribed period of receiving such a request may cause the rejection of the Bid.

1.7.2 Sustainbale Procurement

**Not Applicable**

1.7.3 Life Cycle costs (for Financial Evaluation)

**Not Applicable**

# 1.8 Multiple Contracts

**Not Applicable**

2. Qualification

# 2.1 Eligibility

| **Criteria** | **Compliance Requirements** | | | | **Documents** |
| --- | --- | --- | --- | --- | --- |
| **Requirement** | **Single Entity** | **Joint Venture** | | | **Submission Requirements** |
| **All Partners Combined** | **Each Partner** | **One Partner** |

2.1.1 Nationality

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Nationality in accordance with ITB 4.2. | Must meet requirement | Must meet requirement | Must meet requirement | Not applicable | Forms  [ELI – 1](#eli1); [ELI – 2](#eli2)  with attachments |

2.1.2 Conflict of Interest

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| No conflicts of interest in accordance with ITB 4.3. | Must meet requirement | Must meet requirement | Must meet requirement | Not applicable | [Letter of Bid](#LOB) |

2.1.3 ADB Eligibility

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Not having been declared ineligible by ADB, as described in ITB 4.4. | Must meet requirement | Must meet requirement | Must meet requirement | Not applicable | [Letter of Bid](#LOB) |

2.1.4 Government-Owned Enterprise

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Bidder required to meet conditions of ITB 4.5. | Must meet requirement | Must meet requirement | Must meet requirement | Not applicable | Forms  [ELI – 1](#eli1); [ELI – 2](#eli2)  with attachments |

2.1.5 United Nations Eligibility

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Not having been excluded by an act of compliance with a United Nations Security Council resolution in accordance with ITB 4.8. | Must meet requirement | Must meet requirement | Must meet requirement | Not applicable | [Letter of Bid](#LOB) |

# 2.2 Historical Contract Nonperformance

2.2.1 History of Nonperforming Contracts

| **Criteria** | **Compliance Requirements** | | | | **Documents** |
| --- | --- | --- | --- | --- | --- |
| **Requirement** | **Single Entity** | **Joint Venture** | | | **Submission Requirements** |
|  |  | **All Partners Combined** | **Each Partner** | **One Partner** |  |
| Nonperformance of a contracta did not occur as a result of contractor default **since 1 January 2017.** | Must meet requirement | Must meet requirement | Must meet requirementb | Not Applicable | [Form CON-1](#con1) |

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

b *This requirement also applies to contracts executed by the Bidder as Joint Venture partner.*

2.2.2 Suspension Based on Execution of Bid-Securing Declaration

Not Applicable

2.2.3 Pending Litigation and Arbitration

Pending litigation and arbitration criterion shall not apply.

2.2.4 Declaration: Environmental, Health and Safety Past Performance

Not Applicable

2.3 Financial Situation

2.3.1 Historical Financial Performance

| **Criteria** | **Compliance Requirements** | | | | **Documents** |
| --- | --- | --- | --- | --- | --- |
| **Requirement** | **Single Entity** | **Joint Venture** | | | **Submission Requirements** |
| **All Partners Combined** | **Each Partner** | **One Partner** |
| Submission of audited financial statements or, if not required by the law of the Bidder’s country, other financial statements acceptable to the Employer, for the **last 5 years** to demonstrate the current soundness of the Bidder’s financial position. As a minimum, the Bidder's net worth for the last year, calculated as the difference between total assets and total liabilities should be positive. | Must meet requirement | Not applicable | Must meet requirement | Not applicable | [Form FIN – 1](#FIN1)  with attachments |

2.3.2 Average Annual Construction Turnover

| **Criteria** | **Compliance Requirements** | | | | **Documents** |
| --- | --- | --- | --- | --- | --- |
| **Requirement** | **Single Entity** | **Joint Venture** | | | **Submission Requirements** |
| **All Partners Combined** | **Each Partner** | **One Partner** |
| Minimum average annual construction turnover of **MVR 37.6 Million (Thirty-Seven point Six Million Maldivian Rufiyaa)** calculated as total certified payments received for contracts in progress or completed, within the **last 5 years.** | Must meet requirement | Must meet requirement | **Must meet 25% of the requirement** | **Must meet 40% of the requirement** | [Form FIN - 2](#FIN2) |

2.3.3 Financial Resources

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Criteria** | **Compliance Requirements** | | | | **Documents** |
| **Requirement** | **Single Entity** | **Joint Venture** | | | **Submission Requirements** |
| **All Partners Combined** | **Each Partner** | **One Partner** |
| For Single Entities  The Bidder must demonstrate that its financial resources defined in FIN - 3, less its financial obligations for its current contract commitments defined in FIN - 4, meet or exceed the total requirement for the Subject Contract of MVR 7.1 Million | Must meet requirement | Not applicable | Not applicable | Not applicable | [Form FIN – 3](#FIN3) and  [Form FIN – 4](#FIN4) |
| For Joint Ventures   1. One partner must demonstrate that its financial resources defined in FIN - 3, less its financial obligations for its own current contract commitments defined in FIN - 4, meet or exceed its required share of 40% of **MVR 7.1 Million (MVR 2 Million)** from the total requirement for the Subject Contract.   AND | Not applicable | Not applicable | Not Applicable | **Must meet 40% of the requirement** | [Form FIN – 3](#FIN3) and  [Form FIN – 4](#FIN4) |
| 1. Each partner must demonstrate that its financial resources defined in FIN - 3, less its financial obligations for its own current contract commitments defined in FIN - 4, meet or exceed its required share of 25% of **MVR 7.1 Million (MVR 1 Million)** from the total requirement for the Subject Contract   AND | Not applicable | Not applicable | **Must meet 25% of the requirement** | Not applicable | [Form FIN – 3](#FIN3) and  [Form FIN – 4](#FIN4) |
| 1. The Joint Venture must demonstrate that the combined financial resources of all partners defined in FIN - 3, less all the partners’ total financial obligations for the current contract commitments defined in FIN - 4, meet or exceed the total requirement for the Subject Contract of **MVR 7.1 Million** | Not applicable | **Must meet requirement** | Not applicable | Not applicable | [Form FIN – 3](#FIN3) and  [Form FIN – 4](#FIN4) |

# 2.4 Construction Experience

2.4.1 Contracts of Similar Size and Nature

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Criteria** | **Compliance Requirements** | | | | **Documents** |
| **Requirement** | **Single Entity** | **Joint Venture** | | | **Submission Requirements** |
| **All Partners Combined** | **Each Partner** | **One Partner** |
| Participation as a contractor, Joint Venture partner, or Subcontractor, in **at least one contract** that has been satisfactorily and substantially completed within the last **6 years** and that is similar to the proposed works, where the value of the Bidder’s participation exceeds **MVR 12.5 Million (Twelve point Five Million Maldivian Rufiyaa)** The similarity of the Bidder’s participation shall be based on: a, b  *Design and Construction of ground floor plus 1 level buildings or multi storey buildings* | Must meet requirement | Not applicable | Not applicable | Must meet requirement | [Form EXP - 1](#EXP1) c |

Bidders to take note!

a  *For contracts under which the Bidder participated as a Joint Venture partner or Subcontractor, only the Bidder’s share, by value, shall be considered to meet this requirement.*

b  *For contracts implemented by a Joint Venture contractor, if the Bidder comprises the same Joint Venture, the 'Single Entity' requirements will apply.*

c *In addition to the submission requirement Form EXP – 1, the Bidder shall provide the following supporting documents:*

*1. Signed Contract Agreement, and*

*2. Certificate of Completion of the Works (or equivalent) or Performance Certificate,*

*in sufficient detail to verify the contract name, value and completion time. If the documents are other than in English, an accurate certified translation of these documents in English shall be provided.]*

2.4.2 Construction Experience in Key Activities

**2.4.2. (a)**. **Specific Experience:** The bidder, as a contractor/ management contractor/ subcontractorb has completed/ substantiallyc completed at least, the number and value of similar construction contracts as mentioned in the Table B during the last **6 years**.

**Table B**

|  |  |  |  |
| --- | --- | --- | --- |
| **Criteria** | **Compliance Requirements** | | **Documents** |
| **Requirement** | **Single Entity or Its Specialist Subcontractors** | **Joint Venture or Its Specialist Subcontractors** | **Submission Requirements** |
| For the above or other contracts executed during the period stipulated in 2.4.1, a minimum construction experience is required in the following key activities: | Must meet requirement | Must meet requirement | [Form EXP – 2](#EXP2)a |
| **Architectural design of ground floor plus 1 level buildings or multi storey buildings of minimum 2 projects** |  |  |  |
| **Structural design of ground floor plus 1 level buildings or multi storey buildings of minimum of minimum 2 projects** |  |  |  |

a *Submission requirement Form EXP – 2 shall be supported by documents such as Signed Contract Agreement, Taking-Over Certificate or Contract Completion Certificate indicating the contract name, value. completion date (or percentage of substantial completion), activities performed by Joint Venture partners, and other relevant details sufficient to demonstrate compliance with the requirements.*

*b Subcontracts will be considered only for projects implemented by Government. The Subcontract should be a First Tier Subcontract (Works subcontracted through Primary Contractor) and will be subject to verification by the Client Ministry. Verification through Primary Contractor will be accepted only if the primary contractor is a state-owned company/corporation.*

*c for the purpose of this bid evaluation, a contract will be considered substantially complete if the overall physical completion of the project is more than or equal to 80%.*

2.4.3 Specific Experience in Managing Environmental, Health and Safety Aspects

Not Applicable

# 2.5 Organizational Environmental, Health and Safety System

2.5.1 Environmental, Health and Safety Certification

Not Applicable

2.5.2 Environmental, Health and Safety Documentation

Not Applicable

2.5.3 Environmental, Health and Safety Dedicated Personnel

Not Applicable

Section 4: Bidding Forms

Table of Forms

**[LETTER OF BID](#LOB)**

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Form PER - 2: Resume of Proposed Personnel

Equipment

Site Organization

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Mobilization Schedule

Construction Schedule

COVID-19 Health and Safety Plan (CS-19)

Environmental, Health and Safety Management Plan

Environmental, Health and Safety Code of Conduct

[**BIDDER’S QUALIFICATIONS**](#bidqual)

Form ELI - 1: Bidder’s Information Sheet

Form ELI - 2: Joint Venture Information Sheet

Form CON - 1: Historical Contract Non-performance

Form CON - 2: EHS Performance Declaration

Form FIN - 1: Historical Financial Performance

Form FIN - 2: Average Annual Construction Turnover

Form FIN - 3: Availability of Financial Resources

Form FIN - 4: Financial Requirement for Current Contract Commitments

Form FIN - 5: Self-Assessment Tool for Bidder's Compliance to Financial Resources

Form EXP - 1: Contracts of Similar Size and Nature

Form EXP - 2: Construction Experience in Key Activities

Letter of Bid

*The Bidder must accomplish the Letter of Bid on its letterhead clearly showing the Bidder’s complete name and address*

|  |  |
| --- | --- |
| Date: |  |
| OCB No.: |  |
| Invitation for Bid No.: |  |

To: MINISTRY OF FINANCE

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 (ITB) Clause 8.
2. We acknowledge that we have read and understand ADB’s Anticorruption Policy (1998) and Integrity Principles and Guidelines (2015), both as amended from time to time.
3. We offer to execute in conformity with the Bidding Documents the following Works: [*insert narrative*]
4. The total price of our Bid, excluding any discounts offered in item (d) below is:

[*amount of foreign currency in words*], [*amount in figures*], and [*amount of local currency in words*], [*amount in figures*]

*The total bid price from the Summary of Bill of Quantities for admeasurement contracts or Activity Schedule for lump sum contracts should be entered by the Bidder inside this box. Absence of the total bid price in the Letter of Bid may result in the rejection of the bid.*

1. The discounts offered and the methodology for their application are as follows: [*insert discounts and methodology for their application if any*]
2. Our bid shall be valid for a period of [*insert bid validity period as specified in ITB 18.1 of the BDS*] days starts from the date fixed for the bid submission deadline in accordance with ITB 22.1, and it shall remain binding upon us and may be accepted at any time before the expiration of that period.
3. If our bid is accepted, we commit to obtain a performance security in accordance with the Bidding Document.
4. Our firm, including any Subcontractors or Suppliers for any part of the Contract, have nationalities from eligible countries in accordance with ITB 4.2.
5. We, our directors, key officers, key personnel, including any Subcontractors, Consultants, sub-consultants, manufacturers, service providers or Suppliers for any part of the contract, do not have any conflict of interest in accordance with ITB 4.3.

If there is any conflict of interest, please state details:

1. Parties involved in the conflict of interest: \_\_\_\_\_\_\_\_\_\_
2. Details about the conflict of interest: \_\_\_\_\_\_\_\_\_
3. We are not participating, as a Bidder, either individually or as partner in a Joint Venture, in more than one Bid in this bidding process in accordance with ITB 4.3(e), other than alternative offers submitted in accordance with ITB 13.
4. Our firm, Joint Venture partners, our respective direct and indirect shareholders, directors, key officers, key personnel, associates, parent company, affiliates or subsidiaries, including any Subcontractors, Consultants, subconsultants, manufacturers, service providers or Suppliers for any part of the contract, are not subject to, or not controlled by any entity or individual that is subject to, a temporary suspension or a debarment imposed by the Asian Development Bank or a debarment imposed by the Asian Development Bank in accordance with the Agreement for Mutual Enforcement of Debarment Decisions between the Asian Development Bank and other development banks.[[2]](#footnote-2)
5. Our firm, Joint Venture partners, our respective direct and indirect shareholders, directors, key officers, key personnel, associates, parent company, affiliates or subsidiaries, including any Subcontractors, Consultants, subconsultants, manufacturers, service providers or Suppliers for any part of the contract, are not under ongoing investigation and/or sanctions proceedings by the Asian Development Bank or any multilateral development bank.

If under ongoing investigation and/or sanction proceedings by the Asian Development Bank or any multilateral development bank, please state details:

1. Name of the multilateral development bank: \_\_\_\_\_\_\_\_\_\_
2. Reason for the ongoing investigation/allegations: \_\_\_\_\_\_\_\_\_\_
3. Our firm, Joint Venture partners, our respective direct and indirect shareholders, directors, key officers, key personnel, associates, parent company, affiliates or subsidiaries, including any Subcontractors, Consultants, subconsultants, manufacturers, service providers or Suppliers for any part of the Contract, are not temporarily suspended, debarred, declared ineligible, or subject to any national and/or international sanctions by any country, any international organization, any multilateral development bank and other donor agency.

If so temporarily suspended, debarred, declared ineligible, or subject to any national and/or international sanctions by any country, any international organization, any multilateral development bank and other donor agency, please state details (as applicable to each Joint Venture partner, their respective direct or indirect shareholders, directors, key officers, key personnel, associate, parent company, affiliate, subsidiaries, Subcontractors, Consultants, subconsultants, manufacturers, service providers and/or Suppliers):

1. Name of Institution: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
2. Period of the temporary suspension, debarment, ineligibility, or national or international sanction [*start and end date*]: \_\_\_\_\_\_\_\_\_\_\_\_
3. Reason for the temporary suspension, debarment, ineligibility, or national or international sanction: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
4. Our firm, Joint Venture partners, associates, parent company, affiliates or subsidiaries, including any Subcontractors, Consultants, subconsultants, manufacturers, service providers, Suppliers, key officers, directors and key personnel have never been charged or convicted with any criminal offense (including felonies but excluding misdemeanors) or infractions and/or violations of ordinance; nor charged or found liable in any civil or administrative proceedings in the last 10 years; or undergoing investigation for such, or subject to any criminal, civil or administrative orders, monitorship or enforcement actions.

If so charged, convicted/found liable, under ongoing investigation, or subject to orders, monitorship or enforcement actions, please state details:

1. Nature of the offense, violation, proceedings, investigation, and/or monitorship or enforcement actions: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
2. Court, area of jurisdiction and/or the enforcement agency: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
3. Resolution [i*.e. dismissed; settled; or convicted/duration of penalty*]: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
4. Other relevant details [*please specify*]: \_\_\_\_\_\_\_\_\_\_\_\_\_\_
5. Our firm, Joint Venture partners, our respective direct and indirect shareholders, directors, key officers, key personnel, associates, affiliates or subsidiaries, including any Subcontractors, Consultants, subconsultants, manufacturers, service providers or Suppliers, can make and receive electronic fund transfer payments through the international banking system or otherwise discharge the Employer’s obligation upon initiation of wire transfer.

If unable to make or receive funds through the international banking system or otherwise discharge the Employer’s obligation upon initiation of wire transfer, please state the details:

1. Nature of the restriction: \_\_\_\_\_\_\_\_\_\_
2. Jurisdiction of the restriction: \_\_\_\_\_\_\_\_\_\_
3. Other relevant details: \_\_\_\_\_\_\_\_\_\_
4. Our firm, Joint Venture partners, associates, parent company, affiliates or subsidiaries, including any Subcontractors, Consultants, subconsultants, manufacturers, service providers or Suppliers, key officers, directors and key personnel are not from a country which is prohibited to export goods or services to, or receive any payments from the Employer’s country and/or are not prohibited to receive payments for particular goods or services by the Employer’s country by an act of compliance with a decision of the United Nations Security Council taken under Chapter VII of the Charter of the United Nations.
5. We understand that it is our obligation to notify the Employer of any changes in connection with the matters described in paragraphs (i), (k), (l), (m), (n), (o), (p) and (t) of this Letter of Bid.
6. [We are not a government-owned enterprise] / [We are a government-owned enterprise but meet the requirements of ITB 4.5].**[[3]](#footnote-3)**
7. We have not been suspended nor declared ineligible by the Employer based on execution of a Bid-Securing Declaration in accordance with ITB 4.6.
8. We have paid, or intend to pay, either directly or indirectly, the following commissions, gratuities, or fees with respect to the bidding process or execution of the Contract:**[[4]](#footnote-4)**

|  |  |  |  |
| --- | --- | --- | --- |
| Name of Recipient | Address | Reason | Amount |
|  |  |  |  |
|  |  |  |  |

1. We understand that this Bid, together with your written acceptance thereof included in your notification of award through the issuance of Letter of Acceptance, shall constitute a binding contract between us, until a formal contract is prepared and executed.
2. We understand that you are not bound to accept the lowest evaluated Bid or any other Bid that you may receive.
3. At any time following submission of our Bid, we shall permit, and shall cause our Joint Venture partners, directors, key officers, key personnel, associates, parent company, affiliates or subsidiaries, including any Subcontractors, Consultants, subconsultants, manufacturers, service providers or Suppliers for any part of the contract to permit ADB or its representative to inspect our site, assets, accounts and records and other documents relating to the bid submission and to have them audited by auditors appointed by ADB. We understand that failure of this obligation may constitute obstructive practice that may result in debarment and/or contract termination.
4. Regardless of whether the contract will be awarded to us, we shall preserve all accounts, records and other documents related to bid submission for at least 3 years from the date of submission of the bid or the period prescribed in applicable law, whichever is longer.
5. If we are awarded the contract, we shall preserve all accounts, records and other documents related to the procurement and execution of the contract for at least 5 years after completing the works contemplated in the relevant contracts or the period prescribed in applicable law, whichever is longer.
6. If our Bid is accepted, we commit to mobilizing key equipment and personnel in accordance with the requirements set forth in Section 6 (Employer’s Requirements) and our technical proposal, or as otherwise agreed with the Employer.
7. We certify on behalf of the Bidder, that the information provided in the bid has been fully reviewed, given in good faith, and to the best of our knowledge is true and complete. We understand that it is our obligation to inform the Employer of any changes to the information as and when it becomes known to us. We understand that any misrepresentation that knowingly or recklessly misleads, or attempts to mislead may lead to the automatic rejection of the Bid or cancellation of the contract, if awarded, and may result in remedial actions, in accordance with ADB’s Anticorruption Policy (1998, as amended to date) and Integrity Principles and Guidelines (2015, as amended from time to time).

|  |  |
| --- | --- |
| Name |  |
| In the capacity of |  |
| Signed |  |
| Duly authorized to sign the Bid for and on behalf of |  |
| Date |  |

Activity Schedule

[Schedules of Prices – Lump Sum Contract]

The Employer shall indicate the list of major activities comprising the works and the number of measurement units consistent with the description of works, drawings, and specifications in Section 6 (Employer’s Requirements). Each work item shall be described in sufficient detail to provide clear guidance to Bidders with respect to the type of works, their scope and complexity, and compliance with the required standards.

Bidders are required to enter the prices against each work item on a lump sum basis. Work items against which no lump sum price is entered by the Bidder will not be paid by the Employer when executed and shall be deemed covered by other work items against which the lump sum prices were entered. The sum of prices entered against each work item will represent the total bid price.

The whole cost of complying with the provisions of the Contract shall be included in the Items provided in the Activity Schedule, and where no Items are provided, the cost shall be deemed to be distributed among the Amounts for the related Items of Work.

The bid price is inclusive of all Environmental, Health and Safety management and compliance cost.

Activity Schedule

|  |  |  |  |
| --- | --- | --- | --- |
| **Item No** | **Description** | **Unit** | **Amount** |
| 1 | Preliminaries |  |  |
| 2 | Detail Drawings Production (Architectural, Structural, Building Services and As Built Drawings) |  |  |
| 3 | Ground Works |  |  |
| 4 | Concrete Works |  |  |
| 5 | Masonry Works |  |  |
| 6 | Timber & Metal Works |  |  |
| 7 | Roofing Works |  |  |
| 8 | Ceiling Works |  |  |
| 9 | Doors and Windows |  |  |
| 10 | Finishes |  |  |
| 11 | Electrical and Mechanical Installation |  |  |
| 12 | Hydraulics and Drainage |  |  |
| 13 | Fire Protection System |  |  |
| 14 | Security Access System |  |  |
| 15 | Landscaping and Boundary Wall |  |  |
| 16 | Safeguard Monitoring & Health Safety Management |  |  |
| 17 | Environmental Health and Safety Costs |  |  |
| 18 | As Built Drawings and/ or Operating and Maintenance Manuals |  |  |
| 19 | Addition and Omission |  |  |
| TOTAL | |  |  |
| GST 8% | |  |  |
| TOTAL AMOUNT (INCLUDING GST) | |  |  |

Bid Security

Bank Guarantee

[*Bank’s name, and address of issuing branch or office*]**[[5]](#footnote-5)**

|  |  |
| --- | --- |
| ***Beneficiary:*** | ***MINISTRY OF FINANCE*** |
| ***[name and address of the Employer]*** |  |
| ***Date:*** |  |
| ***Bid Security No.:*** |  |

We have been informed that [*name of the bidder*] (hereinafter called “the Bidder”) has submitted to you its bid dated [*please specify*] (hereinafter called “the Bid”) for the execution of [ *name of contract*] under Invitation for Bids No. [*please specify*] (“the IFB”).

Furthermore, we understand that, according to your conditions, bids must be supported by a bid guarantee.

At the request of the Bidder, we [*name of bank*] hereby irrevocably undertake to pay you any sum or sums not exceeding in total an amount of [*amount in words*] [*amount in figures*]upon receipt by us of your first demand in writing accompanied by a written statement stating that the Bidder is in breach of its obligation(s) under the bid conditions, because the Bidder

(a) has withdrawn its Bid during the period of bid validity specified by the Bidder in the Letter of Bid; or

(b) does not accept the correction of errors in accordance with the Instructions to Bidders (hereinafter “the ITB”); or

(c) having been notified of the acceptance of its Bid by the Employer during the period of bid validity, (i) fails or refuses to execute the Contract Agreement, or (ii) fails or refuses to furnish the performance security, in accordance with the ITB, or (iii) fails or refuses to furnish the domestic preference security, if required.

This guarantee will expire (a) if the Bidder is the successful Bidder, upon our receipt of copies of the Contract Agreement signed by the Bidder and the Performance Security issued to you upon the instruction of the Bidder; and (b) if the Bidder is not the successful Bidder, upon the earlier of (i) our receipt of a copy your notification to the Bidder of the name of the successful Bidder, or (ii) 28 days after the expiration of the Bidder’s bid.

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 Revisions, ICC Publication No. 758.**[[6]](#footnote-6)**

[*Authorized signature(s) and bank’s seal (where appropriate)*]

Technical Proposal

Forms

All sections of the technical proposal below must be provided in detail, using the Forms contained within and where applicable.

Documentary and Supporting evidence of all claims made must be provided.

Failure to follow these directions may lead to your bid being considered as incomplete and not suitable for evaluation.

[Form PER - 1: Proposed Personnel](#per1)

[Form PER - 2: Resume of Proposed Personnel](#per2)

[Form EQU - Equipment](#equ)

[Site Organization](#siteorg)

[Method Statement](#methst)

[Mobilization Schedule and](#mobschd) [Construction Schedule](#conssched)

[HS-C19: COVID-19 Health and Safety Plan](#COVID)

[Environmental, Health and Safety Management Plan](#ehsmp)

[Environmental, Health and Safety Code of Conduct](#codecon)

Form PER – 1

Proposed Personnel

Bidder should provide the details of the proposed personnel and their experience record in the relevant Information Forms below for each candidate: [Refer to Section 6 Item 5 Personnel](#PERSON)

|  |  |
| --- | --- |
| **1.** | **Title of position:** Project Manager |
|  | **Name** |
| **2.** | **Title of position**: Design Architect |
|  | **Name** |
| **3.** | **Title of position:** Civil Engineer |
|  | **Name** |
| **4.** | **Title of position:** Civil Engineer |
|  | **Name** |
| **5.** | **Title of position:** Electrical Engineer |
|  | **Name** |
| **6.** | **Title of position:** Environmental, Health and Safety Officer |
|  | **Name** |
| **7.** | **Title of position:** Site Supervisor |
|  | **Name** |

-- Note --

All titles of positions will be as listed in Section 6 (Employer’s Requirements).

Form PER – 2:

Resume of Proposed Personnel

The Bidder shall provide all the information requested below. Use one form for each position.

|  |  |  |
| --- | --- | --- |
| **Position; [insert position title]** | | |
| **Personnel information** | **Full Legal Name** | **Date of birth** |
| **Known as** | **Place of Birth** |
| **Nationality** | **Citizenship** |
| **Type of Government ID**  **Attach a copy of ID to this form** | **ID number** |
| **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 in reverse chronological order. Indicate particular technical and managerial experience relevant to the project.

|  |  |  |
| --- | --- | --- |
| **From** | **To** | **Company, Project, Position and Relevant Technical and Management Experience** |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |

Form EQU: Equipment

The Bidder shall provide adequate information and details to demonstrate clearly that it has the capability to meet the equipment requirements indicated in Section 6 (Employer’s Requirements), using the Forms below. A separate Form shall be prepared for each item of equipment listed, or for alternative equipment proposed by the Bidder.

|  |  |  |
| --- | --- | --- |
| **Type 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** | |
|  |  | |
|  |  | |

Site Organization

Bidders shall submit an organization chart(s) and provide an explanation of what they perceive to be the key internal and external roles, personnel and interactions on the Contract. In particular, the chart(s) will describe:

1. Overall organization chart showing division between site and head office responsibilities;
2. Placement of accommodation facilities
3. Site organization chart clearly showing responsibilities and functions;
4. Liaison with Engineer, Project Manager and Employer;
5. Liaison with external stakeholders.

Charts shall be submitted for the major phases of the project where there will be changes in the on-site personnel.

**All proposals for site organization shall comply with the Employer’s Requirements as specified in Section 6.**

Method Statement

The Bidder shall submit Method Statements demonstrating a credible methodology for carrying out the Works required under the contract. The Method Statements shall refer to the Construction Schedule described elsewhere.

The Method Statements shall comply with the Employer’s Requirements, Section 6. Method Statements should show an understanding of the requirements of the specifications. They should further build on the specifications describing how applicable site conditions or requirements will be met.

The Method Statements should be provided for headings below and should address the particular details contained under each heading.

1. A draft labor influx plan identifying the number and proposed living arrangements of expatriate work force. Timing for arrival and utilization of personnel shall be provided on a schedule that identifies, at least monthly the number of and positions of staff that will be required. This plan should detail all immigration requirements.
2. Construction program management, staging, tasks, activities and methodologies.
3. Key construction methodology, including
4. Civil earthworks, stockpiling, selection for reuse and disposal to establish the site profile
5. Preparation of the site, retaining walls and foundations for installation of elements including but not limited to the reservoir and process units
6. Temporary facilities on site
7. Installation and site fitting of utilities
8. Pavement & surfacing with particular reference to concrete construction, transportation and curing
9. Landscaping, clean up

Mobilization & Construction Schedule

The Bidders must provide a mobilization and construction Program which must be realistic and adequately detailed, identifying all significant activities. The Program shall include as a minimum:

* Mobilization of plant, resources, equipment and materials including permits, immigration, customs
* sequencing of works,
* design by the contractor and vendor supplied item shop drawings,
* fabrication and delivery,
* delivery of offshore items,
* environmental constraints,

The format and content of the construction Program shall be in a Gantt chart (excel or MS Project) format as per Section 6 (Employer’s Requirements) included in Section 4, Bidding Forms.

***“Please reflect the no-objection request and approval step for Site Specific Environmental, Health and Safety Management Plan as per Contract Conditions in the Mobilization Schedule.”***

COVID-19 Plan Health & Safety Plan (HS-C19)

As per ITB 11.1 (h) and Section 3, 1.1, “The Plan should be fit for purpose for the particular construction works of this contract and be aligned with any relevant government regulations and guidelines on COVID-19 prevention and controls, as well as workplace safety requirements, or in the absence thereof, to international good practice guidelines such as the World Health Organization’s publication entitled “Considerations for public health and social measures in the workplace in the context of COVID-19” (available here: <https://www.who.int/publications-detail/considerations-for-public-health-and-social-measures-in-the-workplace-in-the-context-of-covid-19> ), and to ADB SDCC’s advisory entitled “Protecting the Safety and Well-Being of Workers and Communities from COVID-19” (available here: <https://www.adb.org/publications/safety-well-being-workers-communities-covid-19>).”

Environmental, Health and Safety Management Plan (EHSMP)

The Bidder shall submit an outline Environmental, Health and Safety Management Plan (EHSMP) commensurate with the risks and impacts of the proposed works and activities. These strategies and plans shall describe in detail the actions, materials, equipment, management processes etc. that will be implemented by the Contractor, and its subcontractors.

In developing these strategies and plans, the Bidder shall have regard to the EHS provisions of the contract and EHS risks including those as may be more fully described in Section 6 (Employer’s Requirements).

**The EHSMP outline shall address the criteria identified below:**

1. Responsibilities and organisation chart
2. Copy of the Contractor’s Environmental Policy
3. Key elements to be addressed in the CEMP (sections, sub-plans and site-specific EMP etc)
4. Worker Code of Conduct induction and training
5. Outline of how the Contractor will adhere to the approved CEMP.
6. Monitoring and reporting
7. Records

**The Health & Safety Plan outline shall address the criteria identified below:**

1. Copy of the Contractor’s policy
2. Responsibilities
3. Worker induction and training
4. Communicable diseases awareness and prevention training
5. Emergency response action plan including cyclone preparedness.
6. First aid facilities and medical evacuations
7. Monitoring and recording/reporting

Environmental, Health and Safety Code of Conduct

Environmental, Health and Safety Code of Conduct for Contractor’s Personnel Form

***Note to Bidder!*** *The minimum content of the* *EHS Code of Conduct form as set out by the Employer shall not be substantially modified. However, the Bidder may add requirements as appropriate, including to take into account Contract-specific issues/risks. The Bidder shall initial and submit the EHS Code of Conduct form as part of its bid.*

**ENVIRONMENTAL, HEALTH AND SAFETY CODE OF CONDUCT FOR CONTRACTOR’S PERSONNEL**

We are the Contractor, [*enter name of Contractor*]. We have signed a contract with [*enter name of Employer*] for [*enter description of the Works*]. These Works will be carried out at [*enter the Site and other locations where the Works will be carried out*]. Our contract requires us to implement measures to address environmental, health and safety risks related to the Works.

This EHS Code of Conduct is part of our measures to deal with environmental, health and safety risks related to the Works. It applies to all our staff, labourers and other employees at the Works Site or other places where the Works are being carried out. It also applies to the personnel of each subcontractor and any other personnel assisting us in the execution of the Works. All such persons are referred to as “**Contractor’s Personnel”** and are subject to this EHS Code of Conduct.

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

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

**REQUIRED CONDUCT**

Contractor’s Personnel shall:

1. carry out his/her duties competently and diligently;
2. comply with this EHS Code of Conduct and all applicable laws, regulations and other requirements, including requirements to protect the health, safety and well-being of other Contractor’s Personnel and any other person;
3. maintain a safe working environment including by:
4. ensuring that workplaces, machinery, equipment and processes under each person’s control are safe and without risk to health;
5. wearing required personal protective equipment;
6. using appropriate measures relating to chemical, physical and biological substances and agents; and
7. following applicable emergency operating procedures.
8. report work situations that he/she believes are not safe or healthy and remove himself/herself from a work situation which he/she reasonably believes presents an imminent and serious danger to his/her life or health;
9. treat other people with respect, and not discriminate against specific groups such as women, people with disabilities, migrant workers or children;
10. report violations of this EHS Code of Conduct; and
11. not retaliate against any person who reports violations of this EHS Code of Conduct, whether to us or the Employer, or who makes use of the grievance mechanism for Contractor’s Personnel or the project’s Grievance Redress Mechanism.

**RAISING CONCERNS**

If any person observes behavior that he/she believes may represent a violation of this EHS Code of Conduct, or that otherwise concerns him/her, he/she should raise the issue promptly. This can be done by call [ ] to reach the Contractor’s hotline *(if any)* and leave a message.

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

**CONSEQUENCES OF VIOLATING THE ENVIRONMENTAL, HEALTH AND SAFETY CODE OF CONDUCT**

Any violation of this EHS Code of Conduct by Contractor’s Personnel may result in serious consequences, up to and including termination and possible referral to legal authorities.

FOR CONTRACTOR’S PERSONNEL:

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

Name of Contractor’s Personnel: [*insert name*]

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

Date: [*day month year*]: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Countersignature of authorized representative of the Contractor:

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

Date: [*day month year*]: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Bidder’s Qualification

To establish its qualifications to perform the contract in accordance with Section 3 (Evaluation and Qualification Criteria) the Bidder shall provide the following information requested in the corresponding Information Sheets. Documentary evidence of all claims must be provided

Form ELI – 1

Bidder’s Information Sheet

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Bidder’s Information | | | | |
|  | | **Information of the Bidder** | **If the Bidder is a subsidiary or branch, information of any parent company/companies** |
| **Names** | **Full legal name(s)** |  |  |
| **Full trading name(s) (if any)** |  |  |
| **Addresses** | **Registered address(es)** |  |  |
| **Trading address(es)** |  |  |
| **Postal address(es) (if different from trading address)** |  |  |
| **Type of organization** | |  |  |
| **Country of constitution/incorporation/registration** | |  |  |
| **Year of constitution/incorporation/ registration** | |  |  |
| **Corporate or registration number** | |  |  |
| **In case of a Joint Venture, legal name of each partner** | |  |  |
| **Bidder’s authorized representative**  (name, address, telephone number(s), fax number(s), e-mail address) | |  | |
| **Attached are copies of the following documents.**   * + - 1. In case of a single entity, articles of incorporation or constitution and company incorporation/registration of the legal entity named above, in accordance with ITB 4.1 and ITB 4.2.       2. Authorization to represent the firm or Joint Venture named above, in accordance with ITB 20.2.       3. In case of a Joint Venture, a letter of intent to form a Joint Venture or Joint Venture agreement, in accordance with ITB 4.1.       4. In case of a government-owned enterprise, any additional documents not covered under 1 above required to comply with ITB 4.5. | | | |

Form ELI – 2

Joint Venture Information Sheet

Each partner of the Joint Venture and Specialist Subcontractor must fill out this form separately.

|  |  |  |  |
| --- | --- | --- | --- |
| Joint Venture / Specialist Subcontractor Information | | | |
| **Bidder’s legal name** | |  | |
|  | | **Information of Joint Venture Partner or Specialist Subcontractor** | **If any Joint Venture Partner or Specialist Subcontractor is a subsidiary or branch, information of any parent company/companies** |
| **Names** | **Full legal name(s)** |  |  |
| **Full trading name(s) (if any)** |  |  |
| **Addresses** | **Registered address(es)** |  |  |
| **Trading address (es)** |  |  |
| **Postal address (es) (if different from trading address)** |  |  |
| **Type of organization** | |  |  |
| **Country of constitution/incorporation/ registration** | |  |  |
| **Year of constitution/incorporation/ registration** | |  |  |
| **Corporate or registration number** | |  |  |
| **Joint Venture Partner’s or Specialist Subcontractor’s authorized representative information**  (name, address, telephone number(s), fax number(s), e-mail address) | |  | |
| **Attached are copies of the following documents.**   * + - 1. Articles of incorporation or constitution and company incorporation/registration of the legal entity named above, in accordance with ITB 4.1 and ITB 4.2.       2. Authorization to represent the firm named above, in accordance with ITB 20.2.       3. In the case of a government-owned enterprise, documents establishing legal and financial autonomy and compliance with commercial law, in accordance with ITB 4.5. | | | |

Form CON – 1

Historical Contract Nonperformance

#### Each Bidder must fill out this form in accordance with Criteria 2.2.1 and 2.2.3 of Section 3 (Evaluation and Qualification Criteria) to describe any history of nonperforming contracts and pending litigation or arbitration formally commenced against it.

In case of a Joint Venture, each Joint Venture Partner must fill out this form separately and provide the Joint Venture Partner’s name:

#### Joint Venture Partner: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

|  |  |  |  |
| --- | --- | --- | --- |
| Table 1: History of Nonperforming Contracts | | | |
| **Choose one of the following:**   * No nonperforming contracts. * Below is a description of nonperforming contracts involving the Bidder (or each Joint Venture partner if Bidder is a Joint Venture). | | | |
| **Year** | **Description** | **Amount of Non-performed Portion of Contract**  **($ equivalent)** | **Total Contract Amount ($ equivalent)** |
| *[insert year]* | 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 nonperformance: *[indicate main reason(s)]*** | *[insert amount]* | *[insert amount]* |

Form FIN - 1:

Historical Financial Performance

Each Bidder must fill out this form.

In case of a Joint Venture, each Joint Venture Partner must fill out this form separately and provide the Joint Venture Partner’s name:

Joint Venture Partner: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | Financial Data for past 5 years | | | | |
|  | Year 1: | Year 2: | Year 3: | Year 4: | Year 5: |

Information from Balance Sheet

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Total Assets (TA)** |  |  |  | |  |  |
| **Total Liabilities (TL)** |  |  |  | |  |  |
| **Net Worth =TA – TL** |  |  |  | |  |  |
| **Current Assets (CA)** |  |  |  | |  |  |
| **Current Liabilities (CL)** |  |  |  | |  |  |
| **Working Capital = CA - CL** |  |  |  | |  |  |
| **Most Recent**  **Working Capital** | To be obtained for most recent year and carried forward to FIN - 3 Line 1; in case of Joint Ventures, to the corresponding Joint Venture Partner’s FIN - 3. | | |  | | |

Information from Income Statement

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Total Revenues** |  |  |  |  |  |
| **Profits Before Taxes** |  |  |  |  |  |
| **Profits After Taxes** |  |  |  |  |  |
| * Attached are copies of financial statements (balance sheets including all related notes, and income statements) f**or the last 5 years,** as indicated above, complying with the following conditions. * Unless otherwise required by Section 3 of the Bidding Document, all such documents reflect the standalone financial situation of the legal entity or entities comprising the Bidder and not the Bidder’s parent companies, subsidiaries, or affiliates. * Historical financial statements must be audited by a certified accountant. * Historical financial statements must be complete, including all notes to the financial statements. * Historical financial statements must correspond to accounting periods already completed and audited (no statements for partial periods shall be requested or accepted). | | | | | |

Form FIN – 2

Average Annual Construction Turnover

The information supplied should be the Annual Turnover of the Bidder or each partner of a Joint Venture for the total certified payments received from the clients for contracts in progress or completed, converted to MVR at the rate of exchange at the end of the period reported.

In case of a Joint Venture, each Joint Venture Partner must fill out this form separately and provide the Joint Venture Partner’s name:

Joint Venture Partner: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

|  |  |  |  |
| --- | --- | --- | --- |
| **Annual Turnover Data for the Last 5 Years (Construction only)** | | | |
| **Year** | **Amount Currency MVR** | **Exchange Rate** | **MVR Equivalent** |
| **1** |  |  |  |
| **2** |  |  |  |
| **3** |  |  |  |
| **4** |  |  |  |
| **5** |  |  |  |
| **Average Annual Construction Turnover** | | |  |

Form FIN – 3

Availability of Financial Resources

Bidder must demonstrate sufficient financial resources, usually comprising of Working Capital supplemented by credit line statements or overdraft facilities and others to meet the Bidder’s financial requirements for

1. its current contract commitments, and
2. the subject contract.

In case of a Joint Venture, each Joint Venture Partner must fill out this form separately and provide the Joint Venture Partner’s name:

Joint Venture Partner: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

|  |  |  |
| --- | --- | --- |
| **Financial Resources** | | |
| **No.** | **Source of financing** | **Amount MVR equivalent)** |
| 1 | Working Capital (to be taken from FIN - 1) |  |
| 2 | Credit Line**a** |  |
| 3 | Other Financial Resources |  |
|  | **Total Available Financial Resources** |  |

*a To be substantiated by a letter from the bank issuing the line of credit.*

Form FIN- 4

Financial Resources Requirement

Bidders (or each Joint Venture partner) 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.

**In case of a Joint Venture, each Joint Venture Partner must fill out this form separately and provide the Joint Venture Partner’s name:**

Joint Venture Partner: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

|  |
| --- |
| **Current Contract Commitments** |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| No. | Name of Contract | Employer’s **Contact (Address, Tel, Fax)** | **Contract Completion Date** | **Outstanding Contract  Value**  **(X) a** | **Remaining Contract Period in months (Y)  b** | **Monthly Financial Resources Requirement**  **(X / Y)** |
| 1 |  |  |  |  |  |  |
| 2 |  |  |  |  |  |  |
| 3 |  |  |  |  |  |  |
| 4 |  |  |  |  |  |  |
| **Total Monthly Financial Requirements for Current Contract Commitments** | | | | | | **MVR ………………….** |

a ***Remaining outstanding contract values to be calculated from 28 days prior to the bid submission deadline ($ equivalent based on the foreign exchange rate as of the same date).***

b *Remaining contract period to be calculated from 28 days prior to bid submission deadline.*

Form FIN - 5

Self-Assessment Tool for Bidder’s Compliance to Financial Resources (Criterion 2.3.3 of Section 3)

This form requires the same information submitted in Forms FIN - 3 and FIN - 4. All conditions of “Available Financial Resources Net of CCC **≥** Requirement for the Subject Contract” must be satisfied to qualify.

**Form FIN - 5A: For Single Entities**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| For Single Entities:  (A) | Total Available Financial Resources from FIN – 3 (B) | Total Monthly Financial Requirement for Current Contract Commitments (CCC) from FIN – 4 (C) | Available Financial Resources Net of CCC D = (B - C) | Requirement  for the Subject Contract  (E) | Results:  Yes or No  [*D must be greater than or equal to E*]  (F) |
| (Name of Bidder) |  |  |  |  |  |

**Form FIN - 5B: For Joint Ventures**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| For Joint Ventures:  (A) | Total Available Financial Resources from FIN – 3  (B) | Total Monthly Financial Requirement for Current Contract Commitments (CCC) from FIN – 4 (C) | Available Financial Resources Net of CCC D = (B - C) | Requirement  for the Subject Contract  (E) | Results:  Yes or No  [*D must be greater than or equal to E*]  (F) |
| One Partner: |  |  |  |  |  |
| (Name of Partner) |  |  |  |  |  |
| Each Partner: |  |  |  |  |  |
| (Name of Partner 1) |  |  |  |  |  |
| (Name of Partner 2) |  |  |  |  |  |
| (Name of Partner 3) |  |  |  |  |  |
| All partners  combined | ∑ D = Sum of available financial resources net of current contract commitments for all partners | | ∑ D = \_\_\_\_\_\_\_ |  |  |

**Form FIN – 5 is made available for use by the bidder as a self-assessment tool, and by the Employer as an evaluation work sheet, to determine compliance with the financial resources requirement as stated in 2.3.3. Failure to submit Form FIN - 5 by the Bidder shall not lead to bid rejection.**

Form EXP – 1

Contracts of Similar Size and Nature

Fill up one (1) form per contract. Each contract shall be supported by documents such as Signed Contract Agreement or Certificate of Completion of the Works.

The exchange rate to be used to calculate the value of the contract for conversion to a specific currency shall be the selling rate of the Recipient’s Central bank on the date of the contract.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Contract of Similar Size and Nature** | | | | |
| **Contract No** . . . . . . **of** . . . . . | **Contract Identification No and Title** |  | | |
| **Award Date** |  | | **Completion Date** |  |
| **Total Contract Amount** | **MVR** | | | |
| **If partner in a Joint Venture or Subcontractor, specify participation of total contract amount** | **Percent of Total** | | **Amount** | |
| **Employer’s Name**  **Address**  **Telephone/Fax Number**  **E-mail** |  | | | |
| **Description of the Similarity in Accordance with Criterion 2.4.1 of Section 3 (Evaluation and Qualification Criteria)** | | | | |
| Participation as a contractor, Joint Venture partner, or Subcontractor, in **at least one contract** that has been satisfactorily and substantially completed within the last **6 years** and that is similar to the proposed works, where the value of the Bidder’s participation exceeds **MVR 12.5 Million (Twelve point Five Million Maldivian Rufiyaa)** The similarity of the Bidder’s participation shall be based on:  *Design and Construction of ground floor plus 1 level buildings or multi storey buildings* |  | | | |

Form EXP - 2

Construction Experience in Key Activities

Fill up one (1) form per contract. Each contract shall be supported by documents such as Signed Contract Agreement or Certificate of Completion of the Works.

Each Bidder must fill out this form.

If complied by Specialist Subcontractor, each Specialist Subcontractor must fill out this form and provide the Specialist Subcontractor’s name:

Specialist Subcontractor: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Contract of Similar Size and Nature** | | | | |
| **Contract No** . . . . . . **of** . . .. | **Contract Identification No and Title** |  | | |
| **Award Date** |  | | **Completion Date** |  |
| **Total Contract Amount** | **MVR** | | | |
| **If partner in a Joint Venture or Subcontractor, specify participation of total contract amount** | **Percent of Total** | | **Amount** | |
| **Employer’s Name**  **Address**  **Telephone/Fax Number**  **E-mail** |  | | | |
| **Description of the Similarity in Accordance with Criterion 2.4.2 of Section 3 (Evaluation and Qualification Criteria)** | | | | |
| For contracts executed during the period stipulated in Section 3, 2.4.1, a minimum construction experience is required in the following key activities:   1. Architectural design of ground floor plus 1 level buildings or multi storey buildings of minimum 2 projects 2. Structural design of ground floor plus 1 level buildings or multi storey buildings of minimum of minimum 2 projects |  | | | |

BID SUBMISSION CHECKLIST

*Failure to include requested documentation may result in disqualification of your bid*

(Check here that you have included everything asked for!!)

|  |  |
| --- | --- |
| Is the Letter of Bid signed by an Authorised Person, supported by a Power of Attorney |  |
| Is your Letter of Bid **signed in ink** by the authorised representative and the Letter of bid **is an ORIGINAL** and NOT a photocopy/scan copy/ certified true copy. A Photocopied/scan/certified true copy Letter of Bid or a digital signature will result in DISQUALIFICATION OF YOUR BID |  |
| Have you considered all Addendums to Bid, Minutes of Pre-Bid Meeting and Clarifications issued, in the preparation of YOUR BID? |  |
| Have you answered Items, c), d), e), f), l), m), n), o) in Section 4, Letter of Bid |  |
| Have you included the “Power of Attorney” authorising the representative to sign? **Section 2, ITB 18.1** |  |
| Have you provided the correct number of days (120 days) for BID VALIDITY? **Section 2, ITB 19.1** |  |
| Have you included an ORIGINAL, SIGNED Bid Security per **Section 2 ITB 19.1 You may *not* submit a SWIFT message as a Bid Security.** Note that Bid Security must be valid for 28 days beyond Bid Validity |  |
| Have you included your COVID-19 Health Plan, HS-C19 as per ITB 16.1 |  |
| For technical proposal have you included information on:   1. Site Organization 2. Method Statement 3. Mobilization Schedule 4. Construction Schedule 5. Health & Safety COVID-19 plan |  |
| **Form PER1 -1 Personnel:** As stated under Section 6, Item 5 Personnel |  |
| **Form PER -2 Resume of proposed personnel.** |  |
| **Form EQU – Equipment:**  As stated under Section 6 |  |
| Are all Price Schedules/BOQ filled |  |
| Is the Activity Schedule filled |  |
| Are all of the Bidding Forms in YOUR BID supported with documentary Evidence as requested?  **IT IS NOT ENOUGH TO JUST FILL IN THE FORMS – YOU MUST PROVIDE PROOF** |  |
| **Form ELI – 1: Bidder’s Information Sheet:** If forming a JV – an MOU or Letter of Intenet to be provided, Articles of Incorporation and othe requirements per GoM |  |
| **Form ELI - 2: Joint Venture Information Sheet:** Full Name and numbers of JV members and As Above |  |
| **Form CON - 1: History contract Non-performance:** To fill by each JV member indicating any non-performance of a contract. |  |
| **Form EXP - 1: Similar Contractual Experience:** Copies of Previous similar projects including completeion certificates or commission certificates |  |
| **Form EXP - 2: Experience in Key activities;** Supporting evidence of claims made on architectural design and structural design. |  |
| **Form Fin-1: Financial Statements** Provide Independently Audited End of Year Taxation /Financial Statements for the years ending 2017 – 2021 or if available 2018-2022. |  |
| **Form Fin-2: Average Annual Turnover:** This information is usually assessed from the Financial Statements provided in Fin-1. |  |
| **Form Fin-3: Financial Resources.** All members of the JV or single entities must provide information relating to available cash assets, Lines of Credit (Bank Proof to be provided) |  |
| **Form Fin-4: Current Contract Commitments:** Bidders (or each Joint Venture partner) 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 |  |
| As per ITB 11.1 (h). The Bidder shall submit with its Bid the following additional documents:   1. Tax Registration Certificate |  |
| 1. Business Registration Certificate |  |
| 1. Bid Security |  |
| 1. Power of Attorney authorizing to sign the bid. |  |
| 1. Contract agreements for the past and ongoing contracts that are similar in nature. For completed contracts, local purchase orders, submit Acceptance Certificates, Completion Certificates or Taking Over certificates or equivalents for foreign firms. |  |
| 1. National Contractors Registry Certificate |  |
| 1. The audited financial statements for the last 5 years (2017, 2018, 2019, 2020, 2021 or if available 2018, 2019, 2020,2021 and 2022) |  |

Section 5: Eligible Countries



*“No nationality restrictions apply, other than any restrictions arising from ITB 4.8.”*

Part 2

Employer’s Requirements

Section 6: Employer’s Requirements

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1. Specifications

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**PRELIMINARIES**

* 1. **Scope of work**

**Project Description**

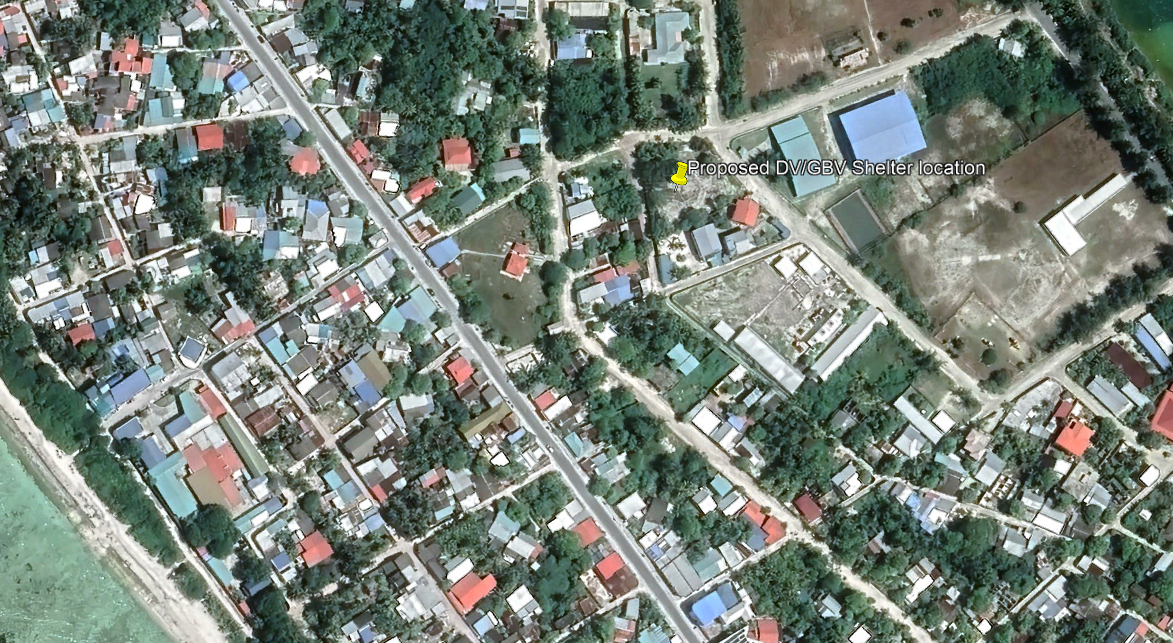
Strengthening Gender Inclusive Initiatives Project (SGII) under ADB Grant assistance is to increase access to sustainable gender responsive social services. This project includes establishment of climate resilient shelters for DV/GBV survivors in Addu, Hulhumale and R. Ungoofaaru through design and construction of pilot facilities which are integrated into social services network to increase availability and access to gender responsive and inclusive social services for DV/GBV survivors.

The DV/GBV Hithadhoo Shelter will be a G+1 building designed for total 20 units, 44 occupants (residents and dropin clients). Procurement method for this project is Design-Build.

**Scope of Work**

The Ministry of National Planning, Housing and Infrastructure as the Implementing Agency for the output 5 of SGII project now seek a Contractor to design and build, ground + one floor DV/GBV Shelter at S. Hithadhoo in according with the concept design drawings and the requirement prepared by the Employer.

**Site Location**



The proposed project site is located at S.Hithadhoo and its approximately 1938.93 sqm (20870.46 sqft). The site is on empty flat and unused land with some vegetation and 14 large and small trees. Proposed concept design for the project is developed to preserve the existing trees at the site.

**Detailed Design Consideration**

The facilities/space requirements for the shelter building are shown in the concept design drawings provided.

Design Consideration for the Shelter building includes but is not limited to the following;

1. Carry out relevant surveys and investigations for the proposed building site.
2. Detailed design including architectural, structural and services drawings shall be based on the concept design provided. Refer to the concept design presentation shared to understand the project vision, design strategies, climate consideration and key details of the design.
3. The design and construction of the shelter shall incorporate principles of environmentally sustainable and accessible development.
4. Design and construction of the Shelter shall be functional, low energy consumption and low cost in use over the building life.
5. Shall consider quality construction and use of durable materials.
6. All outdoor and open spaces shall include all design consideration in the concept design.
7. The ground floor finish level of the building shall be 650mm from the natural ground level. Other open areas to be raised 200mm from natural ground level.
8. Minimum floor to ceiling height shall be 3m.
9. All design shall comply with Building Act and all other regulations stipulated under the Act by MNPHI (Ministry of National Planning, Housing and Infrastructure) Planning Regulation.
10. The design of the shelter shall consider functionality and low energy consumptions over the building life.
11. Insitu concrete structural frame with masonry walls.

**Building Services requirements**

* + - 1. All electrical works shall be accordance with the guidelines set out by the Utility Regulatory Authority, State Electrical Company Ltd or FENAKA and shall include cabling from nearest transformer, electrical main connection to building.
      2. All electrical wiring shall be concealed conduit except for spaces within DB’s closet and area above ceiling, which shall be exposed conduit/trucking.
      3. All plumbing works must comply to any guidelines set out by the service provider.
      4. All Fire protection services must comply the guidelines, regulations and requirements of the relevant government authorities.
      5. Services shall include internet and cable TV provisions.
      6. All services shall be suitable for local weather conditions.
      7. All services drawings shall be approved before construction.
      8. All materials for services shall be approved before its procured.

**Detail Design Drawings submission**

Final construction drawing set shall include but is not limited to;

1. Location Plan
2. Site Plan
3. Complete architectural drawings including floor plans, elevations, cross sections, door/window plans ventilation schedules, architectural details etc.
4. Complete structural drawings including structural plans and structural details.
5. Complete building services drawings including plumbing, electrical, firefighting, security etc.
6. Complete drawings for landscaping.
7. Detailed finishes schedules.
8. Any other relevant drawings and details.

All drawings should include the necessary dimensions and annotations and shall be submitted in AutoCAD and PDF format.

At the end of the project, the contractor shall submit to the employer complete as built drawings of the building.

The Contractor shall submit detailed design drawings (i.e., Good for Construction set of drawings) for employers' approval before beginning of construction works. Final approved detail design drawings as well as shop drawings shall be signed and stamped by a locally registered Architect and Engineer.

**Finishing Schedule**

The proposed finishing schedule is the Employers requirement for this project. Contractor may propose for employers’ approval improvements to this finishes schedule at the detail design stage and at the construction stage of the project.

The contractor shall provide specifications and test reports pertaining the proposed materials. The quality and durability of the proposed materials must be ensured and must be of ISO standards or any other equivalent standard acceptable to the employer.

Expected Finishes Schedule

|  |  |  |
| --- | --- | --- |
| Location/area | Element | Specifications |
| Boundary wall | * Walls | 2 coats of emulsion weatherproof paint with preparatory premier and sealants, as specified by manufacturer and approved by employer.  Timber/metal or equivalent vertical members similar to concept design, approved by employer |
| * Gates | Timber/WPC/metal or equivalent gate door approved by employer. |
| Corridors, pathways, entry porch, ramps | * Floors | Homogeneous/porcelain or equivalent non-skid floor tile finish with skirting, laid with tile adhesive as specified by manufacturer and approved by employer. |
| * Walls | 2 coats of emulsion weatherproof paint with preparatory premier and sealants, as specified by manufacturer and approved by employer. |
| * Ceilings | Slab soffit area ceilings shall be 2 coats of weatherproof emulsion paint finish on smooth finish with preparatory primer and sealants as specified by manufacturer and approved by employer. |
| * Screens | Timber/metal screens approved by employer. |
| * Railings | SS railing for all areas where required, approved by employer. |
| Staircase | * Floors | Homogeneous or equivalent non-skid floor tile finish with nosing and skirting on side walls, laid with tile adhesive as specified by manufacturer and approved by employer. |
| * Walls | 2 coats of emulsion weatherproof paint with preparatory premier and sealants, as specified by manufacturer and approved by employer. |
| * Ceilings | Slab soffit area ceilings shall be 2 coats of weatherproof emulsion paint finish on smooth finish with preparatory primer and sealants as specified by manufacturer and approved by employer. |
| * Railings | SS railing for all areas where required, approved by employer. |
| Security cabin, first aid room, reception, manager’s office, counselling rooms, legal aid rooms, prayer room, nursery, vocational training hall, Computer room, multipurpose hall, library, lounge, etc. | * Floors | Homogeneous/porcelain or equivalent floor tile finish with skirting, laid with tile adhesive as specified by manufacturer and approved by employer. |
| * Walls | 2 coats of emulsion paint with preparatory premier and sealants, as specified by manufacturer and approved by employer. |
| * Ceilings | Slab soffit area ceilings shall be 2 coats of emulsion paint with preparatory premier and sealants, as specified by manufacturer and approved by employer. |
| * Ventilation and Air-conditioning | Ceiling fans and AC units to be installed in all rooms. |
| Ground floor, Accommodation rooms | * Floors | Homogeneous/porcelain or equivalent floor tile finish with skirting, laid with tile adhesive as specified by manufacturer and approved by employer. |
| * Walls | 2 coats of emulsion paint with preparatory premier and sealants, as specified by manufacturer and approved by employer. |
| * Ceilings | Slab soffit area ceilings shall be 2 coats of emulsion paint with preparatory premier and sealants, as specified by manufacturer and approved by employer. |
| * Ventilation and Air-conditioning | Stand fans to be installed in all the accommodation units and to provide power points for AC units in all rooms. No ceiling fans shall to be installed in any of the accommodation rooms |
| * Universally accessible units | Grab bars to be fixed in the rooms, as specified by manufacturer and approved by employer.  All fittings and fixtures for accessible rooms shall meet the standard requirements. |
| All (ground floor) Bathrooms/toilets | * Floors | Homogeneous or equivalent non-skid floor tile finish, laid with tile adhesive as specified by manufacturer and approved by employer. |
| * Walls | Full height Porcelain/ceramic or equivalent wall tile finish, laid with tile adhesive as specified by manufacturer and approved by employer. |
| * Ceilings | Cement board or equivalent suspended ceiling to conceal the plumbing lines. Ceiling finish shall be 2 coats of emulsion water-based paint on putty smooth finish with preparatory primer and sealants, as specified by manufacturer and approved by employer. |
| * Universally accessible units | Grab bars, drop down bars and alarm cords and to be fixed in the toilets, as specified by manufacturer and approved by employer.  For all accessible toilets, toilet fittings, fixtures and installations shall meet the standard requirement for accessible toilets. |
| Kitchen | * Floors | Homogeneous or equivalent non-skid floor tile finish, laid with tile adhesive as specified by manufacturer and approved by employer. |
| * Walls | Full height Porcelain/ceramic or equivalent wall tile finish, laid with tile adhesive as specified by manufacturer and approved by employer. |
| * Ceilings | Slab soffit area ceilings shall be 2 coats of emulsion paint with preparatory premier and sealants, as specified by manufacturer and approved by employer. |
| Dining | * Floors | Homogeneous/porcelain or equivalent non-skid floor tile finish with skirting, laid with tile adhesive as specified by manufacturer and approved by employer. |
| * Walls | 2 coats of emulsion paint with preparatory premier and sealants, as specified by manufacturer and approved by employer. |
| * Ceilings | Slab soffit area ceilings shall be 2 coats of emulsion paint with preparatory premier and sealants, as specified by manufacturer and approved by employer. |
| Laundry | * Floors | Homogeneous/porcelain or equivalent non-skid floor tile finish with skirting, laid with tile adhesive as specified by manufacturer and approved by employer. |
| * Walls | 1.2m height Porcelain/ceramic or equivalent wall tile finish, laid with tile adhesive as specified by manufacturer and approved by employer.  Other wall areas 2 coats of emulsion paint with preparatory premier and sealants, as specified by manufacturer and approved by employer. |
| * Ceilings | Slab soffit area ceilings shall be 2 coats of emulsion paint with preparatory premier and sealants, as specified by manufacturer and approved by employer |
| First floor - corridors | * Floors | Homogeneous/porcelain or equivalent non-skid floor tile finish with skirting, laid with tile adhesive as specified by manufacturer and approved by employer. |
| * Walls | 2 coats of emulsion weatherproof paint with preparatory premier and sealants, as specified by manufacturer and approved by employer. |
| * Ceilings | Cement board or equivalent suspended ceiling to conceal the plumbing lines. Ceiling finish shall be 2 coats of emulsion water-based paint on putty smooth finish with preparatory primer and sealants, as specified by manufacturer and approved by employer. |
| * Screens | Timber/metal screens approved by employer. |
| * Railings | SS railing for all areas where required, approved by employer. |
| First floor - Spare room, office, staff meeting, maintenance staff room, storage, office staff room | * Floors | Homogeneous/porcelain or equivalent floor tile finish with skirting, laid with tile adhesive as specified by manufacturer and approved by employer. |
| * Walls | 2 coats of emulsion paint with preparatory premier and sealants, as specified by manufacturer and approved by employer. |
| * Ceilings | Gypsum board or equivalent suspended ceiling, finish shall be 2 coats of emulsion paint on putty smooth finish with preparatory primer and sealants, as specified by manufacturer and approved by employer. |
| * Ventilation and Air-conditioning | Ceiling fans and AC to be installed in all rooms. |
| First floor - Accommodation rooms | * Floors | Homogeneous/porcelain or equivalent floor tile finish with skirting, laid with tile adhesive as specified by manufacturer and approved by employer. |
| * Walls | 2 coats of emulsion paint with preparatory premier and sealants, as specified by manufacturer and approved by employer. |
| * Ceilings | Gypsum board or equivalent suspended ceiling, finish shall be 2 coats of emulsion paint on putty smooth finish with preparatory primer and sealants, as specified by manufacturer and approved by employer. |
| * Ventilation | Stand fans to be installed in all the accommodation units and to provide power points for AC in all rooms No ceiling fans shall to be installed in any of the accommodation rooms |
| * Universally accessible units | Grab bars to be fixed in the rooms, as specified by manufacturer and approved by employer.  All fittings and fixtures for accessible rooms shall meet the standard requirements. |
| All (first floor) Bathrooms/toilets | * Floors | Homogeneous or equivalent non-skid floor tile finish, laid with tile adhesive as specified by manufacturer and approved by employer. |
|  | * Walls | Full height Porcelain/ceramic or equivalent wall tile finish, laid with tile adhesive as specified by manufacturer and approved by employer |
|  | * Ceilings | Cement board or equivalent suspended ceiling to conceal the plumbing lines. Ceiling finish shall be 2 coats of emulsion water-based paint on putty smooth finish with preparatory primer and sealants, as specified by manufacturer and approved by employer. |
|  | * Universally accessible units | Grab bars, drop down bars and alarm cords and to be fixed in the toilets, as specified by manufacturer and approved by employer.  For all accessible toilets, toilet fittings, fixtures and installations shall meet the standard requirement for accessible toilets. |
| External doors |  | Timber/WPC or equivalent doors approved by employer. |
| Windows |  | Timber/Aluminum or equivalent openable panel windows with sliding screens approved by employer (refer to concept design drawings for details),  8mm thick tempered glass on window panels. |
| Ventilators in Bathrooms |  | Timber/Aluminum or equivalent louvered ventilators approved by employer. |
| Internal doors |  | Timber/WPC or equivalent doors approved by employer. |
| Power and Lighting |  | Adequate lighting and power outlets shall be provided in all areas of the building and shall be in accordance to the approved services drawings.  All electrical works for the entire building to be in accordance to standards set by Utility Regulatory Authority or STELCO/FENAKA. |
| Ventilation and Airconditioning in other common areas |  | Where necessary adequate number of ceiling fans to be installed in the common areas and exhaust fans to installed in the kitchen area. |
| Security Systems |  | Camera system shall be provided covering all public area, corridors, stairs and all open areas.  All drawings for security systems shall be submitted for Client’s approval. |
| Fire Safety |  | For kitchen and pantry areas smoke detector shall be provided and for entire building Fire Detection and Protection Systems shall be in accordance to MNDF guidelines. |
| Door access/security system |  | Client approved door security access system shall be provided for all entrance gates and door to accommodation zone. |
| Sloped Roof |  | Sloped metal roofing (Lysaght or equivalent) with supporting timber or metal roof structure approved by employer |
| General Landscaping |  | All materials for the landscaping and porous paving material on the landscape areas shall be approved by employer |

* 1. **Standard and Codes**
     1. The Contractor shall, perform the Works in compliance with all regulations, standard specifications or statutes of the Government of Maldives unless conformation to other specifications and standards are noted.
     2. The current British Standard Specifications and Codes of Practice or ***any other equivalent international standard shall apply to and form part of these specifications*** unless otherwise specified in respect of all materials and works to which they have application.
  2. **Drawings and Specifications**
     1. Drawings and Specifications are intended to complement each other, so that if anything is shown on the Drawings, but not mentioned in the specifications or vice versa, it is to be furnished and built as though specifically set forth in all three. If any discrepancies, errors, ambiguities or omissions occur in the Drawings or Specifications, the same shall be referred to the Project Manager before proceeding with the Works, and the Project Manager decision on such discrepancies, errors, ambiguities or omissions shall be final.
     2. In addition to the Drawings and Specifications attached hereto, the Project Manager will during the progress of the Works furnish additional Drawings, Specifications, and instructions as may be necessary, in the opinion of the Project Manager for the purpose of the proper and adequate execution and maintenance of the Works, and the Contractor shall make his work conform. Such drawings and instructions shall be deemed to be part of the Contract Documents.
  3. **Transportation to the Site**
     1. The Contractor shall provide all necessary transport, handling and storage of all materials, components and the like to their points of installation on site including transport to and from storage. The Contractor shall provide all necessary transport of labour to and from the site.
  4. **Schedule and Execution Plan**
     1. The Contractor shall prepare and submit to the Project Manager for approval the construction schedule and an execution plan of temporary facilities, stockyards, etc., before starting the Works.
  5. **Repairing and Correction**
     1. Any breakage(s) or defect(s) of existing buildings, road utilities, or part(s) of them caused by the Works (including transportation for the Works) shall be repaired or corrected by the Contractor, as it is the contractor who shall be held responsible for such.
  6. **Workmanship and Materials**
     1. All workmanship shall be of the best standard. All goods and materials to be incorporated in the Works must be new, unused, of the most recent or current models and incorporate all recent improvements in design and materials unless provided otherwise in the contract.
     2. The Contractor shall submit for the approval of the Project Manager a list of names and addresses of the manufacturers and trademarks or names of all the various types of materials and goods he proposes to use in the Works. The list shall include reference to the specification’s clause or article to which the materials and goods apply.
     3. Materials shall be obtained from approved sources and used in accordance with the manufacturer’s printed instructions. In the absence of a specification all materials shall comply with a relevant standard. The Project Manager shall order the removal of any materials, which he has not approved.
     4. No orders for materials and goods shall be placed until approval has been obtained for the materials and goods from the Project Manager.
     5. The Contractor shall note that it is his responsibility to include in his price, the cost of the materials and products as specified and no adjustment will be allowed should the Project Manager reject the alternatives.
  7. **Obvious Work**
     1. Where an item of work is obviously required for the type of work being undertaken then it shall be deemed to have been included even though the item is not specifically mentioned or shown in the Drawings or Specifications.
  8. **Protection**
     1. The Contractor shall have the Works and adjoining properties protected from inclement weather. Any loss or damage caused by weather, carelessness or lack of skilled workers, accident or otherwise shall be of such property that is affected. The Contractor shall provide all necessary dustsheets, barriers and guardrails and clear away at completion.
     2. The Works shall be suspended during such a time as may be directed and/or approve d by the Project Manager if the specified quality of work is difficult to maintain during inclement weather.
  9. **Scaffolding**
     1. The Contractor shall provide, erect, maintain, dismantle and clear away at completion proper and adequate including that required for subcontractor and suppliers. Putlog holes shall be made good to match the adjacent surface as the scaffolding is dismantled.
     2. The Contractor shall be responsible for all safety precautions in connection with the scaffolding including the provision of all bracing, scaffold boards, toe boards and the like and for entire sufficiency for the Works.
  10. **Construction Machinery, Plants and Equipment’s**
      1. All necessary construction machines shall be provided and maintained by the Contractor and shall be approved by the Project Manager.
      2. If cranes or any other type of plant which places any load on the structure are proposed, all details of such plant shall be submitted to the Project Manager for approval before commencement of the Works. If approved by the Project Manager and acceptable, permission may be given for the structure to be strengthened, in order to carry out loads, and the Contractor shall be responsible for any resulting additional costs.
      3. The Contractor shall be responsible for making good to the satisfaction of the Project Manager any damage to the permanent structure that may be caused by his plant and equipment.
  11. **Samples**
      1. The Contractor shall furnish for the approval with reasonable promptness, all samples as directed by the Project Manager. The Project Manager shall check and approve such materials with reasonable promptness only for conformance with the design concept of the Works and for compliance with the information given in the Contract Document. The Works shall be in accordance with the approved samples
      2. All samples shall be delivered to the Project Manager’s office with all charges in connection therewith paid by the Contractor and deemed to be included in the Contract Price.
      3. Duplicate final approved samples, in addition to any required for the Contractor’s use, shall be furnished to the Project Manager, one for office use and one for the site.
      4. Samples shall be furnished so as not to delay fabrication, allowing the Project Manager reasonable time for consideration of the sample submitted.
      5. Each sample shall be properly labelled mentioning the name and quality of the material, manufacturer’s name, name of project, the contractor’s name and date of submission, and the specification clause to which the sample refers.
  12. **Ordering Materials**
      1. The Bills of Quantities shall not be used as a basis for ordering materials and the Contractor is entirely responsible for assessing the quantities of materials to be ordered.
      2. Upon receipt of the Project Manager’s order to commence the Works, the Contractor shall immediately place orders for all required materials and will be held responsible for any delays occurring due to late placing of such orders.
      3. The Contractor shall pay all expenses, taxes and dues etc. incurred on the procurement of materials from abroad
  13. **Water and Electricity for the Works**
      1. The Contractor shall make all necessary arrangements and provide all water for the proper execution of the Works, together with all transport, temporary plumbing, storage and distribution, pay all charges and alter, adept and maintain temporary work as necessary and remove and make good at completion.
      2. The Contractor shall make all necessary arrangements to provide all artificial lighting and power (maintain a generator if necessary) for the proper execution and security of the Works and protection, with all meters, temporary wiring and fittings, pay all charges and alter adapt and maintain the temporary work as necessary and remove and make good at completion.
  14. **Site Offices for Contractor**
      1. The Contractor shall provide maintain and clear away on completion of the Contract all necessary site offices, canteens, mess-areas and welfare facilities, toilets and all other temporary buildings and the like for all site staff employed by the Contractor and required by subcontractors and suppliers.
      2. The offices shall be open at all normal working hours to receive instructions, notices and other communications.
      3. The Contractor shall obtain the approval of the Project Manager of the proposed site layout, type and drainage arrangement of all the buildings prior to erection of same. All buildings shall be supplied and maintained in good condition and of neat appearance; all maintenance to same as instructed by the Project Manager shall be carried out at the Contractor's expense.
      4. Under no circumstances shall overnight accommodation be permitted on Site except for the site watchman in carrying out his duties.
  15. **Contractor’s Site Area**
      1. Throughout the period of the Contract the Contractor shall maintain the area of his operation within the limits of the Site in a clean, tidy and safe condition by arranging materials and the like in an orderly manner. All rubbish, debris, waste materials and the like shall be systematically cleared from the Site as it accumulates.
      2. The Contractor shall take all steps necessary as directed by the Project Manager to minimize or eliminate dust, noise or any other nuisance, which may occur. Plants emitting excessive dust, smoke, excessive noise or another nuisance shall not be permitted.
  16. **Progress Meetings**
      1. During the course of the Works, progress meetings shall be held at fortnightly intervals for the purpose of coordinating the Contractor's works and to ensure that full compliance is maintained.
      2. Minutes of such meetings should be recorded; copies will be distributed to all persons concerned and full effect shall be given to all instructions contained therein.
      3. Prior to such meetings the Contractor shall give to the Project Manager's Representative details in writing of that portion of the Works he proposes to construct during the coming two weeks with details of the plant and method he proposes to employ. These proposals shall be discussed at the meeting and no work based on such proposals shall proceed without the approval of the Project Manager's Representative.
      4. The Contractor shall submit all reports as instructed by the Project Manager in connection with progress meetings and the day to day management of the Works.
  17. **Progress Photographs**
      1. The Contractor shall supply once a month, at the time of submitting his Interim Certificates, twelve photographs from 36 exposures showing the progress of the Works. The Project Manager shall direct the times and position from which the photographs are to be taken.
      2. The photographs shall be submitted in three copies dismounted of a size not less than 15 x 10 centimetres with the description of the viewpoint stamped in ink on the back. The negative shall have the date on it and remain the property of the Project Manager and no prints from these negatives may be supplied to others unless previously authorized in writing by the Project Manager.
  18. **Setting Out**
      1. The Contractor shall be responsible for accurately setting out the Works to the specified positions, dimension, levels and Building Lines and also checking the site surveys for dimensional and level accuracy and reporting any discrepancies before the building work commences.
      2. The Contractor shall provide the Project Manager with all facilities, equipment and labour to enable him to check the setting out and levels of the Works at all times. The checking of any setting out point, line or level by the Project Manager shall not in any way relieve the Contractor of his responsibility
      3. All setting out points, benchmarks, site rails, pegs and other survey points shall be clearly marked and protected from damage or disturbance during the execution of the Works
  19. **Bill boards**
      1. The Contractor shall provide and maintain two billboards for the Site each consisting of a plastic board panel of size not less than 2 m x 2 m supported 2.5 m above the ground with angled steel framing or similar material and fixed in concrete foundations.
      2. Each board shall have the following written in both Dhivehi and English by a skilled sign maker:
         1. The name of Project
         2. The name of Employer.
         3. The name and address of Project Manager
         4. The name and address of Contractor
      3. A scaled layout shall be prepared and submitted for the Project Manager's approval before fabrication.
      4. No advertising material other than the above will be permitted.
      5. The location and layout of Sub-Contractors or Manufacturer's billboards, if allowed, must be submitted for the Project Manager's approval.
  20. **Loading in Excess of Design Load** 
      1. No loading in excess of the design loading shall be placed on any portion of the structure without the written permission of the Project Manager
      2. If such permission is granted, all beams or other members of the structure which are subjected to loading other than the designed loading shall be strengthened and supported to the satisfaction of the Project Manager, and the Contractor shall be responsible for any resulting additional costs
      3. The Contractor shall be responsible for making good to the satisfaction of the Project Manager any damage to the permanent structure that may be caused by such over-loading.
  21. **Building Permit**
      1. The Contractor shall allow for obtaining the building permit and for paying all fees in connection therewith.
  22. **Permanent Drainage, Electricity and Water connection**
      1. The Contractor shall allow for arranging and obtaining the permanent drainage, water and electricity connections to the proposed development and he shall be responsible for making all payments in connection therewith.
  23. **Handing Over**
      1. Prior to handing over the proposed development, the Contractor shall gain the approvals and respective Completion Certificates from all the local government authorities and the like that the Works has been completed in accordance with their requirements.
      2. Any payment in connection therewith shall be paid by the Contractor.

1. **SITE WORKS**
   1. **Site Clearing**
      1. The Site shall be cleared of all vegetation, rock, boulders, etc. and surface soil shall be removed as directed by the Project Manager. The trees which are to be retained shall be protected from damage
      2. Spreading, leveling and consolidating on site where required, shall be made with suitable surplus excavated material obtained from the Site. Other soils used for filling shall be approved by the Project Manager
      3. The Contractor shall dispose all unsuitable and surplus excavated material
      4. The Contractor shall tidy up and leave the Site in a clean and sanitary condition at all times during the execution of the Works.
   2. **Excavation**
      1. Excavation shall be performed to the required depth as shown in the Drawings.
      2. A survey of the existing site shall be made and the results of same submitted to the Project Manager before commencement of the work
      3. Excavation area shall be protected from any water flowing in. Sides of excavations shall be shored or inclined to retain excavation unless otherwise specified
      4. Excavation near adjoining structures shall be executed with care so as not to damage those structures.
      5. The Contractor shall take all necessary precautions during the excavation for the Works particularly those excavation which are adjoining existing buildings and shall protect such buildings from the damage or collapse by means of temporary or permanent shoring, strutting, sheet piling or underpinning or excavation in short lengths and/or other methods as he deems fit and also he shall properly support all foundations, trenches, walls, floors, etc. affecting the safety of the adjoining existing buildings.
      6. The Contractor shall alter, adopt and maintain all such works described above for the whole period of the Contract and shall finally clear away and make good all damages done.
      7. The construction and efficiency of the shoring, underpinning, strutting and the like for the purpose for which it is erected shall be the responsibility of the Contractor, should any subsidence or any other damage occur due to the inefficiency of the shoring, underpinning, strutting and the like or any other support provided, the damage shall be made good by the Contractor at his own expense and responsibility.
      8. The shoring, strutting, piling and the like, shall be executed in such a manner as to cause as little inconvenience as possible to adjoining owners or the public and the Contractor shall be responsible for negotiating with the adjoining owners the means to safeguard their property and for the use of any portion of their land for the purpose of executing the excavations and no claims submitted on this ground will be entertained.
      9. The Contractor shall be held solely responsible for the safety of the adjoining existing buildings, the sufficiency of all temporary or permanent shoring, underpinning, piling, and the like.
      10. The Contractor shall keep the Project Manager informed as to the manner in which he intends to proceed with the execution of the excavations and obtain his approval. Such approval if given shall not absolve the Contractor of his responsibility.
      11. Excavation shall extend a sufficient distance from walls, footings, etc. to allow space for placing and removing shoring and formwork, for performing all work in the excavations and for the inspection of same.
      12. Excavated material shall be deposited within specified areas as directed unless otherwise specified.
      13. The Contractor is deemed to have inspected the site and to leave ascertained for himself as to the nature of the soil, etc. and also the areas where to collect and stack the materials for which necessary site clearance shall have to be made at his own cost.
      14. Stacking or excavated materials shall be done at places approved by the Project Manager and he shall have recorded the original ground levels of such places jointly with the Contractor before commencement of stacking operation.
      15. Extra excavation and allied lead/lift required specifically for providing working space to workmen or shuttering to walls of basement etc. shall be measured for payment, no extra claim being allowed for such work incidental to development and executions of allied jobs. Only authorized excavation approved by the Project Manager shall be paid for
      16. Sufficient clear working space shall be left all around excavated area. The disposal of waste/unserviceable materials may be in filling and/or in embankment according to nature of place of disposal. The appropriate specifications for filling and/or embankment shall apply
      17. All foundation trenches shall be excavated to the full widths and depths shown on the drawings or to such greater or smaller depths as may be found necessary in the opinion of the Project Manager and so instructed by his representative.
      18. Should any excavation be taken down below the specified levels, the Contractor shall fill in such excavation at his own cost with cement concrete specified for foundations, well rammed in position until it is brought up to the level.
      19. The Contractor shall notify to the Project Manager when the excavation is completed and no concrete or masonry shall be laid until the Project Manager has inspected of the soil for each individual footing.
      20. All foundation pits shall be refilled to the original surface of the ground with approved materials, which shall be well consolidated as instructed by the Project Manager.
      21. The Contractor shall erect temporary barricades around the excavations and if necessarily make provisions of red lamps.
      22. The Contractor shall remove/maintain/restore all service lines like telephone, water supply, electricity etc. without any extra charges.
   3. **De-watering**
      1. Where the excavation level is below the natural water table and it is necessary to pump continuously from the excavation or to install a specialist type of dewatering equipment around the perimeter of the site or excavation, the Contractor will be responsible for ensuring the safety and stability of all adjoining structures and services or utilities above or below ground level.
      2. It will also be the responsibility of the Contractor that the equipment installed shall ensure that the excavation and subsequent construction is carried out in dry conditions.
      3. Continuous or permanent de-watering of the excavation or Site may not be undertaken without the written approval of the Project Manager and the methods to be employed shall also comply with Codes of Practice and Local Authority requirements.
      4. The water pumped from the excavations or well points shall be pumped to disposal points or sumps approved by the Project Manager and the Local Authority and if so required be passed through settling tanks before disposal.
      5. Unless prior approval has been obtained no water must be disposed of in the Municipality's sewer systems.
   4. **Backfill**
      1. All earth used for filling shall unless otherwise stated, be selected hard dry material from the excavation the maximum dry density of the fill material shall be not less than 1600 kg/m3.
      2. The backfill of excavations shall be placed in horizontal layers not exceeding 300mm in thickness. Each layer shall be compacted by hand or other mechanical means to the required density before the next layer is added
      3. Care shall be taken when filling or back-filling to avoid any wedging action or eccentric action upon or against the structure of the work.
      4. Before placing the fill, the surface of the sub-grade shall be compacted at optimum water content to the same percentage of maximum dry density required of subsequent lay.
      5. The Project Manager will inspect all compacting devices that the Contractor proposes and shall have the right to reject any device which he feels is unsuitable for the job.
      6. Heavy equipment for spreading and compacting fill and backfills shall not be operated closer to walls than a distance to the difference in height between the top of the footings and the layer being compacted.
      7. When back-filling behind retaining walls, basement walls and the like the said structures shall be kept propped during the complete operation. The hydraulic compaction of fill shall not be permitted and the back filling shall be carried out in layers not exceeding 150 mm thick.
      8. Each layer shall be compacted to 90% of the modified compaction. No back filling shall be carried out until the wall concrete has achieved its full works cube strength and care shall be exercised so as not to damage the external tanking membrane and its protection.
2. **CONCRETE WORKS**
   1. **General**
      1. Materials used in the Works shall be new, of the qualities and kinds specified herein and equal to the approved samples. Delivery shall be made sufficiently in advance to enable further samples to be taken and tested if required. No materials shall be used until approved and materials not approved shall be immediately removed from the Works.
      2. Materials shall be transported, handled and stored on the site or elsewhere in such a manner to prevent damage, deterioration or contamination.
   2. **Cement**
      1. Cement shall be Ordinary Portland cement of an approved brand.
      2. Cement shall conform to BS 12.
      3. Cement shall be of recent manufacturer and used within 6 months of manufactured date.
      4. The Contractor shall with each fresh consignment of cement delivered to the site furnish the Project Manager with a copy of the Manufacturer's statement of compliance with the above Standard Specifications together with the date of manufacture, certified by an independent agency in the country of origin and its date of delivery to Site.
      5. Check tests will be required by the Project Manager. These tests shall be carried out at the Contractor's expense.
      6. Any cement failing to meet the required standards will be rejected and replaced at the Contractor's expense.
      7. Any cement not conforming to BS 12 shall not be used unless otherwise approved by the Project Manager.
   3. **Aggregate**
      1. Fine aggregate shall be river sand conforming to BS 882.
      2. Coarse aggregate shall be crushed stone excluding limestone or derivatives of limestone conforming to BS 812.
      3. Aggregate shall not contain injurious amount of rubbish, dirt, organic impurities and other foreign matters.
      4. Strength of aggregate shall be more than that of hardened concrete paste.
      5. Shape of coarse aggregate shall not be flat or slender.
      6. Aggregate to be used in concrete shall possess the qualities indicated in the following tables.
      7. Manufactured sand and blast furnace slag to be use in concrete shall not be used unless otherwise specified or approved by the Project Manager.
      8. In case of using fine aggregate with 0.01% or more water soluble chloride content, the necessary measures for corrosion inhibiting of reinforcement shall be instructed by the Project Manager.
      9. The maximum size of coarse aggregate shall be 25 mm.
      10. Sources of aggregate shall be to the approval of the Project Manager and samples of aggregate from the proposed source shall be submitted to the Project Manager at least 28 days before its intended use.
   4. **Water**
      1. Water shall not contain injurious amount of impurities that may adversely affect concrete and reinforcement.
      2. Ground water shall not be used for concrete works.
      3. Water shall be obtained from a public supply where possible, and shall be taken from any other sources only if approved by the Project Manager.
      4. Only water of approved quality shall be used for washing out formwork, curing concrete and similar surfaces.
   5. **Handling and Storage of Material**
      1. **Cement**
         1. Cement shall be stored in a manner to prevent weathering.
         2. Bagged cement shall be piled no more than 10 bags so as to permit easy inspection
         3. Cement caked even to the slightest extent shall not be used. Such cement and rejected cement shall be immediately separated from other bags of cement so that they shall not be mistaken for others.
      2. **Aggregate**
         1. Aggregate shall be stored in a manner effectively separating coarse and fine aggregate according to type and shall be prevented from inclusion of dirt, rubbish and other undesirable foreign matters.
         2. Coarse aggregate shall be unloaded and piled in a manner not to cause segregation of small and large particles. Aggregate to be stored in piles shall be in mounds of moderate height and at a location where good drainage is provided.
   6. **Mix Proportion and Strength**
      1. Mix ratio for reinforced concrete shall be in the proportion 1:2:3 (cement: fine aggregate: coarse aggregate) by dry volume.
      2. Mix ratio for lean concrete shall be in the proportion 1:2:6 (cement: fine aggregate: coarse aggregate) by dry volume.
      3. Water-cement ratio for concrete shall be 0.4% to 0.45%
      4. The specified design strength of reinforced concrete shall be 25 N/mm²
      5. The required slump of concrete shall be 100 mm.
      6. Design mix proportion shall be to obtain required workability, consistency and durability.
   7. **Production of Concrete**
      1. **Field-mixed Concrete Plant**
         1. The Contractor shall select the necessary facilities for storage, batching, mixing and transporting of each of the materials and submit them for approval of the Project Manager prior to start work.
      2. **Measuring** 
         1. All materials shall be measured by volume for each batch and water may be measured volumetrically.
         2. Cement shall be measured by number of bags unless automatic cement weight measure is in use.
      3. **Mixing Control**
         1. Concrete mixture shall be constantly controlled to obtain required workability and mixed strength. Mixing time for each batch shall be not more than 3 minutes.
      4. **Quality Control** 
         1. The Contractor shall conduct tests for quality control toward insuring that concrete of the required quality is constantly produced.
         2. The Contractor shall have all quality control tests report ready for submission as required by the Project Manager.
      5. **Quality Inspection of Concrete at the Point of Placement**
         1. The Contractor shall conduct tests on concrete at the point of placement. When test results meet the tolerances given below, the concrete shall be qualified to have passed the tests.

(a) The tolerance between actual slump and required slump of the concrete shall be  2.0 mm

* + - 1. For the estimation of compressive strength of concrete in compressive strength tests, when the average value of compressive strength of concrete obtained in a test is not less than the specified design strength, it shall be qualified to have passed the test. In case of failure to the above
      2. requirements, the Contractor shall take necessary measures such as to perform appropriate test as instructed by the Project Manager.
  1. **Transporting and Placing**
     1. **General**
        1. The Contractor shall establish a manner and schedule for transporting and placing of concrete and obtain approval of the Project Manager.
        2. Concrete shall be transported in a manner to minimize segregation, spill, age and other changes in quality thereof.
        3. Concrete shall be placed and consolidated in a manner to insure uniformity and optimum density.
        4. In case of rain or other conditions that may affect the quality of concrete during concreting, the Contractor shall take necessary measures as instructed by the Project Manager.
     2. **Time Limit**
        1. The time limit from start of mixing to completion of placing of a batch as rule shall be 30 minutes.
     3. **Preparation prior to Placing**
        1. The place where concrete is to be deposited shall be cleaned and sheathing shall be sprinkled with water. Subsequently, water accumulated in the form shall be removed.
     4. **Construction Joint**
        1. Joint surfaces shall be cleaned, made free of laitance and other foreign matters, and wetted prior to concreting. Joint surface shall be roughened if directed by the Project Manager.
        2. The locations of shapes of construction joints shall be consulted and approved by the Project Manager.
     5. **Concrete Placing**
        1. Concrete placing shall be proceeded to keep the surface of placed concrete as horizontal as possible.
        2. Concrete shall be continuously poured to compact around reinforcing bars and corners of formwork.
        3. The maximum time interval between placements of continuous concreting shall not exceed 0.5 hours. However, when special measures are taken this time limit may be changed according to instruction or approval of the Project Manager.
     6. **Consolidation**
        1. Vibrating of concrete and tapping of formwork shall be performed to wall, column and other places difficult for concrete to proceed. Proper number of workers for placing and compacting concrete shall be arranged.
        2. Vibrator shall be operated for concrete called for water tightness, difficult portion for concrete to proceed and other cases directed by the Project Manager. However, vibrator shall not be touched reinforcing bars and shall not be operated more than 30 seconds at same spot.
        3. Concrete shall be placed 300 - 600 mm thickness at once in case vibrator is performing. In case flexible-insert-vibrator is called for, concrete shall not be placed thicker than the length of the insert or vibrator at one pouring.
     7. **Placing Speed**
        1. Concrete shall be placed at the speed suited for the workability of the concrete and condition of the place of placement, which insures proper consolidation of concrete.
  2. **Concrete Curing**
     1. **Curing Method**
        1. After concrete has been placed, the concrete surface shall be kept moist by sprayed with water or by other appropriate methods, and shall be protected from direct sunlight and rapid drying. The top surface of slabs shall be kept flooded with water at all times after concreting for the duration of curing period. This curing period shall be for not less than 14 days.
        2. As a rule, no foot traffic or loads shall be permitted on concrete for at least 24 hours after placement.
  3. **Test**
     1. **General**
        1. The contractor shall be required to conduct all tests according to BS (British Standard) method and procedure.
        2. Test, as a rule, shall be conducted at the locations directed or at the testing institutions approved by the Project Manager.
        3. The Project Manager shall conduct test, as a rule.
        4. In case of failure in test, measure shall be taken as instructed by the Project Manager.
        5. The Contractor shall keep test records during the work and for 2 years after completion of the contracted work.
     2. **Material**
        1. Cement Test

1. Setting test
2. Soundness test
3. Compressive strength test

Note: Item (1) shall be conducted once in every manufacturer.

Item (2) & (3) shall be conducted once in every 2,000 bags.

* + 1. **Aggregate test**

1. Grading and fineness modules
   1. **Concrete**
      1. Fresh concrete

Slump, air content, shall be conducted daily, and more often at request of the Project Manager.

* + 1. Compressive strength test of concrete

Test for estimation on strength of concrete in structure:

* + - 1. In order to assume estimated strength of concrete in structure, compressive strength test shall be conducted for prepared test pieces on the 7th day and 28th day and those test pieces shall be made for sampling at placing of concreting.
      2. Strength test shall be conducted for each of the following conditions: each day’s pour and each class of concrete, each change of supplies or source and each 100 cubic meters of concrete or fraction thereof. The number of test pieces to be used in a test shall be not less than 3 for each test of the 7th day and the 28th day unless otherwise instructed by the Project Manager.
      3. Test pieces shall be made in accordance with British Standards, and sampling shall be taken as near as possible at the point of placement.
      4. Test pieces shall be stored without being disturbed and shall be covered during the first 24 hours, and carefully transported specimens to the testing laboratory. Test pieces shall be cured in water after de-moulding. The temperature of test pieces shall be kept as close as possible to the temperature of the concrete in structure until the time of testing.
      5. The test results shall be expressed in the average value by calculating the average compressive strength of all test pieces. The average value must be equal to or greater than the specified strength.
  1. **Defective Concrete and Finishes**
     1. Honeycombed surfaces shall be made good or on the instruction of the Project Manager be cut out by the Contractor and make good at his own expense.
     2. Concealed concrete faces shall left as from the formwork except honeycombed surfaces shall be made good. Faces of concrete to be rendered shall be roughened by approved means to form a key. Faces of concrete that are to have finished other than those specified shall be prepared in an approved manner as instructed by the Project Manager.

1. **CONCRETE FORMWORK** 
   1. **Structure and Material**
      1. **Structure**
         1. Formwork shall be performed to obtain accurate concrete in accordance with the designated drawings.
         2. Formwork shall be firmed and secured to bear the force of concreting and tightened to avoid cement paste seeping.
      2. **Materials**
         1. Sheathing for formwork shall be waterproof plywood of not less than 12 mm thick. Joint of sheathing shall be butt joint and firmly assembled. In case of using wood board for sheathing, boards shall be 15 mm thick with an applied planer. Joint shall be tongued and grooved unless otherwise approved by the Project Manager.
         2. Form liners shall be sound and suitable materials to accurately and safely cast the in situ concrete structure as shown on the Drawings.
         3. Timber form boards for sheathing, where used for fair-faced concrete shall be of such new materials as not to cause any defects to the surface of the concrete. Special care shall be taken in fabrication, storage and protection of these boards.
      3. **Other Material**
         1. Fastening hardware to be used shall be those with allowable tensile strength guaranteed by manufacturer through strength tests.
         2. Form oil shall not have injurious effects on quality of concrete nor to bonding of surface finishing materials and shall be subject to approval of the Project Manager.
   2. **Performance**
      1. **Design of formwork**
         1. Formwork shall be designed to withstand construction leads during concreting, lateral pressure of fresh concrete, shock and vibrators due to concrete placing.
         2. Formwork shall be free of injurious leakage of water, easy to remove, and shall not damage concrete at removal.
         3. Supports shall be provided with the adequate horizontal and diagonal bracing and/or stays to prevent collapsing, heaving and twisting of formwork due to horizontal loads working during concrete placing.
      2. **Tolerance**
         1. The dimensional tolerances in location and cross section of concrete member used for designing and construction of formwork shall conform to the following table.
   3. **Standard Values of Dimensional tolerances**

|  |  |
| --- | --- |
| **Item** | **Tolerance (mm)** |
| Tolerance in distance from datum line of each floor to respective members | + 10 |
| Tolerance in cross section of columns, beams and walls | - 5 , + 10 |
| Tolerance in thickness of floor and roof slabs | 0, +10 |

* + 1. **Fabrication and Erection**
       1. Erection of formwork, and transportation and storage of materials thereof shall be started only after previously placed concrete has reached an age which acceptance of these loads will not have any adverse effect on the concrete.
       2. Sheathing shall be fabricated and installed accurately to match the locations, shapes and dimensions of members called for in the Drawings.
       3. Sheathing shall be installed tightly so as not to permit cement paste or mortar to escape from joints.
       4. Pipes, boxes and other embedded hardware shall be properly secured to sheathing or others so that they will not move during concrete placing.
       5. Supports shall be erected plumb. Supports at any two vertically consecutive floors shall be erected as near as possible to identical locations on a common plane.
       6. Shoring shall be erected paying special attention to safety.
       7. If sheathing is reused, the surface in contact with the concrete shall be thoroughly cleaned off and sufficiently repaired before reuse. In case of using for fair-faced concrete, the same sheathings shall be used twice after approval of the Project Manager.
    2. **Inspection**
       1. Formwork shall be inspected by the Project Manager prior to placing of concrete.
    3. **Striking of forms**
       1. The minimum period for keeping the forms in position and for watering after laying the concrete shall be as stated below, except otherwise specified in drawings. Forms shall be removed in such a manner as to ensure the complete safety of the structure, so that there is no shock or vibration as would damage the reinforced concrete.
       2. The responsibility for the safety of the concrete shall rest entirely with the Contractor and the Contractor shall be held liable for any damage done and shall have to make good the same at his own expenses.
       3. The Contractor shall inform the Project Manager when he intends to remove shuttering and shall obtain his consent, but the consent of the Project Manager shall not relieve the Contractor of his responsibility.
       4. The minimum time for formwork to remain in place shall be as per the following table.

|  |  |
| --- | --- |
| Vertical sides of beams, slabs and columns | 24 hours |
| Soffits of slab | 10 days |
| Soffits of beams | 21 days |
| Cantilevers | 28 days |

* + 1. **Relocation of Support**
       1. Supports under concrete shall be not relocated
    2. **Removal of formwork**
       1. Formwork shall be removed gently, after its removal has been approved by the Project Manager.
       2. Inspection by the Project Manager shall be obtained immediately after the removal of sheathing and defects shall be immediately remedied according to instruction of the Project Manager.
       3. After shoring have been removed, members shall be carefully observed for cracking and deflection, when found, they shall be reported immediately to the Project Manager.

1. **STEEL REINFORCEMENT**
   1. **Material**
      1. Reinforcing steel shall be of the dimensions given in the Drawings.
      2. Reinforcing bars shall comply with the requirement of B.S.4449 and welded wire fabric, square bar fabric and expanded metal shall comply with appropriate part of B.S.4483.
      3. Diameter 6 mm reinforcing steel shall be round mild steel bars, and 12mm, 16mm, 20mm and 25mm shall be deformed high strength bars.
      4. Any other non-specified reinforcing steel shall be used only with the approval of the Project Manager.
      5. All reinforcing steel and binding wire shall be stored under cover and shall be at least 250 mm above the ground.
   2. **Cleaning**
      1. Reinforcing bars shall be cleaned before use so that it is free from rust, oil, dirt or other coatings that reduce bond.
   3. **Bending and Laps**
      1. The reinforcement shall be bent cold in an approved bar bending machine.
      2. Preferably bars of full length shall be used. Lapping of bars where necessary shall conform to BS1487 ‘Bending Dimensions of Bars of Concrete reinforcement.’
   4. **Reinforcement Cover**
      1. Concrete cover for reinforcement shall be as follows:

FOR ANY STEEL IN UNDER GROUND CONRETE 50 mm

CLEAR COVER IN SLABS 25-30 mm

CLEAR COVER IN BEAMS SOFFIT 30-35 mm

CEAR COVER IN SIDES OF BEAMS 30 mm

CLEAR COVER IN COLUMNS 40 mm

* 1. **Placing**
     1. Reinforcement intended for contact when passing each other shall be securely tied together with binding wire.
     2. Binders and stirrups shall tightly embrace the longitudinal reinforcement to which they shall be security bound or spot welded.
     3. Binding wire shall be turned in from the formwork and shall not project beyond reinforcing bars.
     4. All reinforcement shall be inspected by the Project Manager and approved before concrete is placed in the forms.

**STRUCTURAL STEEL**

* 1. **Scope**
     1. This section shall apply to the work involved with structural steels. All incidental items of structural steel shall be stated in the particular specification.
  2. **Materials**
     1. **Steel**
        1. Shape of steel shall be precise and straight and free of injurious scratches and rust.
        2. All steel sections shall be galvanized sections of strength class 43 A.
        3. Dimensions of steel section and tolerance of dimension shall conform to standard dimension of steel regulated in ASTM or BS standard.
     2. **Bolt**
        1. Shape of bolt, nut, and washer shall be in accordance with requirement of BS 4190 & BS 3692.
        2. Quality of bolt shall be SC 43 A.
     3. **Welding Rod**
        1. Arc welding rod shall conform to materials to be welded, and position.
  3. **Fabrication**
     1. Main fabrication shall be done in workshop unless otherwise specified or approved by the Project Manager.
     2. Full scale drawing of each section shall be drawn prior to fabrication and checked by the Project Manager.
     3. Section of each material shall be cut perpendicular to axis unless otherwise specified in the drawing.
     4. Saw and angle cutter shall be used for cutting, and cut section shall be free of any noticeable defect.
     5. Deformation caused by cutting shall be corrected.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Diameter of Bolt** | **Standard Pitch** | **Minimum Pitch** | **End Distance** | **Edge Distance** |
| 12 | 50 | 30 | 30 | 25 |
| 16 | 50 | 40 | 40 | 30 |

* + 1. Normal temperature or hot drawn process shall do bending process. Steel shall be red heat in hot drawn process.
    2. Those directed in the drawing shall be chiseled finish and completely attached.
    3. Materials shall be checked for bend, distortion, warp, etc. before fabrication.
  1. **Bolt**
     1. **Bolt Hole**
        1. Spacing of bolt holes shall be as directed in the following table.
        2. Minimum pitch and end distance for lightweight steel shape shall be more than 3 times and 2.5 times a Bolt diameter respectively.
        3. Diameter of hole shall not be over 0.5 mm larger than bolt diameter. However, for anchor bolt 5mm clearance shall be allowed between bolt diameter and diameter of hole unless otherwise specified.
        4. Bolt hole shall either be drilled open or reamed after sub-punching. Punching can only be permitted for a material thickness less than 13 mm.
        5. Rolled edge around a hole shall be removed.
        6. Position of a bolt hole shall be precise so that the center of all holes aligns.
     2. **Protection against loosing of Nuts**
        1. Nuts shall be protected against loosing by concrete covering, double nuts or other proper means.
  2. **Welding**
     1. **Welding**
        1. Welder shall have an authorized qualification in Maldives and approved by the Project Manager.
        2. Other tests shall be conducted to confirm welder’s skill in accordance with type of work.
        3. Tack welding shall be carried out by the welder approved by the Project Manager.
     2. **Welding Machine**
        1. Arc welding machine shall be alternate or direct current type, which provides sufficient and adequate current.
     3. **Preparation**
        1. Welding shall be done as much downward as possible using a jig such as Rotary frame.
        2. Welding rod shall be always kept in a dry area and if necessary, dried by drying equipment.
        3. Welding surface shall be free of water, scale or others injurious to welding work. Slag appeared on the created surface in the middle of welding shall be cleaned before starting again.
     4. **Fabrication**
        1. Welding edge shall be smoothed by automatic gas cutting or other proper finishes.
     5. **Finishes**
        1. Surface of welds shall be as smooth as possible and size and length of welds shall not be less than designed dimensions.
        2. Reinforcement of weld shall not exceed 0.1s + 1 mm (s: Designated size) in fillet welds.
        3. Welded parts shall be free of undercut, overlap, crack, blow hole, lack of welds, and lack of weld settlement, rolled up slag or other defects.
        4. Crater at the end of bead shall be carefully heaped up and slag, sputter, etc. shall be completely removed after welds.
     6. **Safety**
        1. Safe scaffoldings shall be provided for the field welds work.
        2. Welding facilities shall be such that there shall be no electric leakage of electric shock. There also shall be sufficient protection for fire.
        3. Electric shock protection device shall be used and also care shall be taken not to get suffocated or intoxicated by gas when welding in small area.
     7. **Inspection**
        1. Welding parts shall be inspected before, during and after welding in accordance with work schedule.
  3. **Erection and Field Painting**
     1. **Erection**
        1. Erection procedure shall be prepared by the contractor and be approved by the Project Manager prior to the erection.
        2. Material shall be stored on flat surface in order not to get distortion, twist or other defects. Correction shall be made to those distortions or twisted before erection.
        3. Horizontal reinforcement and bracing shall be placed and bolts are temporary tightened as trusses are put up.
        4. Connection of materials by bolts, etc. shall be made after distortion on plumb is thoroughly corrected.
        5. Temporary bracing or other reinforcement shall be placed to resist wind pressure or other loads erection.
        6. When heavy objects are placed on a horizontal element in the course of erection, they shall be reinforced with prior approval of the Project Manager.
        7. Care shall be taken on all facilities so that there is no accident.
     2. **Field Painting**
        1. All steel work shall be delivered to site unprimed shall be cleaned of impurities, scrapped and wire brushed to remove rust and painted with one coat of priming paint applied by brush.
        2. Steelwork delivered to Site primed shall be cleaned of impurities and damage to the priming paint and made good with priming paint.
        3. Galvanized steelwork to be painted shall be cleaned of impurities. Where rusting has occurred the rust shall be removed by wire brushing and made good with an approved rust inhibitor. The surfaces shall be coated with a mordant solution, washed with clean water and painted with two coats of priming paint applied by brush.
        4. Steelwork, which is to be concealed shall be prepared and primed as above and shall be painted with two priming coats and one finishing coat of paint applied by brush.
  4. **Anchor Bolt**
     1. The other methods for movable burying shall be as directed by the Project Manager.

1. **WATER PROOFING**
   1. **Description of work**
      1. Extent of water proofing work is shown on drawings.
      2. Install slurry type water proofing to top surfaces of balcony slabs and external surfaces of underground concrete work.
      3. Install crystalline type water proofing to underground water tanks and roof slabs in strict accordance with the approved manufacture’s printed instructions.
   2. **Materials**
      1. Crystalline Type: Material used shall be a cementitious coating containing catalytic chemicals which migrate in to the concrete using moisture present in the concrete as the migrating medium, and which cause the moisture and the dehydrated cement in the concrete to react causing the growth of insoluble crystals of dendritic fibers in the void and capillary tracks of the concrete that allow passage of water, there by rendering the concrete itself water proof.
      2. Acceptable products: Laticrete *(refer particular specifications).*
   3. **Storage of materials**
      1. General: All materials shall be stored in original undamaged containers with manufactures seals and labels intact. Material shall be stored off the ground in a dry enclosed area.
   4. **Surface preparation** 
      1. General: All surfaces shall be examined for form tie holes and defects such as honeycombing, rock pockets, cracks, etc. These areas shall be repaired in accordance with these specifications and the manufactures printed instructions.
      2. Concrete finish: concrete surfaces shall have an open capillary system to provide tooth and suctions shall be clean; free from scale, excess form oil, laitance, curing compounds and other foreign matter.
      3. Smooth surfaces or surfaces covered with excess form oil or other contaminants shall be washed lightly sandblasted, water blasted, or acid-etched with muriatic acid, as required to provide a clean absorbent surfaces.
      4. Horizontal surfaces shall not be trowelled or power-trowelled, and shall be left with a rough float finish or a broom finish. Vertical surfaces may have a sacked finish. Comply with manufactures specifications for requirements pertaining to minimum ‘age’ of concrete deck surface scheduled to receive water proofing.
      5. Surface moisture: Water proofing shall be applied to ‘green’ concrete as soon as possible after forms have been stripped or to older pours which have been thoroughly moistened with clean water prior to application. Free water shall be removed prior to its application.
      6. Mixing of crystalline water proofing compound: To comply with manufactures specification for 2-coat installation.
   5. **Application**
      1. General: Apply all materials under the direction of the manufacturer’s representative.
      2. Construction joints and surface defects: Comply with waterproofing material manufacturer’s printed directions in the preparation, and treatment of construction joints and surface defects.
      3. Surface application: After all repair, patching and sealing strip placement has been prepared in accordance with manufacturer’s recommendations and approved by manufacturer’s representative, treat concrete surface with first coat slurry mix of crystalline waterproofing compound.
      4. Brushing: Use a short bristle or broom to work the slurry well into the concrete, filing all hairline cracks and surface pores.
      5. Second coat: Apply second coat while first coat is still ‘green’ but after it has reached an initial set, all as recommended by the water proofing material manufacturer.
   6. **Curing**
      1. General: Curing shall begin as soon as the waterproofing materials have set up sufficiently so as not to be damaged by a fine spray. Treated surface shall be sprayed three times a day for a three-day period. Allow material to set 12 days before filling the structure with liquid
      2. Protect treated surfaces from damage due to wind, sun, rain and temperatures below 35 degrees Fahrenheit. For a period of 48 hours after application, arrange protections to permit proper curing conditions for waterproofing material.
      3. Clean up: Remove all surplus materials from the premises and leave all areas broom-clean. In the case of temporary protections remove all such items carefully to avoid damage to treated surfaces. Assemble all such materials and remove from premises followed by broom cleaning as noted.

**EMBEDED DAMPROOF MEMBRANE**

* 1. **General**
     1. This section deals with laying of flexible sheet as damp proof membranes or has chemical or vapour barriers embedded in the fabric of the building. It does not deal with the weatherproof roof sheeting, or with vapour barriers.
  2. **Products**
     1. Laticrete *(*refer *particular specifications).*
  3. **Workmanship**
     1. Manufacturers Recommendations: to be strictly followed for all products and materials. Apply sheets to clean, dry surfaces with all joints sealed to give a completely water proof continuous membrane.
     2. Polythene Sheet Under-Slab DPM: lay a level bed of fine sand, not less than 13mm thick or as specified to receive membrane.
     3. Polythene Sheet DPM: ensure that sheets are clean and dry. Lay single layer loose on base, lap edges 150mm and seal with mastic or adhesive tape.
     4. Pipe Etc: where pipe etc. pass through sheeting make junction completely watertight by forming collars fully bonded / sealed to both pipes and sheeting.
     5. Project: finished sheeting adequately and prevent puncturing during following work. Sheet to be covered by permanent over laying construction as soon as possible.

1. **MASONRY**
   1. **Materials**
      1. Material used for masonry and plastering work shall conform to Section 3 - CONCRETE WORKS.
      2. Masonry work shall be done with cement bricks or blocks of approved quality unless specified otherwise.
      3. The blocks shall be free from excessive amounts of salt or other impurities and shall be inspected and approved by the Project Manager.
   2. **General**
      1. **Execution Drawing**
         1. Work shall be complied with this specification unless otherwise stated on particular Specification or Drawings. Any work not specified shall be discussed and directed by the Project Manager. Execution drawing of block or brick alignment (inclusive of indication for hanging bolt, wood plug and conduit pipe), detail reinforcement, window opening, and other requirements shall be prepared and submitted for the Project Manager.
      2. **Stake-Board**
         1. Stake-board shall be provided at each 5 m in length and shall be inspected by the Project Manager for the accuracy, firmness and secure ness. However, suitable ruler, plumb bob and leveller shall be provided for minor performance of cement block and bricks.
      3. **Transportation and storing**
         1. Care shall be taken for damage during transportation of materials and any defect of natural finished concrete blocks or bricks shall be rejected.
         2. Different size of material shall be stored separately and projected from dirt and other impurities.
      4. **Curing**
         1. Any shock or load shall not be applied until concrete mortar or other fills hardened. Corner, projection and top of cement block or brick work shall be protected from rain, dryness, cold, damage and stain by covering.
         2. Void between blocks or bricks shall not be intruded by rainwater.
   3. **Block work**
      1. **Material**
         1. Blocks shall be of standard quality low permeability blocks with no defects and sample shall be submitted for approval of the Project Manager.
         2. Blocks shall be 75x100x200mm MCPW solid block double layer (200 mm thick) for external walls and single layer (100 mm thick) for internal walls (internal solid block masonry only at ground floor and all toilets). The average compression strength should be not less than 2.8N/mm2 and shall comply with physical requirements of ISO 6073: 1981
      2. **Horizontal reinforcement for concrete block wall**
         1. Horizontal reinforcement shall be provided at end of wall adjoining to concrete column. Reinforcing bar shall be anchored into end block and column.
         2. Horizontal reinforcing bar for block wall shall be 6 mm diameter at 1000 mm intervals.
      3. **Placing Blocks & Bricks**
         1. Cement blocks shall be saturated with water and joint shall be cleaned.
         2. Bonding mortar shall be used immediately after mix, and mixed mortar left for more than one hour shall be rejected.
         3. Vertical and horizontal joint of blocks shall be filled completely and suitable with mortar on line shall not be moved or rearranged. Joint and surface of block of exposed finished block wall shall be cleaned immediately after joint is filled.
         4. In case concrete block wall is attached to structural concrete, block wall shall be placed before concreting structure.
         5. Mortar for joint shall be touched with steel trowel before hardened and exposed joint shall be finished with uniform width and planned without roughness or cavity.
         6. Height for placing block per day shall be maximum 1.2 m unless otherwise specified.
      4. **Joints**
         1. The thickness of joints shall not exceed 10 mm and the joints shall be rated (13 mm dup.) when the mortar is still floor, so as to provide for proper bond for the plaster. Any mortar which falls on the floor from these joints or removed due to raking of joints shall not be reused.
      5. **Lintel**
         1. Lintel shall be reinforced concrete as approved or directed by the Project Manager.
         2. Main reinforcing bar shall be anchored more than 40D (40 x diameter of the bar) at both ends.
         3. In case lintel is prefabricated, shop drawing shall be submitted for approval of the Project Manager.
      6. **Frame of Opening**
         1. In case frame is temporarily installed before placing of blocks, frame shall be firmly placed and joiner shall be bonded with mortar as placing each block at side and top of frame.
         2. In case frame is installed after placing of blocks, joiner shall be bonded with additional mortar at space or every two blocks or more.
         3. Back of frame shall be filled and compacted with mortar by providing shuttering board.
         4. Wood plug and anchor bolt shall be covered with mortar or concrete.
         5. Piping
         6. Principally, piping shall not be placed in block wall unless piping block is in use.
         7. In case electric conduit pipe is placed in cavity of concrete blocks, care shall be taken not to obstruct reinforcing bar, and cavity shall be completely filled.
         8. In case chipping and piping on face of blocks is unavoidable, performance shall confirm to instruction of the Project Manager.
         9. Joiner and supporter for exposed piping shall be buried at joint which back is filled or otherwise approved by the Project Manager.

**PLASTERING**

* 1. **General**
     1. All masonry walls shall have smooth finished cement plaster on both sides with a surface setting coat of neat cement applied within an hour of the completion of rendering.
     2. Cement rendering to floor shall be same as above.
  2. **Materials and Storage**
     1. Plaster materials which are affected by moisture such as plaster and cement shall be stored properly
     2. Materials used for plastering shall conform to those of Section 3 - Concrete Works. Grading of sand, however, shall be as in table below

|  |  |  |
| --- | --- | --- |
| **Grading of sand** | **Mortar plastering** | **Plastering** |
| 5mm sifting thorough 100% 0.15mm sifting less than 10% | for first coat  for finish coat | for first coat and dubbing out |
| 2.5mm sifting through 100% 0.15mm sifting less than 10% | for finish coat | for second coat |

* + 1. White cement or filler or similar shall confirm to the requirements of Portland cement, BS.12.
    2. The use of mixtures shall be approved by the Project Manager’s representative. The amount of admixture shall be such that it affects mortar strength very little.
    3. 7.5.5 Mixing volume ratio of mortar shall be as in table below:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Base** | **area of application** | **first coat cement: sand** | **Dabbing out cement: sand** | **Finish coat cement: sand** |
| Masonry blocks | Floor  Interior wall  Exterior wall | -  1:4  1:4 | -  1:4  1:4 | 1:4  1:4  1:4 |

* 1. **Thickness of Coating**

Standard thickness of coating (mm)

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Base** | **Area of application** | **First coat** | **Dubbing out** | **Second coat** | **Finish coat** | **Total** |
| Masonry block | Floor  Interior wall  Exterior wall | -  8  8 | -  -  - | -  8  8 | as per dwg  4  4 | as per dwg  15  15 |

* + 1. Thickness of coating shall be standard thickness of coating unless otherwise indicated on the Drawings.
  1. **Finish**
     1. Type of finish and work schedule

|  |  |  |
| --- | --- | --- |
| **Type** | **Work Schedule** | **Notes** |
| 1.Smooth Trowel finish | Shall be applied flat by metal trowel  Shall be finished by pressing with  the trowel. | Before applying second coat, corner and edge shall be screed well. |
| 2. Wooden float finsh | Shall be applied by wooden float |  |

* 1. **General Preparation**
     1. Remove efflorescence, laitance, dirt and other loose material by thoroughly dry brushing.
     2. Remove all traces of paint, grease, dirt and other materials incompatible with coating by scrubbing with water containing detergent and washing off with plenty applying coatings unless specified other wise.
     3. In Situ Concrete Surfaces: Scrub with water containing detergents to ensure complete removal of mould oil, surface retards and other materials incompatible with coating. Rinse with clean water and allow drying, unless specified otherwise.
     4. Organic Growths: Treat with fungicide to manufacturer’s recommendations and bush off.
     5. Hacking For Key: Roughen specified surfaces thoroughly and evenly by removing the entire surface to a depth of 3mm by scabbling, bush hammering or abrasive blasting. Clean surfaces by washing and brushing.
     6. Smooth Concrete Surfaces: where no keying or mix or bonding agent is specified, wet smooth concrete surfaces immediately before plastering.
  2. **External Plastering**
     1. Dissimilar Solid Backgrounds for Plastering: where plaster is to be continued without break across joints between dissimilar solid backgrounds which are rigidly bonded together, cover the joints with a 200 mm wide mesh strip (back grounds in the same plane) or with the corner mesh (internal angle) fixed at not more than 600 mm centers along both edges, unless specified or otherwise.
     2. Dissimilar Solid Backgrounds for Plaster: where plaster is to be continued without break and without change of plane across the face of a 300 mm and rigidly bonded to the background.
     3. Cover the face of the column /beam/ lintel with building paper extending 25 mm on the adjacent background.
     4. Over lay with expanded metal lathing extending 50mm beyond the edges of the paper and securely fixed with masonry nails at not less than 100 mm centres along both edges.
     5. Alternatively, an approved paper and mesh lathing may be used.
     6. Dissimilar Solid Backgrounds for Rendering: where rendering is to be continued without break across joints between dissimilar solid backgrounds which are in the same plan and rigidly bounded together, cover joints with a 150 mm wide strip of building paper overlaid with 300mm wide metal lathing fixed at not more than 600 mm centres along both edges unless specified other wise.
     7. Service Chases: cover with steel mesh strip fixed at not more than 600 mm centres along both edges.
     8. Conduits bedded in under coat to be covered with 90mm wide jute scrim budded in finishing coat mix, pressed flat and trowelled in. Do not lap ends of scrim.
  3. **Internal Plastering**
     1. Accuracy of plaster 15 mm thick or more: maximum permissible gap between an 1800 mm straight edge and any point on the surface to be 3 mm.
     2. Dubbing Out: If necessary to correct inaccuracies, dub out in thickness of not more than 10 mm in same mix as first coat. Allow each coat to set before the first is applied. Cross scratch surface of each dubbing out coat immediately after set.
     3. Metal Mesh Lathing: Work undercoat well in to interstices to obtain maximum key.
     4. Under Coats: generally, to be not less than 8 mm with thickness greater than 16 mm applied as two equal coats. Rule to even surfaces and cross scratch - end coat to provide a key for the next hand applied coat.
     5. Cement Based Under Coats: all to dry out thoroughly but not rapidly, to ensure that drying shrinkage is substantially complete before applying next coat.
     6. Dissimilar Backgrounds: where scrim or lathing or beads are not specified, cut through plaster with a fine blade in a neat, straight line at junctions of:
     7. Plastered rigid sheet and plastered solid backgrounds.
     8. Dissimilar solid backgrounds
     9. Smooth Finish: trowel or float to product a tight matt, smooth surface with no hollows abrupt change of level or trowel marks. Do not use water brush and avoid excessive trowelling and over polishing.
  4. **External Rendering**
     1. Dubbing Out: if necessary to correct inaccuracies, dub out in thicknesses of not more than 10 mm in same mix as first coat. Allow each coat to dry before the next is applied. Cross scratch surface of each dubbing out coat immediately after set.
     2. Under Coats for hand applied finishes
        1. Apply first undercoat or dubbing out coat by throwing from a trowel.
        2. Coats to be no less than 8mm thick, with thickness greater than 16mm applied as two equal coats. On weak backgrounds first under coat to be not less than 10 mm thick.
        3. Brush down each under coat to remove dust and loose particles and wet thoroughly before application of next coat.
        4. Cross scratch under coat without penetrating the coat, to provide key for following coat(s).
     3. Drying: Keep each coat damp for the first three days by covering with polythene sheet and/or spraying with water. Thereafter prevent from drying out too rapidly. Work in shade whenever possible.
     4. Allow each coat to dry out thoroughly to ensure that drying shrinkage is substantially complete before applying next coat.
     5. Playing Floated Finish: Finish with wood or other suitably faced float to give an even texture.
     6. Do not draw excessive laitance to surfaces.
  5. **Metal Mesh Lathing / Reinforcement For Plastered/Coatings.**
     1. Lathing has to be provided as reinforcement for plastering in columns, walls or specified in drawings products.
     2. **Products**:
        1. Plain Expanded Metal Lathing: To B.S 1369 with a minimum weight of 1.9 kg/mm2. Manufacturer to approval of the Project Manager.
        2. Wire Ties: Unless other specified, annealed iron, galvanized to B.S 443.
        3. Clout Nails: galvanized steel or stainless steel nails to B.S 1202: Part 1, table 3.
        4. Staples: Galvanized steel wire staples to B.S 1494: Part 2.
     3. **Workmanship**
        1. Framing: fix securely and accurately to help ensure that coatings on lathing , when finished, are true to line and level , within specified tolerances and free from cracks, rippling, hollows, ridges and sudden changes of levels.
        2. Runners/Bearers spanning between concrete beams/ribs: fix with 3mm wire ties twisted around 38 mm X 10 gauge screws driven well into fixing blocks or plugs in sides of beams/ribs.
        3. Wire Ties: twisted ends tightly together, cut off surplus and bend ends of wire away from face of coating.
        4. Plain Expanded Metal Lathing:

Stretch lathing and fix securely in accordance with manufacturers recommendations to give a taut, firm base for plaster/ rendering.

Fix with the long way of the mesh at right angles to supports and with all strands sloping in the same direction.

Lap side edges not less than 25 mm. Lap ends 50mm at supports and 75 mm between supports. aps must not occur within 100 mm of angles or bends.

1. **CARPENTRY AND JOINERY**
   1. **Materials**
      1. Timber shall be in accordance with the requirements of BS 1186 ‘Quantity of Timber and Workmanship in Joinery’, Part 1, ‘Quality of Timber’.
      2. Timber and timber products shall be subject to the inspection and approval of the Project Manager.
      3. Timber shall be seasoned to stable moisture content compatible with the finished use, straight and true and free from wind, warp and distortion and in lengths suitable for the members required.
      4. All timber shall be in long lengths and laps, scars or splices shall be over a bearing surface. Where obtainable, finishing timber exposed to view shall be in single lengths.
   2. **Preservation of Timber**
      1. All timber shall be treated for insect attack and is to be of the correct moisture content and free from surface moisture content and dirt.
      2. All rafters, purlins, framing scribe pieces, wall plates, and trusses etc. (if any) shall be treated for insect attack with approved timber preservative. No extra payment shall be made for such coating and will be considered inclusive in the rate of the respective item in the BOQ.
      3. Treatment shall be carried out after all cutting and shaping is completed.
   3. **Hardware**
      1. Hardware shall be standard quality and samples shall be submitted to the Project Manager for approval.
      2. All hinges shall be stainless steel or brass and shall be approved by the Project Manager.
      3. The dimensions and quality of hardware shall meet the requirements and shall not be rested, deformed or defective.
   4. **Dimensions and Finish**
      1. All dimensions of timber given are finished dimensions.
      2. All elements and others of structural nature, which are exposed, must be machine planed to a smooth finish.
      3. All unexposed timber shall be machine planed to a rough finish.
      4. All joinery work shall be dressed on all four sides and hand dressed where necessary and sanded to all exposed surfaces. All arises in any way accessible shall be sanded and smoothed off
   5. **Workmanship**
      1. All connections whether nailed, screwed glued, morticed or dove-tailed shall be accurately made and properly executed to provide sound, satisfactory connections for the class of work required.
      2. Timbers containing defects or distortions shall not be used.
      3. All joinery shall be manufactured by skilled tradesman with accurate tolerances and set out and with tools, jigs, machines and equipment appropriate for the work.

Assembly of the joinery units and joinery frames, etc. shall be by means of glued connections appropriate to the work - mortice and tenon, housing and doweling, etc. where practicable including the use of glued blocks wherever required. Nailing, screwing shall only be used with prior approval of the Project Manager, corrugated fasteners shall not be used for effecting connections.

1. **FINISHES**
   1. **General**
      1. Glazed Ceramic Tile shall comply with British Standard Specification No. 1281 and shall be approved sizes as shown on Drawings and the product of a reputable manufacturers approved by the Project Manager.
      2. Unglazed Ceramic Tile shall comply with the requirements of British Standard No.1286 and shall be of approved sizes as shown on the drawings and the product of a reputable manufacturer.
   2. **Manufacturers**
      1. All tiles, ceramic or homogenous, for the project shall be manufactured at the highest quality and shall be prior written approved and signed off by the project engineer.
   3. **Ceramic and Vitreous Tile Materials** 
      1. **Ceramic and Vitreous clay Wall Tiles**
         1. All tiles for wall installation shall have cushion edge, impervious porcelain and highly glazed surface. Colours shall be as selected by the Project Manager and shall include trimmers, corner pieces, bull nose and all other special shapes indicated or required. All this shall be free from flaws, cracks and crazing.
      2. **Floor Ceramic and Vitreous Tiles**
         1. Non-slip ceramic tile for shall be used on all floor locations. Floor tiles shall be specially prepared for floor use but shall have all the qualities of ceramic tiles listed above for wall use.
   4. **Mortar Materials**
      1. Standard brand of light gray or white Portland cement as specified in drawings, conforming to current British Standard specifications shall be used.
      2. Sand shall be clean, sharp, river sand, conforming to British Standard Specifications and graded fine to coarse within the following limits: 100% passing 8 sieve, 90% to 100% passing 16 sieve, 60% to 90% passing 30 sieve, 25% to 55% passing 50 sieve and 0% to 15% passing 100 sieve.
   5. **Cement Colour**
      1. Dry cement colour, chemically inert, non-fading, alkalifast, mineral pigment, as approved shall be used wherever refinished.
   6. **Waterproofing**
      1. Floors of toilet areas, corridors and planter boxes shall be treated with an appropriate water proofing coating, approved by the Project Manager
   7. **Installation Requirements**
      1. As far as possible, tile lay out work should be in such a way that no tiles less than half size occurs.
      2. Align joints in wall tile vertically and horizontally except where other patterns are shown or specified, align joints in floor tiles at right angles to each other straight with walls to conform to the patterns selected.
      3. Verify locations of accessories before installing tiles. Work shall be coordinated with plumbing and other trades before starting of tile work.
      4. Installation of ceramic and vitreous tile shall be in accordance with manufacturer’s instructions.
   8. **Floor Tile Installation**
      1. All ceramic and vitreous clay tile floors shall be in Portland cement setting beds. Concrete surfaces shall be cleaned and surface of concrete shall be wetted prior to placing of setting bed mortar. Tiles shall be immersed in water for minimum of 4 hours before laying.
      2. Setting Bed Mortar Mix: shall consist of one (1) part Portland cement and two (2) parts dry sand, by volume, to which not more than 1/10 part of hydrated lime may be added.
      3. When mixed with water, the mortar mix shall be of such consistency and workability as to produce maximum density. Determine consistency by stroking the mortar surface with a trowel. Where of correct consistency, the troweled surface readily assumes a smoothed, slickened appearance.
      4. Spread setting bed mortar and screed to provide smooth, dense beds with true planes pitched to drains. The thickness of bed shall be such that the floor tile will finish flush with adjacent finished flooring, but bedding shall have average thickness of 38 mm.
      5. After bed has set sufficiently to be worked over, trowel or brush a thin layer, 3mm in thickness, of neat Portland cement paste over the surface of the back of tile.
      6. Do not prepare larger setting bed than can be covered with tile before the mortar sets.
      7. Press tile firmly into the bed tapping with wood blocks to obtain firm bedding of total tile area and a smooth top surface.
      8. All tiles shall be properly aligned with straight joints in even widths. Joints width shall be determined by spacers on ceramic tiles. Tamping shall be completed within one (1) hour after placing tile. Adjust work out of line within this period.
      9. Tiles shall be fitted closely around pipes running through walls and floors. Pitch floors to drains.
   9. **Wall Tile Installation**
      1. Base Plaster 13 mm thick applied to masonry wall shall be one-part Portland cement, three-parts of river sand by volume. Where additional thickness build-up is required to conform to indicated lines, apply as separate coat at no cost to employer.
      2. Setting bed of tiles shall be done with cement slurry. The thickness of slurry bed shall be 3 mm thick minimum for setting tiles and walls.
      3. Installation of tiles shall be in accordance with standards and applicable requirements previously specified for floor tile.
      4. Tiles shall be installed in perfect vertical plumb and as per the pattern and joints if shown on drawings

* 1. **Grouting**
     1. Grouting shall not commence for at least 24 hours after placing of tiles.
     2. Grout for floor and wall ceramic and vitreous tiles shall be waterproof, neat white Portland cement with dry cement colour added as directed by the Project Manager. If white grout is selected, cement shall be white.
     3. Grout mixed to a creamy consistency in accordance with manufacturer’s directions shall be used for joint filling. Maximum width of joints shall be 3 mm.
     4. Force maximum grout into the joints with trowel. Before grout sets, strike or tool joints to base of cushion and fill all skips and gaps. Do not permit setting bed materials to show through grouted joints.
     5. Cure grout joints by maintaining damp condition for three (3) days by sponging down, or other methods approved by the Project Manager. Allow floors to set 48 hours before permitting ordinary foot traffic.
  2. **Defects in Tiles and Tile Laying**
     1. The surface of all tiled floors shall be perfectly in level and shall be executed by experienced workers in the field of tile laying.
     2. A sample panel of laid tiles of each type shall be approved by the Project Manager before commencement of tile laying.
     3. Mismatches of colour, chipped or damaged tiles installed by the Contractor shall be rejected and shall have to be replaced by the Contractor at his own cost and risk.
     4. 14.10.4 Mismatches of colour in tiles installed by the Contractor shall be rejected and shall have to be replaced by the Contractor at his own cost and risk.
  3. **Guarantees**
     1. Manufacturer shall provide his standard guarantees for work under this section. However, such guarantees shall be in addition to not in lieu of all other liabilities which manufacturers and Contractor may have by other provisions of the Contract Documents.

1. **PLUMBING**
   1. **General**
      1. The materials used and workmanship shall be of highest quality and grade unless otherwise specified shall conform to the latest specifications of British Standards and Codes of Practice for “Water Supply “Sanitary, Pipe Work “Building Drainage “Surface Water and Sub- Soil Drainage” and applicable to details and work indicated on the Drawing and Bill of Quantities. In case of any discrepancy / ambiguity the decision of the Consultants shall be final, and the contractor will act and perform accordingly.
      2. The work shall be executed strictly in accordance with the rules and regulations set by the relevant local authority of the Maldives
      3. The Contractor shall be responsible for obtaining the necessary approvals and test certificates from the concerned departments of City Council and Utility regulatory Authority.
      4. Plumbing work shall be carried out by licensed plumbers and shall produce the copy of the license along with the tenders, or approved by the Project Manager.
      5. Any damage done by the Contractor to any existing work during the course of execution shall be made good by him at his own cost. Failing which it shall be get done by the Consultants at Contractor’s risk and cost.
      6. The Contractor shall be responsible to connect the drainage and water supply to the mains and to obtain the necessary approvals and certificates from the City Council and Utility Regulatory Authority.
      7. All connections to mains and meter installation shall be arranged by the Contractor and payment of fees thereof, if any, shall also be made by him.
      8. The Contractor shall be responsible for the watch and ward of all fittings until the Works is fully completed and handed over to the owner.
      9. The levels, measurements and other information concerning the existing site as shown on the drawings or as described as are supposed to be correct. The Contractor shall, however, verify them by himself and no extra claim whatsoever shall be entertained on account of the errors or omissions in such matters or on account of the descriptions turning cut to be different from what was accepted.
      10. The Project Manager shall instruct the Contractor to purchase and use such materials of particular make or from particular source as may in his opinion be necessary for proper and reasonable compliance with the specification and execution of the Works.
      11. After all plumbing fixtures and equipment have been set ready for use, and before the Contractor leaves the job, he shall thoroughly clean all fixtures installed by him, removing all plaster, stickers, rust stains and other foreign matter of discolouration on fixtures, leaving every part in acceptable condition and ready for use to the satisfaction of the Consultants.
   2. **Drawings and Information Required**
      1. The Contractor shall submit shop drawing for the entire installation including installation details for all items required or asked for approval of the Project Manager.
      2. Approved by the Project Manager of shop drawing for any material, apparatus, devices and layout, shall not relieve the Contractor from the responsibility of furnishing same of proper dimension, size, quantity and all performance characteristic to efficiently perform the requirements and intent of the Contract Documents. Such approval shall not relieve the Contractor from responsibility for errors of any sort in the shop drawing.
      3. If the shop drawings deviate from the contract Documents the Contractor shall advise the Consultants of the deviations in writing accompanying the shop drawings including the reasons for the deviations. At the start of the Project the Contractor shall periodically and thereafter submit to the Consultants list of all shop drawings which will be submitted in the course of the project. The list shall show the disposition of each item including date of submission approval etc. The list shall be kept up to date through the entire course of construction.
   3. **Record Drawing**
      1. During Construction the Contractor shall keep an accurate record of all deviations between the work as shown on the Contract Drawings and that which is actually installed.
      2. The Contractor shall secure from the Consultants after approval of his Shop Drawing a complete set of drawing and note changes thereon in ink.
      3. The Contractor shall make a complete record of all changes and revisions in the original design which exist in the completed work.
      4. The cost of furnishing above prints and preparing these for record “ shall be deemed to be include in the tendered cost and its effects spread over other items of work, and as such item shall not be a subject to payment”. When all revisions showing the work as finally installed the corrected Original Transparencies shall be submitted to the Consultants before final payment for the completed work will be made.
   4. **Operating and Maintenance Instructions**
      1. Three sets of operating and maintenance instruction covering completely the operation and maintenance of all plumbing equipment, controls, heaters, pumps and the like shall be furnished to the Owner, by the Contractor.
   5. **Tests**
      1. The entire system of drains, waste and vent piping inside and outside the building shall be tested by the Contractor under a water test, which shall include the entire system from the lowest point to the highest pipes above the roof.
      2. The water test shall be made in accordance with all local requirements. Every portion of the system shall be tested to a hydrostatic pressure equivalent to latest 15 feet head of water. After filling, the Contractor shall shut off water supply and shall allow it to stand 2 hours under test during which time there shall be no loss or leakage.
      3. The Contractor shall furnish and pay for device, material supplies, labour and power require for all tests. All tests shall be made in the presence and to the satisfaction of Project Manager.
      4. Defects disclosed by the test shall be repaired or if required by the Project Manager defective work shall be replaced with new work without any extra charge to the Owner. Test shall be operated as directed until the work is proved satisfactory.
      5. Fixture shall be tested for soundness, stability of support and satisfactory operation.
      6. The Contractor shall notify the Project Manager at least one week in advance of making the required test, so that arrangements may be made for their presence to witness the test.
      7. Equipment shall be tested in service and the Contractor shall demonstrate that the equipment performs the work intended for it and that it complies with the requirement of these specifications for such equipment, to the satisfaction of Consultants.
      8. The rates shall include for all costs associated with tests
   6. **Work in Common Piping**
      1. **Material**
         1. Piping and fitting material shall be PPR (Polypropylene Random Copolymer) or equivalent and approved by the Project Manager.
         2. Piping material shall comply with requirements of water supply and sewerage and other relevant authorities.
         3. Materials for the piping and service requirements shall basically conform to the service pressures encountered.
      2. **Providing Drawings and Manuals**
         1. The Contractor shall submit one set of originals and further two copies of layout drawings to the Project Manager after completion of the Works. These drawings must give the following information:

* Run of all piping and diameter on all floors and the vertical stacks.
* Location and sizes of all control valves, access panels and other equipment.
  + - 1. Location of all manholes and their sizes.No completion certificate will be issued until the drawings are submitted.
      2. The Contractor shall submit to the Project Manager for approval, samples, shop drawings, manufacturer’s drawings, equipment characteristics and capacity data etc. of all equipment, accessories devices etc. that he proposes to use in the installation.
    1. **Samples**
       1. The Contractor shall provide samples of all sanitary fittings, pipes and specials man-hole cover and frames, gratings and water supply pipes and fittings etc. and shall be deposited with the Project Manager (which will be returned to the Contractor at the completion of the Works) and shall obtain approval from the Project Manager before using in the Works. Any material rejected by the Project Manager shall be removed from the site within 24 hours of rejection.
    2. **Drawings**
       1. The work shall be done in conformity with the plans and within the requirements of the general architectural, electrical and structural plans. This work shall be properly coordinated with the work of the other trades. Hangers and sleeves shall be furnished in time for their installation as other work proceeds.
       2. The plumbing drawings are diagrammatic, but shall be followed as closely as actual construction. All deviations from drawings required to conform to the building construction shall be made by the Contractor at his own expense.
       3. The architectural drawings shall take precedence over the plumbing drawings as to all dimensions.
       4. Large size details shall take precedence over small size drawings. The special dimensions in the specifications or schedule of quantities or instructions of the Project Manager shall supersede the drawings. The Contractor shall verify all dimensions at site.
       5. The recommend position of the fittings, fixtures, control valves, tanks etc. as shown on the drawings will be adhered to as far as practicable.
       6. Should there be any discrepancy due to incomplete description ambiguity or omission in the drawings and other documents, whether original or supplementary, forming the contract, either found on completion or during the currency of the installations work, the Contractor shall immediately, on discovering the same, draw the attention of the Consultants and the Consultants decision in final and binding on the Contractor.
    3. **Existing pipes**
       1. The site shall be examined for field drains and those, when found, shall be either entirely removed or diverted, trenches filled with dry earth in 200 mm to 300 mm layers and consolidated as directed by the Project Manager.
    4. **Spare Parts**
       1. Necessary spare parts of the plumbing equipment for the one (1) year operation shall be supplied by the Contractor.
    5. **Excavation**
       1. All excavations shall be timbered to the satisfaction of the Project Manager and the type of timber shall be suitable to the kind of earth encountered. Fixing of timber and removal after completion of work shall be done as directed by the Project Manager.
       2. Should any water accumulated in the trenches, headings or other excavation, the Contractor shall do such work as may be necessary to drain away the accumulated water and shall install pumps as may be required to keep the excavation and trenches dry. The Contractor shall ensure that the flow water in trenches or excavation does not injure or remove cement or aggregate of any concrete that has not set. No subsoil water shall be discharged into open drains or sewer at the site.
       3. In refilling trenches after excavation this should be done in layers of 150mm after consolidating each layer. Special care shall be taken that the earth is packed uniformly and there is damage to the piping.
       4. Rates for excavation should include for backfilling in consolidated layers where necessary and as directed by the Project Manager.
    6. **Piping**
       1. The Contractor shall, as soon as possible after the award of the contract, prepare and submit to the Project Manager for approval, working drawings showing exact locations and pipe runs for all pipe-work, the layout and setting up of equipment and the connection of piping to the equipment. Such drawings shall include details and methods of supports, anchors and sleeves etc.
       2. Pipe runs shown in the drawings are approximate and intended to indicate the general run and locations only. The exact locations of all pipe-work shall be determined on Site.
       3. All pipes, fittings etc. shall be kept closed against moisture and foreign matters when stored at site and during installation.
       4. All pipes shall be fixed clear of one another and be so arranged as to provide easy access for maintenance and repair.
       5. All plumbing work shall be carried out by suitably qualified plumbers in accordance with the British Code of Practice and Regulations and requirements of related Authorities.
       6. Materials for the piping and service requirements shall basically conform to the service pressures encountered.
       7. Each part of the installation of the plumbing work shall be completed in all details as shown in the drawings or as specified and provided with all necessary control valves, etc. that will be necessary for their satisfactory operation.
       8. All piping shall be run plumb, and straight and parallel to walls, except drain line which shall pitch 6 mm per 300 mm in the direction of flow.
       9. Pockets, unnecessary traps, turns and off-sets shall be avoided. When traps or pockets are unavoidable, they shall be valve drains.
       10. Piping installed on the concrete slab shall be firmly fixed or anchored to the floor with packing to prevent damage to pipes. Pipes shall not be bent with bender where cross with other pipe or change to upward.
       11. Where pipes are to be laid directly in the ground, bed shall be sufficiently compacted; necessary protection for piping shall be taken.
       12. Backfill shall be done after the approval of the Project Manager in such a manner not to damage the pipe line and shall be restored to the original stage.
       13. Where pipes penetrate through waterproof part or fire partition or fire wall, pipe sleeves shall be provided and clearance between pipe sleeve and pipe shall be filled with caulking material approved by the Project Manager.
       14. Pipes, fittings, valves and accessories shall be thoroughly cleaned, both internally and externally before installation and shall be cleaned before putting into service.
       15. Plumbing work shall be completed in accordance with the details shown on the Drawings or as specified and provided with all necessary control valves, etc. that will be necessary for their satisfactory operation.
       16. All pipes shall be cut square and true to the pipe axis by means of suitable tools without reducing pipe diameter and cut ends shall be finished smooth. Before making connections, chips, dirt and other foreign matter shall be removed from the interior of each pipe. Fixing of hangars and embedding of pipe sleeves shall be carried out without delay along with the progress of the work where required.
       17. Pipe connections for the water supply system shall be by PPR (Polypropylene Random Copolymer) high pressure. Jointing shall be generally by means of solvent cement according to manufacturer’s instructions
       18. Vertical pipe shall be braced at more than 2 point in every story.
  1. **Water Supply Work**
     1. **Materials**
        1. Pipes, joints and fittings for water supply work shall be PPR (Polypropylene Random Copolymer).
        2. Materials and workmanship shall comply with the local water supply authority requirements.
  2. **Water Pumps**
     + 1. The specifications herein stated are basic guides only. Other items not so indicated but which are obviously necessary for the proper operation of the system as intended shall be supplied and installed, in accordance with accepted Consulting standard.
       2. Manuals of operation and maintenance and list of spare parts shall be supplied together with the equipment.
       3. The contractor shall submit at least four copies of pump performance curves showing among others, the pump rating and efficiency, properly marked out.
       4. A metal name plate indication in indelible letters for the correct specification of the pump and motor shall be properly attached to the assembly at a location such that the information written thereon can be conveniently read by all concerned.
       5. Well water pump and Fresh water pump: Flow rate = 60L/min, Head = 70m, Type: End suction Hydro pneumatic pump, 220/440V, 3-Phase, and 50 Hz. Alternate and parallel operation. Fire pump: 50L/min, 70m head, Vertical multistage pump with alternative operations.
  3. **Spacing of supports**
     + 1. Support spacing for PPR (Polypropylene Random Copolymer) pipes shall be as follows

|  |  |  |
| --- | --- | --- |
| **Nominal Dia.** | **Up to 40** | **more than 50** |
| Space (m) | 1.2 | 1.5 |

* 1. **Drainage Work**
     1. **General**
        1. High Pressure HDPE (high-density polyethylene) pipe and fittings shall be used for all drainage work including vent pipes.
        2. Joints shall be made as per the manufacturer instruction and as approved by the Project Manager.
        3. Where horizontal drain branch joints the main, such branch shall be connected to the main in a substantially horizontal position and at an acute angle of not more than 45 degree to the main in all cases.
     2. **Vent stack pipes**
        1. Vent pipe shall be vertically branched out upward from a horizontal drain branch pipe or other appropriate point. Horizontal branching of the vent pipe shall be done on approval of the Project Manager.
        2. Where vent pipes on each floor are to be connected to the vent stack, all connections shall be made at least 150mm above the respective overflow edges of fixture on that floor.
        3. The provision of the preceding item shall also apply to the connection of vent stack vent pipe.
        4. Vent stack shall be connected to the waste stack or soil stack at the lowest part to stack pipe.
        5. Where vent pipe is to be connected to the horizontal drain pipe, such angle shall be more than 45 degree to upward.
        6. Vent stack shall be extended 600 mm from the top of the roof or lead to the wall and top of pipe shall be covered with vent cap.
  2. **Laying of Pipes**
     1. The pipes shall be laid to proper lines and levels as shown in the plans and directed by the Project Manager, as the main is laid, the front pipes in the trench shall always be closed with a plug either of iron or wood and security fastened. The plug shall not be removed except when pipe laying is resumed or for purposes of testing.
  3. **Laying of sewer water Mains**
     1. All mains shall be laid on a good solid, bottom to prevent subsidence and consequent fracture.
     2. Mains running under buildings, if unavoidable, shall be completely surrounded by 150 mm of concrete.
     3. In case of mains passing through a well, the weight of the latter shall be carried by a lintel or a suitable relieving arch.
     4. All rising mains shall be properly plugged to all wall brackets at regular intervals as given in the drawings.
     5. All mains shall be concealed inside wall as far as possible except for vertical sewer mains, cleaning doors shall be provided in the walls whenever necessary and as directed by the Project Manager.
  4. **Sewers**
     1. After the cement has had time to set, the pipes shall be tested in length between manholes in following manner.
     2. In the lowest manhole/intercepting trap as the case may be, a plug shall be inserted in the pipe. The disc in the pipe at the upper manhole shall be fitted with a filling pipe with a right angle bend and an air cook. The pipe line shall then be filled with water by means of the pipe connection on the upper disc. The air cock on the upper disc shall be kept open while the pipe line is being filled to permit the escape of air. When the pipes are filled with water and air excluded, the air cock shall be shut and the water shall be poured into conical filler, attached to the filling pipe until the water remains in the filter. The filling pipe shall then be raised and fastened so that the height of surface of the water in the filler above the invert of the pipe is 1828 mm which will be usual test pressure for S.W pipes. If the water level does not fall more than 16 mm (12 mm) in a length of 91.4 meter the test may be considered satisfactory.
     3. The Contractor shall make good all defective work at his own expense
  5. **PPR (Polypropylene Random Copolymer)**
     1. 15.14.1 Manufacturer’s instruction should be followed in pipes to be used for water mains. Sufficient number of expansion/contraction joints shall be incorporated in the length of mains to allow for variation of temperature to the recommendation of the pipe manufacturers.
     2. 15.14.2 These pipes shall be effectively protected from the direct rays of sun immediately after they are laid and until permission is given for the trenches to be refilled by the Project Manager. Subject to such permission being obtained, trenches shall be refilled without delay. Final connection at a fixed point shall be deemed unto the majority of the length of the pipe line has been covered by backfill in order to reduce the effect of expansion and contraction caused by temperature variations.
  6. **Bends and other Specials**
     1. In fixing bends care shall be taken to see that the axis of the bend is truly vertical or horizontal as the case may be and the spigot of the bend is well in the socket of the pipe with which a joint has to be formed. The Contractor shall be called on to replace any faulty work at his own expense.
  7. **Flanged Joints**
     1. 15.16.1 All flanged joints shall be made by painting the faces of the flanged with red lead freely and bolting the flanges evenly on all sides. A thin fiber of lead wool may be used in making the joints water tight when facing of the flanges is not true. Rubber insertions may be used with approval. Sewage resistant rubber insertion has to be used for sewer lines.
  8. **Support for U.P.V.C Pipes**
     1. When U.P.V.C pipe lines incorporate metal valves or other heavy fittings, it is essential to support the valves directly rather than allowing their weight to be carried by the UPVC pipe and support shall be placed on either side of the fittings mentioned above. Molded plastic fitting also should be supported.
     2. Maximum allowable horizontal support distance for UPVC are given below.
     3. For vertical installation supports, distances shall be doubled.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Nominal bore** | 12 mm  (1/2”) | 18 mm  (3/8”) | mm  (1”) | 32 mm  (1¼”) | 38 mm  (1½”) | 50 mm  (2”) |
| **Support distance** | 533 mm  1’9”) | 616 mm  (2’0”) | 686 mm  (2’3”) | 764mm  (2’6”) | 840 mm  (2’9”) | 915 mm  (3’0”) |
| **Nominal bore** | 75 mm  (3”) | 100 mm  (4”) |  |  |  |  |
| **Support distance** | 1220 mm  (4’0”) | 1290 mm  (4’6”) |  |  |  |  |

* 1. **Sewer pipes**
     1. All ‘P’, ‘S’, ‘I’ junctions bends etc. required shall be furnished and set without extra charge and shall confirm to the pipe specifications as to quality
  2. **Air Valves**
     1. These valves to be fitted as per drawings and Bill of Quantities shall be tested and accompanied by a certifying their efficiency.
     2. The floating ball in the valve shall be suitable metal or vulcanite or rubber specially manufactured for tropical conditions.
  3. **Scour Washout Valve**
     1. These shall be provided at portions shown in place and shall contain in one unit a flanged scour valve with short connection pieces, cast iron bend and T pieces for connection to main pipe.
     2. The rate shall also provide for short length of straight pipe to a convenient as per details complete with covers and surface boxes
  4. **Foot valves and Strainers**
     1. Foot valve and strainers should be of reputable manufacture approved by the Project Manager and shall be fitted with flushing lever attachment where specified.
  5. **Pressure Reducers**
     1. Pressure reducing valves shall be of the equilibrium type of approved manufacture and capable of reducing the pressure to the valve required as per plan and Bill of Quantities.
  6. **Water Meter**
     1. The water meters shall be from a reputed manufacture and shall be approved by the Project Manager before installation.
  7. **Equilibrium Ball Valves**
     1. These should be of reputable manufacture approved by the Project Manager and be of the angle pattern with gun metal valve seats guide bush, copper float with wrought iron lever and links with bronze pins.
  8. **Fittings**
     1. All sanitary pipes, gullies, water closets/bidets, squatting basins, sinks bath tubs etc. to be of approved design and to be obtained from approved Manufacture and to be of the best stoneware, glazed inside and outside, with burnt hard and sound, free from flaws, blisters, cracks and other imperfections and best quality commonly called ‘Firsts’.
     2. Rates should include for all bends, junctions, traps, cleaning, painting, fixing clear of wall etc. complete as specified as per Bill of Quantities.
     3. All pipes, fittings, flushing cisterns, valves, stop cocks, taps, tanks, surface boxes etc. to be of the best of their kinds and in addition to complying with previous clauses to be from approved Manufacturers and all taps, cocks, valves etc. to be screwed down pipe. Taps have to be of brass/nickel coated and valves have to be of gun metal. All tanks have to be made fly-proof and to the complete satisfaction of the Project Manager.
     4. Rates should include for all cutting and waste, bends, taps junctures, cleaning eyes, tees.
  9. **Manholes, Manhole covers and Frames** 
     1. Concrete cover slabs or top rings of manholes shall provide a suitable seating for a rectangular cover.
     2. The frame shall have a clear opening of 0.61m x 0.61m or alternatively a circular or double triangular cover depending on the type of cast iron manhole cover to be used. The rate for manholes shall allow for such provision.
     3. Where the supply of cast iron manhole cover and frames is payable separately the cost of setting, surrounding, painting and materials for same shall be allowed for in the rate for manholes.
     4. Suitable lifting rings, hooks or brackets shall be provided in the pre-cast manhole sections. Box holes shall be separately grouted with 1:2 cement mortars.
     5. The contractor shall supply two manhole keys for each pattern of cover without additional charge over the rate for covers (or manholes).
     6. Heavy duty (grade a) cast iron manhole cover and frames shall be of the double triangular type to bs and having a clear opening of 550mm dia.
     7. Medium duty (grade b) cast iron manhole covers and frames shall be of the circular type having a clear opening of 550mm dia or the rectangular type having a clear opening of 0.61m x 0.61m and confirm to bs. They shall be of the single seal type, the weight of cover frame being approximately 127.00 kg.
     8. Light duty (grade c) cast iron manhole cover and frames shall be of the doubles seal flat type having a clear opening of 0.61m x 0.61m conforming to bs. Weight of cover and frame approximately 50.75kg.
     9. All manhole covers and frames shall be supplied, coated with a black bituminous composition and be given two coats of bituminous paint after bedding.
     10. No extra rate is payable for drop and/or junction manholes but piping in and surrounds of drop lines are payable at that relevant rates for s.w piping and manholes.
     11. In drop manholes where the difference in level between the incoming drains and the sewer does not exceed 0.610m in 75mm and there is sufficient room in the manhole, the connecting pipe may be brought directly through the manhole wall, and the fall accommodated by constructing a ramp in the benching of the manhole. The ramp shall be of concrete and finished equal to that of the benches. No extra rate is payable.
  10. **Interceptor Manhole**
      1. All gravity sewer lines should be, connected through an intercepting inspection chamber before connecting to the main sewer line, and the dimensions of the manhole and trap to be in conformity with the Maldives Water and Sanitation Authority.
  11. **Fixtures and Accessories**
      1. All sanitary wares shall be manufactured by the following manufacturers & shall comply to finishes schedules stated on drawings.

(a) Rapetti (Eight Floor)

(b) Duravit (Eight Floor)

(c) Cotto (Other Floors)

* 1. **As built Drawings**
     1. The Plumbing Contractor shall mark down with red pencil on two sets of plumbing plans all the revisions, omissions and/or additions to the various plumbing installation drawings as the construction progress. One set of the plans as marked shall be submitted to the Project Manager after completion of the work.
     2. Before the final payment is made to the Contractor, he shall submit to the Owner through the Project Manager, all As-Built Drawings incorporating the changes made and noted in the marked plans retained by him. The As-Built Drawing incorporating all the changes made and noted in the marked plans retained by him. The As-Built Drawings shall be prepared on reproducible form
     3. The Plumbing contractor shall prepare and submit the As-Built Drawings without extra cost to the Owner.
  2. **Miscellaneous**
     1. Throughout the construction period, open ends of all installed pipelines shall be kept closed by temporary plugs. Drainage lines shall not be used to conduct dirty construction wash-washer, especially, those with cement, to avoid possible clogging.
     2. A temporary fire protection system at each building shall be provided by the Contractor during the construction period. This shall be of sufficient capacity to put out any fire that may break out at any of the building floors due to construction period. This in addition to temporary fire extinguishers required.
     3. A temporary potable water supply shall be available to construction workers at each building floor as construction work progresses.
     4. A temporary human Excrete Disposal System shall be provided by the Contractor to serve the workers during the construction period.
  3. **Height of Fixture Installation**

Height of fixture shall be as follows unless otherwise specified on the Drawings

|  |  |  |
| --- | --- | --- |
| **Fixture** |  | **Height (mm)** |
| Wash Basin | Floor finish to front top edge - Male  Floor finish to top of mirror - Male  - Female | 700  1675  1660 |
| Lavatory | Floor finish to front top edge | 760 |
| Shelf | Floor finish to top of shelf - Male  - Female | 1005  990 |
| Cistern | Floor finish to bottom of cistern  Floor mounted Japanese type  Western type | 500  550 |
| Drinking fountain | Floor to front top edge | 765 |
| Flush valve, WC | Floor to center of valve | 600 |
| Paper holder | Floor to center of holder - Japanese type | 400 |
|  | - Western type | 750 |
| Faucets  Sink  Lavatory  Bath room | Sink floor to top of faucet  Lav. top to top of faucet  Floor finish to top faucet | 300  150  300 |
|  |  |  |

1. **PAINTING**
   1. **Material**
      1. All paints shall be approved by the Project Manager for colour, quality and type. All painting work shall be carried out in accordance with the paint manufacturer’s specifications unless otherwise directed by the Project Manager.
      2. All paints and finishes used for the project shall be manufactured by or under license from one of the following manufacturers;

(a) Nippon Paint

(b) Sigma Paint

* + 1. Paint shall be ready mixed and all paints, varnishes, enamels, lacquer stains, paste fillers and similar materials shall be delivered to the site in the original containers with the seals unbroken and labels intact. Each container shall give the manufacturer’s name, type of paint, colour of paint and instructions for reducing. Thinning shall be done only in accordance with the manufacturer’s directions.
    2. Use of product by the same manufacturer shall be a general rule in each stage of work in this Specification.
    3. Colour, lustre, colour scheme, finish shall be decided by the Project Manager after checking sample paint test.
    4. The painting shall be performed by experienced and competent painter.
    5. Where the walls are specified to be painted, all columns arises, groove, rough surfaces, reveals, soffits and returns, etc. shall be included. No extra shall be payable.
  1. **Definition of Terminology**

**Surface Sealing**

Surface to be painted shall be sealed to have uniform suction and prevent lye from oozing out.

**Spot Puttying**

All cracks and depressions shall be filled flush with putty.

**Puttying**

All surfaces to be painted shall be puttied uniformly flat surface.

**Spot painting**

Spot puttied area shall be touched up by paint

**Touch-up**

Any damaged area after the prime coat has been applied shall be touched up

**Drying hour**

The drying time of double-coated paint shall be measured at the temperature of 20°C and humidity of 70%.

**Amount of paint**

The amount shall be standard amount of paint itself not including thinner. It shall increase or decrease depending on shape and surface condition in the process of painting.

* 1. **Paint Finish Symbols**

OP Synthetic resin mix paint finish

VP Solvent-polyvinyl chloride resin paint finish

EP Polyvinyl acetate resin emulsion paint finish

AEP Synthetic resin emulsion paint finish

CL Clear lacquer finish

EXP Epoxy resin paint finish

Stipple (OP) Stippled finish (oil mix paint finish)

Stipple (EP) Stippled finish (polyvinyl acetate resin emulsion paint finish)

* 1. **Painting in General**
     1. **Preparation of Paint**
        1. Mixing: Paint content with pigment shall be thoroughly stirred to make a uniform consistency.
        2. Thinning: Portable water shall be used for thinning of emulsion paint and water-soluble paint. Proper thinner, product of the same manufacturer as paint, as a rule, shall be used for other types of painting. Percentage of thinning and viscosity shall be conducted with direction of manufacturer or catalogue as they vary with the method of paint, temperature, type of material to be painted.
        3. Allowable period of Use: Paint mixed with more than 2 types shall be used with direction of a manufacturer or catalogue as allowable period of use, mixing ratio and mixing method vary. The paint which has passed allowable period of use shall not be used.
     2. **Conditions of Painting**
        1. Work shall not be executed in the following situations
        + When humidity is above 85%
        + When raining or it is forecast
        + When dusts are present
        + When temperature of surface is high under hot weather and bubbles are likely to develop on the painted surface.
        + Conditions of Surface to be painted: Work shall not be executed or proper means shall be taken in the following situations.
        + When surface is damp and wet
        + When condensation (is likely to) develop on the surface.
        1. All nail holes on veneer, board. etc., shall be covered with proper rust-proof paint before the subsequent painting is applied in accordance with this specification.
     3. **Performance**
        1. Paint shall be evenly and uniformed applied on the surface. Areas of difficult application such as pointed part, internal angle, welded part, etc. shall be thoroughly painted and double coated as necessary to deep uniform coating thickness.
        2. Painting shall be properly done by carefully selecting the painting method by the shape of surface and types of paint.
     4. **Protection**
        1. Dangerous material such as paint, thinner, etc., excluding emulsion paint and water-soluble paint shall be kept in accordance with regulations concerned.
  2. **Procedure of Painting**
     1. **Exterior - Surface of Mortar, Plaster and Concrete**

AEP- Synthetic resin emulsion paint.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Coating**  **Process** | **No. of**  **Coats** | **Type of**  **Paint** | **Drying**  **hour** | **Amount**  **(kg/m²)** |
| 1. Surface preparation |  | Dry, clean and free from impurities |  |  |
| 2. Surface sealing | 1 | Sealer for emulsion paint | longer than 4 hours |  |
| 3. Puttying |  | Putty for emulsion paint |  |  |
| 4. Grinding |  | Grind with proper grinding tool |  |  |
| 5. Spot painting |  | Synthetic resin emulsion paint |  |  |
| 6. Second coating | 1 | Synthetic resin emulsion paint | longer than 4 hours | 0.10-0.13 |
| 7. Finish coating | 2 | Synthetic resin emulsion paint | longer than 4 hours | 0.10-0.13 |

Notes:

Degree of dryness on the surface to be painted shall be kept under 6% in water content and below pH 9.5

Puttying and sanding process shall allow omitting depending on the conditions of the surface.

Drying time of putty shall be long enough for sanding to proceed.

Amount of sealer for surface sealing shall be adjusted with direction of the Project Manager as it varies with the surface conditions.

* + 1. **Exterior - Iron Products in General**

OP - Synthetic resin mix paint

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Coating**  **Process** | **No. of**  **Coats** | **Type of**  **Paint** | **Drying**  **hour** | **Amount**  **(kg/m²)** |
| 1. Surface preparation |  | Completely remove rust, moisture, oil and other impurities by sander, cleaner and surface. |  |  |
| 2. First Coating  24 hours | 1 | Rust proof oil paint | longer than 24 hours | 0.13-0.15 |
| 3. Touch-up |  | Touch-up rustproof oil paint |  |  |
| 4. First Coating | 1 | Rustproof oil paint | longer than 24 hrs | 0.13-0.15 |
| 5. Second coating | 1 | Synthetic resin mix paint | longer than 15 hrs | 0.11-0.15 |
| 6. Finish coating | 1 | Synthetic resin mix paint | longer than 15 hrs | 0.11-0.15 |

Note:

Paint for touch-up painting shall be the same as used for first coat in process No. 2

* + 1. **Exterior - Wood**

OP - Synthetic resin mix paint finish

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Coating**  **Process** | **No. of**  **Coats** | **Type of**  **Paint** | **Drying**  **hour** | **Amount**  **(kg/m²)** |
| 1. Surface preparation |  | Clean and sand to plane surface |  |  |
| 2. Knot treatment | 1-2 | Lacquer varnish | longer than 24 hours |  |
| 3. First coating | 1 | First coat paint of oil mix paint | longer than 24 hrs | 0.13-0.15 |
| 4. Second Coating | 1 | Oil mix paint | 24 hrs | 0.11-0.13 |
| 5. Finish coating | 1 | Oil mix paint | longer than 24 hrs | 0.11-0.13 |

Note:

* 1. Puttying and sanding shall be done after process No.2 when there are cracks, etc. on the surface putty shall be oil-putty, but drying time shall vary depending on conditions.
     1. Interior - Mortar, board, etc.

Stipple (EP) - Polyvinyl acetate resin emulsion paint finish

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Coating**  **Process** | **No. of**  **Coats** | **Type of**  **Paint** | **Drying**  **hour** | **Amount**  **(kg/m²)** |
| 1. Surface preparation |  | Dry, clean and free from impurities |  |  |
| 2. Surface sealing | 1 | Sealer for emulsion paint | longer than 4 hours |  |
| 3. Puttying |  | Putty for emulsion paint |  |  |
| 4. Grinding |  | Grind with proper grinding tool |  |  |
| 5. Spot painting |  | Second coating paint of polyvinyl acetate resin emulsion paint |  |  |
| 6. Second Coating | 2 | Polyvinyl acetate resin emulsion paint | longer than 4 hrs | 1.11-0.13 |
| 7. Finish Coating | 1 | Polyvinyl acetate resin emulsion paint for stipple-finish | longer than 4 hrs | 0.25-0.35 |

Notes:

Degree of dryness on the surface to be painted shall be kept under 6% in water content and below PH 9.5

Puttying and sanding process shall allow omitting depending on the conditions of the surface.

Drying time of putty shall be long enough for sanding to proceed.

Amount of sealer for surface sealing shall be adjusted with direction of the Project Manager as it varies with the surface conditions.

* + 1. Interior - Mortar, plaster, concrete, etc.

VP Solvent - Polyvinyl chloride resin paint finish

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Coating**  **Process** | **No. of**  **Coats** | **Type of**  **Paint** | **Drying**  **hour** | **Amount**  **(kg/m²)** |
| 1. Surface preparation |  | Dry, clean and free from impurities |  |  |
| 2. Surface sealing | 1 | Sealer for emulsion paint | longer than 2 hours |  |
| 3. Puttying |  | Putty for polyvinyl chloride resin paint |  |  |
| 4. Grinding |  | Grind with proper grinding tool |  |  |
| 5. Spot painting |  | Solvent-polyvinyl chloride resin enamel emulsion paint |  |  |
| 6. Second Coating | 1 | Solvent-polyvinyl chloride resin enamel emulsion paint | longer than 4 hrs | 0.11-0.14 |
| 7. Finish Coating | 2 | Solvent-polyvinyl chloride resin enamel emulsion paint | longer than 4 hrs | 0.11-0.14 |

Notes:

Degree of dryness on the surface to be painted shall be kept under 6% in water content and below PH 9.5

Puttying and sanding process shall allow to omit depending on the conditions of the surface.

Drying time of putty shall be long enough for sanding to proceed.

Amount of sealer for surface sealing shall be adjusted with direction of the Project Manager as it varies with the surface conditions.

* + 1. Interior - Mortar, plaster, concrete, etc.

EP Polyvinyl acetate resin emulsion paint finish

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Coating**  **Process** | **No. of**  **Coats** | **Type of**  **Paint** | **Drying**  **hour** | **Amount**  **(kg/m²)** |
| 1. Surface preparation |  | Completely remove rust, moisture, oil and other impurities by sander, cleaner and surface |  |  |
| 2. First Coating | 1 | Synthetic resin rust-proof.  Red lead-type, lead compound-type | longer than 24 hrs | 0.18-0.22  0.13-0.15 |
| 3. Touch-up |  | Touch-up rust proof paint |  |  |
| 4. First Coating | 1 | Synthetic resin rust-proof paint.  Red lead-type, Lead compound-type | Longer than 24 hrs | 0.18-0.22  0.13-0.15 |
| 5. Second Coating | 1 | Synthetic resin mix paint | longer than 15 hrs | 0.11-0.13 |
| 6. Finish Coating | 1 | Synthetic resin mix paint | longer than 15 hrs | 0.11-0.13 |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Coating**  **Process** | **No. of**  **Coats** | **Type of**  **Paint** | **Drying**  **hour** | **Amount**  **(kg/m²)** |
| 1. Surface preparation |  | Dry, clean and free from impurities |  |  |
| 2. Surface sealing | 1 | Sealer for emulsion paint | longer than 4 hrs |  |
| 3. Puttying |  | Putty for emulsion paint |  |  |
| 4. Grinding |  | Grind with proper grinding tool |  |  |
| 5. Spot painting |  | Polyvinyl acetate resin emulsion paint |  |  |
| 6. Second Coating | 1 | Polyvinyl acetate resin emulsion paint | longer than 4 hrs | 0.11-0.13 |
| 7. Finish Coating | 1 | Polyvinyl acetate resin emulsion paint | longer than 4 hrs | 0.11-0.13 |

Notes:

Degree of dryness on the surface to be painted shall be kept under 6% in water content and below PH 9.5

Puttying and sanding process shall allow omitting depending on the conditions of the surface.

Drying time of putty shall be long enough for sanding to proceed.

Amount of sealer for surface sealing shall be adjusted with direction of the Project Manager as it varies with the surface conditions.

* + 1. Interior - Iron products, steel.

OP - Synthetic resin mix paint

Notes:

Paint for touch-up painting shall be the same as used for first coat in process No.2

When oil rust-proof paint is used instead of synthetic resin rust proof, its specification shall conform to No. 5 and No.6.

* + 1. Floor - Concrete and Mortar

EXP - Epoxy resin paint finish

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Coating**  **Process** | **No. of**  **Coats** | **Type of**  **Paint** | **Drying**  **hour** | **Amount**  **(kg/m²)** |
| 1. Surface treatment |  | Dry, clean and free from impurities |  |  |
| 2. First coating | 1 | First coating paint for epoxy | Longer than 24 hrs |  |
| 3. Finish Coating | 2 | Epoxy resin paint | Longer than 24 hrs |  |

Notes:

Degree of dryness on the surface to be painted shall be kept under 6% in water content and below PH 9.5.

Amount of paint and number of paint shall be as directed by the Project Manager as they vary with the conditions of surface and required thickness of coating.

Painted surface shall be kept out of use for more than 7 days after application of final coat.

1. **ELECTRICAL INSTALLATIONS**
   1. **General**
      1. The work shall be carried out strictly in accordance with the standard specifications and shall also conform to the requirements of Electricity Rules in force in the Utility Regulatory Authority.
      2. All materials to be used in the Electrical Works shall be HAEGER or equivalent and shall bear the certification marks of local authorities. All materials shall be approved by the Project Manager before use in the Works.
      3. Earthing shall invariably be done in the presence of the Project Manager or his representative.
      4. All the conduits shall be continuously earthed. Check nuts shall be provided at the point where the conduct enters the I.C. box and junction box.
      5. The Contractor shall arrange for the inspection of all Medium Pressure Installation by the Electrical inspector of the local electric supply authority from where the electricity connections has to be obtained, and see that they are passed by him.
      6. The Contractor shall be responsible for all necessary permits, approvals, fees, and deposits etc., required for completing the Electrical works in accordance with the Contract.
   2. **Scope of work**
      * 1. The work consists of furnishing all tools, plants, labour, materials and equipment and performing the internal electrical Works comprising of:

* Light and power wiring
* Fans and fixtures
* Wires and Cables
* Telephone System
* Sub- Station Equipments:
* Distribution Fuse gear
* Earthing System
* Lightening Protection System
* Fire Alarm System
* Air Conditioning System
* Computer Network Cabling outlet work
  + 1. **Prequalification**
       1. The Electrification Work shall be carried out only by a licensed contractor authorized to undertake such work under the Utility Regulatory Authority.
    2. **Qualification**
       1. A licensed Electrical Contractors should have the following qualifications:
* Must have in his employment a competent Electrical Engineer registered with Utility Regulatory Authority.
* Must have in its employment an Electrical Project Manager having certificate of competency who will exclusively supervise this work.
* Must have necessary tools, plant and instruments.
* Must have adequate experience of similar works.
* If a contractor does not possess the above qualifications he shall be allowed to sublet the Work to a competent Sub-Contractor provided an application for his prequalification is made to the engineer for his approval. Decision of the Engineer in this case shall be binding on the Contractor.
  + 1. **Rules and Regulations**
       1. The installation in general shall be carried out in conformity with the Electricity Rules, 1937 (UK), and the latest edition of the Regulations for the Electrical Equipment of Buildings issued by the Institution of Electrical Engineers, London (I.E.). However, in case of conflict between these Specifications and the I.E. Regulations, these Specifications shall be followed.
    2. **Standards**
       1. The latest relevant British Specifications, and I.E. recommendations shall be applicable and be followed for the equipment specified herein.
    3. **Climatic Conditions**
       1. All equipment supplied shall withstand, without developing any defect, the following climatic conditions:-
* Maximum Ambient Temperature = 113° F or 45° C
* Minimum Ambient Temperature = 28° F or - 2.2° C
* Maximum Humidity = 98%
  + 1. **Specifications**
       1. The Contractor shall furnish all material and equipment at site, confirming fully to the specifications given herein and to the accepted standards, the Institution of Electrical Engineers, London, and the Utility Regulatory Authority.
       2. It is not the intent of these Specifications to include all details of design and construction of various material and equipment to be supplied under this contract.
       3. The Contractor shall supply and install all material and equipment specified herein and also all installation and small material such as nuts, bolts, washers, shims angles, leveling material, insulation, tape, solder, etc. and all such required for complete installation as intended by the Specifications.
       4. The contractor shall provide for all the required technical and non-technical personnel, skilled and non-skilled labour, construction equipment, transportation etc., as required for the completion of Work in strict accordance the Technical Specifications laid herein-after.
       5. All material and equipment supplied by the Contractor shall be new and in all respects conforming to the high standard of engineering design and workmanship.
       6. All material and equipment which have to be supplied and installed by the Contractor shall be passed/approved by the Project Manager; even if the same is exactly in accordance with the Bill of Quantities and Drawings.
    2. **Submittal**
       1. The Contractor, after the award of work, shall submit for approval of the Project Manager all drawings and cuts of equipment, appliances, fixtures and accessories. Cuts, catalogues and drawings shall be clearly marked to indicate, the items furnished.
    3. **Approval of Drawings and Data**
       1. The Contractor shall provide detailed electrical drawings, wire diagrams, etc. for all electrical switchgear, fuse gear and all other systems etc. for the Project Manager to review and approval. Three sets of equipment drawings shall be provided for obtaining approval.
    4. **Drawings & Data**
       1. Three sets of drawings and data (for each equipment) shall be furnished by the Contractor for the Project Manager approval before commencement of work. The drawings to be supplied by the Contractor shall be as follows:-
    5. **Electrical Drawings showing**:-
* Single-Line diagram
* Detailed wiring diagram
* All interconnections
* Relays, their locations, and internal wiring diagrams
* Other electrical devices including meters instruments and their wiring diagram
  + 1. **Shop Drawings**
       1. The design drawings do not show conduit routes and depict only the position of various fixtures and outlets. All the planning for the conduit routes shall be carried out, well in advance of the actual execution of work, by the Contractor to the satisfaction of the Project Manager. For this purpose the Contractor shall prepare shop drawings and obtain prior approval of the Project Manager. There prints of each shop drawings shall be submitted for obtaining approval.
       2. No piece of work shall be allowed to be executed at site without the availability of these approved shop drawings. These shop drawings shall clearly depict the load balancing chart of each Distribution Board.
       3. Time required for the preparation and approval of shop drawings shall be considered to have been included in the total time allowed for the completion of the work.
    2. **Spare Parts list**
       1. A list of spare parts required for the one year’s operation (each equipment) where deemed necessary together with unit price of each part, shall be supplied by the contractor.
    3. **Guarantee**
       1. The Contractor shall furnish written guarantee in triplicate of the manufacturer for successful performance for each equipment. Such guarantee shall be for replacement which may be found defective in material or workmanship.
       2. The guarantee shall cover a minimum period of 12 months effective from the date of completion certificate.
    4. **As-Built Drawings**
       1. The Contractor shall, during the progress of work keep a careful record of all changes and revisions where the actual installation differs from that shown on shop drawings. These changes and revisions shall be accurately carried out on the shop drawings and submitted to the Project Manager for approval. After approval these drawings shall become the property of the Owner. These updated and approved shop drawings depicting clearly all changes and revisions made on site shall be called As-Built Drawings.
       2. Reproducible tracings of all these As-Built Drawings shall be handed over to the Project Manager. Final payment will be withheld until the receipt of the approved As-Built Drawings.
    5. **Test Reports**
       1. The Contractor shall be responsible for the submitting the test reports/certificates and get the installation inspected passed by the Utility Regulatory Authority.
  1. **Conduit and Conduit Accessoires**
     1. **Conduit Pipe**
        1. The conduit for the wiring of lights, socket outlets and other systems shall be made of PVC confirming to BSS 3505/1968 Class-D.

The conduit shall have following wall thickness and standard weights:

|  |  |  |
| --- | --- | --- |
| **Pipe Size** | **Wt/100Rft.** | **Wall thickness** |
| 20mm dia | 3.4 Kg | 0.04 to 0.05 |
| 25mm dia | 4.5 Kg | 0.045 to 0.055 |

* + - 1. Steel conduit shall conform to BSS 31/latest. The conduit shall be enamelled with good quality non- cracking and non-flaking black paint.
    1. **Conduit Accessories**
       1. The use of factory made round PVC junction boxes shall be used and should have nipples to receive PVC pipe with force fit, shall be used for ceiling outlets. The wall type junction box shall also be PVC.
       2. Each junction box shall be provided with one piece cover which shall be fitted on the box with screws.
       3. Conduit accessories such as switch boxes, socket outlet boxes, pull boxes and inspection boxes shall be made of PVC having dust tight covers. All boxes shall have required number of conduit entry holes. All the rectangular or square shaped boxes shall have nipples to receive PVC conduit force fit.
       4. Manufactured smooth bends shall be used where conduit changes direction. Bending of Conduit by heating or otherwise shall be allowed only at special situations with the permission of the Project Manager. Use of sharp 90 degree bends and tees is prohibited.
       5. Bends shall have enlarged ends to receive the conduit without any reduction in the internal diameter of the PVC pipe.
       6. All accessories e.g. boxes, coupling, bends, solid plugs, bushes, reducers, check nuts etc. shall be equal in quality to the specified conduit.
       7. The drawings do not show conduit routes and all the planning for arranging conduit routes shall be carried out by the Contractor to the satisfaction of the Project Manager.
       8. The entire conduit system shall be essentially completed before the wiring pulling is taken in hand. Each conduit run shall be tested for continuity and obstructions. All obstructions shall be cleared in an approved manner. Water and moisture that has entered any section of the conduit installation must be dried with suitable swabs to the satisfaction of the Project Manager.
       9. Adequate expansion joints shall be provided in all conduit runs passing across the expansion joints in the concrete slab of the buildings.
       10. All the free ends of conduit shall be solidly plugged till such time as final and proper terminations are made.
  1. **Wires, Cables and Cords**
     1. **Wires & Cords**
        1. The wires & cords for the conduit wiring shall be single core, made of stranded copper conductors, PVC insulated, tested to B.S. 6004, 1975. The voltage grade shall be 300/500 volts or 450/750 V unless otherwise specified on Drawings and Bills of Quantities.
        2. All the wire and cables shall be of the approved standard of the Utility Regulatory Authority.
* For light or fan point wiring with 1.5 mm square or as specified in the BOQ.
* For light circuit wiring with 2.5 mm square or as specified in the BOQ.
* For power plug 15A wiring with 4 mm square or as specified in the BOQ.
  + 1. **Installation Instructions**
       1. All wiring shall be continuous between terminations and use of connectors or joints is not allowed. Spur and tee connections are strictly prohibited.
       2. Manufacturers recommended lubricant shall be allowed to facilitate pulling of wires. Use of any kind of oil and soap is prohibited.
  1. **Wiring Accessories**
     1. **Switches – GEWISS PLAYBUS or equivalent** 
        1. Indoor switches controlling lights and fans shall be single pole, 5A, one or two way, suitable for 250V, 50 Hz. The body of the switches shall be made of moulded plastic, one/two/three/four gang with integral built in moulded plastic face plate.
        2. Weatherproof switches shall conform to B.S. standard.
     2. **Switch Socket Outlet Units - GEWISS PLAYBUS or equivalent**
        1. Switch & socket units shall be single, pole, 3 pin rated 5A. 15A or 20A or 250V or 50 Hz. These shall be moulded plastic type with white integral built-in face plate. Each socket shall have its control switch by the side of it on a common face plate. Thus the complete unit specified in BOQ shall be as switch and a socket outlet unit.
     3. **Fans**
        1. All fans shall be capacitor type Deluxe models or equivalent and suitable for operation on 200/220 volts, 50 Hz, A.C Supply. All ceilings fans shall have five speed dimmers. The air displacement shall be adequate to 10,000 c.f.m for 48” (1219 mm) Sweep, and 12,000 c.f.m. for 56” (1423 mm) Sweep at maximum speed. The fan motor shall be capacitor type and bearings shall be groove type to give noiseless and quiet operation. The noise level relative to a frequency of range 1000 Hz should be within the limits of +3 dB.
     4. **Dimmer** 
        1. The dimmer shall be recessed type as required and shall be approved by the Project Manager.
     5. **Fan Hook**
        1. The fan hook shall be made of 12 dia mild 5/5 steel rod bent to shape of approved design. It should be in the form of a loop about 3-1/4” (87.5 mm) long and about 2” (50 mm) wide. The rod shall be bent to have at least 8” (200 mm) extension on both sides for tying to the reinforcement steel of the slab. All ceiling fan shall be of one make only.
        2. The fan hook shall be installed in the RCC slab of the ceiling at the time of pouring concrete.
  2. **Light Fixtures**
     1. **General**
        1. The description of light fixtures is given in the Bills of Quantities, and stated on the Drawings, and all relevant material is described in this Section.
        2. The determination of quality is based on certified photometric data covering the coefficient of utilization, light distribution curves, construction material, shape, finish, operation, etc.
        3. The Contractor shall submit samples of each and every lighting fixture specified for approval of the Project Manager.
        4. The type of fixtures with manufacturer catalogue reference is given in Bill of Quantities.
        5. The lighting fixtures shall be manufactured by ERCO **or equivalent** as approved by Project Manager.
     2. **Incandescent Light Fixture**
        1. The glass globes/ shades/ diffusers of the incandescent light fixtures shall be first class quality glass free from any air bubbles or voids. The glass shall generally be of opal white colour unless otherwise specified. The shape of the glass may be spherical, hemispherical, flattened bottom or tablet shaped as required.
        2. Surface mounted fixture shall have stove enamelled sheet steel body. It may also be satin brass or aluminium anodised finish as required. The fixing holes shall match the outlet box. Wall bracket light fixtures shall have back plates with matching holes of the outlet box and decorative finish as required.
        3. All the lighting fixtures shall be suitable for local climatic conditions.
     3. **Fluorescent Light Fixture**
        1. All the light fixtures shall have lamps and electronic ballasts of the wattage specified. The fluorescent lamp shall be either 2 ft - 18 watts or 4 - 35 watts and the colour shall generally be day light, cool day light in the order of preference or as mentioned specifically.
        2. The fluorescent lamps shall be Philips to BSS 1853 but having a minimum useful life of 5000 hours. The new generation of 26mm dia 18 watts and 36 watts energy efficient lamps shall be preferred.
        3. The ballast shall be totally enclosed electronic type suitable for operation on 220 V, 50 Hz, single phase supply, a wiring diagram, wattage, voltage and current ratings shall be printed on the body of the ballasts. The power loss shall not more than 10 watts for 36 watts ballast. The ballast shall be noiseless in operation without any whistling sound.
        4. The manufacture shall be called upon to guarantee a trouble free life of 3 years, effective from the date of completion certificate.
        5. The starters shall have radio-interference suppressers.
        6. The internal wiring of the light fixtures shall be carried out at manufacturer’s factory with heat resistance wires of size not less than 1.5 mm square.
        7. The louvers of light fixtures shall be made of anodized aluminium and/or moulded plastic. The diffusers shall be made of Acrylic Perspex.
        8. All the lighting fixtures shall be suitable for local climatic conditions.
     4. **Installation Instructions** 
        1. The light fitting shall be installed according to manufacturer’s recommendations or as approved by the Project Manager.
        2. Flexible connecting wires from outlet box to the fixture shall be provided by the contractor; connector made of porcelain or thermoplastic material shall be provided and installed in the outlet boxes for connecting flexible wires to the point wires.
        3. Outlet boxes or any openings in the ceilings and walls shall be covered with appropriately fabricated accessories to provide an architectural entity to conceal them.
     5. **Main L.T. Switchboard**
        1. The L.T. switchboard shall be indoor type, free standing, free supporting, floor mounted, totally enclosed, sheet clad, dust and suitable for operation on 3 phase 4 wire system, 415 v, 50 Hz, AC supply.
        2. The board shall be suitable for installation back to the wall and capable of front attendance. The switch board shall be designed to suit service conditions and ensure security and safety during operation, inspection, operation, cleaning and maintenance.
        3. The switch board shall be designed and tested to IEC recommendations. Each panel shall withstand strain of 2000 volts insulation level for one minute power frequency test.
        4. The L.T. switch board shall consist of the following:
* ……………………………………………… Unit incoming panel
* KWh meters (To be approved and checked by Utility Regulatory Authority)
* Out going distribution feeders
  + 1. **Distribution Feeder Panel**
       1. Single line diagram of the L.T. switch board shall be approved by the Project Manager and City Council and Utility Regulatory Authority before placing order for the switch board.
    2. **Earthing**
       1. The switchboard shall be effectively earth by means of a copper strip of 25 mm x 3 mm (1” x 1/8”) cross -section bolted to connections near the bottom of the switchboard.
    3. **Accessories**
       1. Designations labels, lifting lugs, foundation bolts, interconnecting nuts blots, and washers, thimbles, lugs, levelling shims cable glands and/or cable end box for all the sizes of incoming and outgoing cable shall be supplied with the switchboard.
  1. **Testing**
     1. The following tests shall be conducted on each completed switchboard.
        1. Type Tests
* Temperature rise test
* Mechanical endurance test
* Making/Breaking Capacity test
* Routing Test
* High Voltage test
* The Switchboard shall be tested to British/Electricity Council Standard 41-5. Preference shall however, be given to Switchboards fabricated from all components manufactured by only one manufacturer.

**Installation Instruction**

* + 1. All labour, equipments, tools and plants required to complete the installation shall be provided by the contractor. The Switchboard shall be fixed firmly on the floor in perfect line, plumb and level position.
    2. All incoming and outgoing cable connections shall be made from the bottom including Earth connections.
  1. **Distribution Board**
     1. The distribution boards shall be free standing, cubical type or wall mounting type suitable for recessed mounting. Each distribution board (DB) shall be tropical in design, fully dust and vermin proof and liquid repellent.
  2. **Lightning Protection System**
     1. **General**
        1. The Contractor shall be under obligation to supply all labour material, services and skilled supervision necessary. Shop drawing for the lighting system shall be submitted to the Project Manager at least 4 weeks before commencing the work.
     2. **Workmanship**
        1. The installation shall be carried out by skilled and competent workmen so as to achieve high class workmanship.
  3. **Telephone System**
     1. **General**
        1. The design drawings do not show conduit routes and depict only the position of various telephone outlets. All the planning for the conduit routes shall be carries out, well in advance of the actual execution of work, by the Contractor to the satisfaction of the Project Manager. For this purpose the Contractor shall prepare shop drawings and obtain prior approval of the Project Manager. Three prints of each shop drawings shall be submitted for obtaining approval before commencement of work.
        2. No piece of work shall be allowed to be executed at site without the availability of these approved shops drawings. Time required for the preparation and approval of shop drawings shall be considered to have been included in the total time allowed for the completion of the work.
        3. The contractor shall furnish and install the type of Telephone outlets approved by the Project Manager. All the floor mounted telephone boxes shall be concealed in a PVC box with open able cover for easy access.
        4. Both ends of each set of conductors shall be properly identified with durable tags with the same identifications of both ends, at the outlet and the telephone terminal cabinets to facilitate the installations of the telephone instrument in the future and for trouble shouting purposes. Cable used shall be twisted and shielded 3 cables in the office area and the rest as shown in the drawing.
  4. **Fire Alarm System**
     1. **General**
     2. The contractor shall be under obligation to, supply, install, test, commission and maintain for the period specified elsewhere, a fire alarm system as specified in the drawings, for this building.
     3. **Specifications**
     4. The system shall facilitate the detection of fires occurring in any part of the building by subsequent audible and visual indications. The system shall generally comprise of the following:
* Main Control Panel
* The control panel will be Perspex fronted panel and will display all screened labelling and indications by block LEDs mounted behind the front hinged cover. The control panel shall be mounted in pressed steel housing and provide the following functions and indications.
* Fully monitored two wire circuit for each sensor zone (24V D.C.) as required.
* Fully monitored two wire sounded circuit (24V D.C.) as required.
* Change over relay contacts each rated 5 amps 240V A.C. (Resistive load).
* Full test and isolate functions via a key-board located on the facia of the main termination housing to provide the following:-
* Ability to isolate sensor zones.
* Ability to isolate sounder zones.
* Ability to test automatically zones with an auto reset facility to enable a single person to carry out testing
* Full LED display of all functions comprising of:-
* System on, system fault, processor fault, alarm, zone supply fault, system supply fault, battery fault, charger/mains fault, sounder fault and sensor fault together with a test mode display which provides zone clears , zone open circuit and zone short circuit indication for individual sensor and sounder (bells) lines.
* Sequence of sounder operation- All sounder (bells) and relay out-put sequences shall be completely programmable to enable future changes to be carried out with only software changes.
* The control panel shall provide the following functions and indications:-
* Twin LED display for system on , system fault ,sounder fault, alarm, mains/ charger fault, main processor fault, sensor fault, alarm silenced , battery fault, supply fault and earth fault.
* Also five dedicated control functions on illuminated push buttons which are key - isolated. These shall provide Evacuate, Buzzer Mute, Alarm silence, Lamp test and Reset controls.
* Battery charger - the battery charger shall be an integral part of the main fire alarm control panel cabinet and shall be capable of fully recharging the stand - by batteries after a main’s failure within 12 hours. The capacity of the batteries shall be sufficient to supply the standing load for the least 24 hours and the maximum alarm load for one hour. The system shall be suitable for operation on 220v single phase or 415v, 3- phase 50 Hz supply.
* Mimic diagram showing all the floors shall be incorporated in the control panel.
* Sensors and Sounders
  + - 1. The main control panel as described in the foregoing shall be capable of working with the following devices having common specification as under:-

(a) Operating voltage 10-30 volts dc (two wire system)

(b) Ambient temperature 10 C to +80 C.

(c) Humidity range 20 to 90 RH

(d) Altitude range Sea level to 6000 meters

(e) Alarm mode Self latching producing a resistance of 680 ohms across the supply line.

* + - 1. Photocell (optical) smoke detectors- the units shall operate on light scattering principle. An internal infra-red light source shall be pulsed, with the light beam ranged so as to by-pass a receiving unit. The presence of smoke shall scatter the light beam, causing it to be reflected on to the receiving photocell. An evaluation circuit shall measure the amount of light and shall compare it to a reference. The detector shall trigger in to an alarm state when the amount of smoke exceeds a pre-set level. To ensure against false alarms several pulse readings shall be taken and compared before the detector shall be triggered into alarm. The detectors shall conform to b.s.s. 5446 part -1 and shall have the following specifications:-

(a) Quiescent Current Less than 100 micro amps at 20 volts.

(b) Alarm Current Maximum 60 mA

(c) Maximum Coverage 300 cubic meters

(d) Weight 250 grams approx.

(e) Diameter x Height 92 mm x 80 mm

* Manual stations - this unit also named call point shall be break glass type that do not require a hammer. The frangible glass is pressed hand to break the glass which shall activate the alarm. The call point shall conform to B.S. 5839 part-2.
* Alarm bells - the alarm bells shall be centrifugal type and the gong shall be 100 mm diameter or as specified. The unit shall be suitable for an input of 24 v dc. And shall provide a normal output of 94 db at 1 meter.
* Electronic sounders - the unit shall be primarily designed to operate on 24v.d.c. And arranged easily to generate a variety of sound signals: intermittent, continuous or warble tones.
  1. **Wiring**
     1. The wiring for the fire alarm system shall be carried out in PVC conduit in accordance with instructions contained herein relevant section. 2x2.5 mm square or 4x2.5 mm square PVC heat resistance insulated single core cable 300/500 volts grade shall be pulled in 1” dia PVC conduit laid for the purpose. Any spurs and tee joints in the wiring are strictly prohibited. Instructions contained in section -E.2.2 and 2.3 shall be followed.
     2. **Installation**
     3. The installation as a whole shall be tested and commissioned, in accordance with manufacturer’s instructions, to the entire satisfaction of the Project Manager.
     4. **Shop Drawings**
     5. Shop drawing of the fire alarm system layout shall be submitted to the Project Manager for approval.

1. **R.C. CONCRETE ROOFING AND WATERPROOFING**
   1. **General**
      1. Material shall be of the best quality and to the approval of the Project Manager all in accordance with the relevant British Standards and Agreement Board Certificates.
      2. Workmanship shall be to the highest standards and codes of practice.
   2. **Testing**
      1. The Contractor is to test, to the satisfaction of the Project Manager, all areas of roofing, waterproofing, terraces, bathrooms, and the like for water penetration. These tests are to be carried out after the membrane has been laid.
      2. The Contractor is to allow in his rates for such areas to be flooded with water, and left for a minimum of 48 hours.
      3. On completion of roofing works the Contractor is to leave the roof in a sound and watertight condition, to the approval of the Project Manager, and in a satisfactory state for handing over.
   3. **Guarantee**
      1. The Contractor is to provide the Employer with a written guarantee to cover improper materials or faulty workmanship for a period of 10 (ten) years from the date of issue of the Final Certificate at the completion of the maintenance period. The Contractor shall bear the cost of any of the consequential damage as is provided for in same guarantee. The text of the guarantee shall be to the Project Manager's approval.
   4. **Preparation of Surfaces**
      1. All surfaces shall be clear of all deleterious matter and dry all in accordance with the manufacturer's written instructions. Prior to the application of any waterproofing/roofing material or primer the Contractor shall grind the concrete surface using a mechanical grinder to ensure all surface irregularities are removed and gain the Project Manager's written approval that he may commence the said works, without same all works shall be rejected and replaced at the Contractor's expense.
   5. **Protection**
      1. Finished and part finished surfaces shall be suitably protected to ensure no damage by other trades. Any roofing or waterproofing so damaged due to non‑protection shall be removed and replaced at the Contractor's expense. The Contractor shall submit to the Project Manager his proposed methods of protecting the various surfaces and locations prior to their completion or application of finishing layers, i.e. tiling and the like.
   6. **Roofing**
      1. The roofing shall comprise the following layers: -
         1. Concrete screed, density 650‑800 kg/m³, minimum thickness 30mm laid to falls and cross falls to drainage outlets. The screed shall be laid in bays not exceeding ten square meters and 300 mm wide from the edge with joints between bays in 10mm thick compressible fibre material.
         2. Supply and apply one coat of approved priming/bonding course as per manufactures' instruction.
         3. 4 mm electrometric special polyester tropical grade modified bituminous felt, torch applied - black finish.
         4. 20 mm thick finished natural sand stone tile laid over sand cement screed of thickness min 50 mm in slopes and cross slopes. Joints at 10 m² to be filled with approved polysulphide sealants (two part polysulphide) in accordance with the manufacturer's instructions.
         5. Skirting comprising waterproof membrane turned up and over fillet at roof perimeter up wall as per detail drawings. Allow for all two part polysulphide sealant and aluminum flashing.
   7. **Waterproofing**
      1. Prepare and apply two coats bitumen paint to all surfaces below ground level.
      2. Apply primer and one layer self adhesive membrane, to Project Manager's approval with end and side laps, applied as per the manufacturer's instructions to the concrete floors of all wet areas, including bathrooms, toilets, kitchens and the like including dressing into drainage outlets and the like, and turning membrane as skirting up all perimeter walls 300mm high and tucking into preformed groove.
      3. As item 2) above to horizontal concrete surfaces and top of blinding as shown on drawings with 20mm thick screed protection layer over.
2. **ALUMINUM DOORS AND WINDOWS**
   1. **Aluminium Doors and Windows**
      1. All windows and doors are to be constructed by approved specialist suppliers of medium section to the particular requirements noted on the drawings as to weight and profile. All sections shall generally conform to relevant British Standard Specifications.
      2. All frames should be made to fit the actual openings with a 3 mm clearance all around. Discrepancies in overall width or height exceeding 3 mm will not be allowed and the frames will be rejected in such cases. Any small discrepancies shall have the gaps suitably backed and filled with gun-applied water repellent mastic sealant
      3. All sealants used in the assembly of, and in the fixing of cladding and window framing, shall be non-setting to allow thermal movement without detriment to those joint sealants used for peripheral caulking and shall be one part silicone sealant and shall conform to BS 4245. All spliced joints between mullions should be sealed with an approved silicone product, compatible with other sealants and packing used.
      4. The auxiliary components in sashes as locks, pivots, sliding gear etc. shall comprise of stainless steel or resisting materials.
      5. The tolerance is to be as follows:

a) Inside width of frame 3 mm Maximum

b) Inside height of frame 3 mm Maximum

c) Depth of frame 2 mm Maximum

d) Opposite side, Inside distance 2 mm Maximum

* + 1. The performance - associated requirements are

(1) Strength (resistance to wind pressure and other forces applied in use)

(2) Air tightness or ability to cut out drafts.

(3) Water - tightness against rain or dew.

(4) Sound arresting effect to (shut off noise from outside as well as inside).

* + 1. All surfaces shall have an anodized protective surface layer of minimum 25 Micron thickness.
    2. Glazing shall be done as specified by the Project Manager. Glass shall be tinted, or as specified in the drawings. Thickness shall be according to the size of panels as given hereunder.

|  |  |
| --- | --- |
| Not exceeding 1 sq. ft. | 2mm |
| Exceeding 1 sq. ft. but not exceeding 2 sq. ft. | 3mm |
| Exceeding 2 sq. ft. but not exceeding 4 sq. ft | 4mm |
| Exceeding 4 sq. ft. but not exceeding 6 sq. ft | 5mm |
| Exceeding 6 sq. ft. | 6mm |

* + 1. Prior to import and / or purchase of the Aluminium Doors and Windows, the relevant specification of the manufacturer, along with samples has to be submitted to the Project Manager for approval. This clause shall not be contravened on any account.
    2. The fitting shall be done with utmost care not to spoil the finishes given by the manufactures, and any cleaning done shall be done with cleaners etc. as specified by the Manufactures.
    3. The Contractor shall provide all items, articles, materials, operations, mentioned, or scheduled on the drawings, including all the labour materials, including fixing devices, equipment and incidentals necessary as required for their completion.
    4. The Contractor shall submit shop drawings and/or samples of each type of doors, windows, railings and other items of metal work to the Project Manager for approval. The shop drawings shall show full size sections of doors and windows etc. thickness of metal, details of construction hardware as well as connection of windows, doors and other metal work to adjacent work.
    5. Aluminium doors and shutters shall be manufactured by an approved manufacturer and shall be of sections, sizes combination and details shown on the drawings. The frame member shall be one piece, corners shall be electrically welded, ground smooth and true and glazing bare shall be threaded or interlocked as approved by the Project Manager.
    6. Glazing for doors and windows shall be of specified thickness and of approved quality and shall conform to specification of glazing. Fixing for glazing shall be done with aluminium Snap-On beading as per detail drawing and instructions. Necessary continuous rubber gaskets of approved make shall be provided.
    7. Colour for doors and windows shall be approved by the Project Manager.
  1. **Aluminium louvers**
     1. Samples shall be submitted for approval.
     2. All metal louvers shall be installed according to manufacturer’s instructions.
     3. All units shall be installed plum, well fitted and securely attached to supporting frames.
  2. **Top hung windows, ventilators and side hung doors**
     1. All windows and doors should be weather stripped. The weather protection should be achieved by a positive compressive action against the section and should not depend on external contact. At every contact between two profiles two weather stripping sections should be provided to complete weather protection.
     2. The bottom section for hinges must be capable of being adjusted vertically if necessary. The gap between section and the floor should be covered with a pair of special splay-tube sections.
     3. The shutter sections for both windows as well as doors shall be hollow section type and shall be overall size 57 x 45 mm and the door sections shall be overall size 81 x 45 mm (including flanges).
     4. The shutters of the windows and doors should be assembled with stainless steel pins and nylon washers. Handles shall be anodised aluminium finished to match the aluminium sections and mounted with self lubricating nylon washers.
     5. A mortice cylinder rim automatic deadlock of high quality with double pin tumbler shall be used.
     6. Windows shall have anodised aluminium handles, colour as framing and a latching mechanism securing the shutter to the frame both at the top and bottom.
     7. Required fittings;
        1. Single action door closer concealed in the head bar of the outer frame and mounted on an adjacent pivot at the threshold and deadlock fitted.
        2. The left hand leaf of double doors with flush bolts at head and sill with deadlock fitted to the right hand leaf.
        3. Escape doors to have panic bolts assembly with vertical elements concealed in the sill and door closer as in 13.3.7.1.
  3. **Installation** 
     1. Aluminium work shall be installed adjusted and glazed by experienced workmen all in accordance with the manufacturer's installation instructions and in full conformity with the approved shop drawings, samples and other submitted data. Under no circumstances shall materials be installed on surfaces that contain condensation, dirt, grease or other foreign encountered materials that would hinder or prevent proper installation and functioning for the use intended.
     2. Aluminium work shall be carefully and accurately assembled with proper and approved provision for contraction and expansion and set in correct locations as per approved detailed shop drawings, all level, square, plumb and aligned with other work. All joints between framing and structural building shall be sealed in order to be watertight and weatherproof and to satisfy all other requirements of the Project Manager.
     3. Frames shall be designed and manufactured with a maximum 2.5mm tolerance around the opening in the structure. These joints are to be finished by applying an approved sealant into a polystyrene foam backing strip.
     4. All aluminium works are to be fully protected for the duration of the contract from damage by other trades. The Project Manager shall approve the method of protection.
     5. If for any reason final finishes become scratched, abraded or damaged during transport, delivery, storage or erection, it shall be the Contractor's responsibility to remove or repair those defective areas or components as directed and to the complete satisfaction of the Project Manager.
     6. Repair work shall be identical to the manufacturer's applied finish with regard to gloss, finish and visual appearance. Field touch up of painted aluminium is permitted only with the written permission of the Project Manager. Where touch up is not an authorised means of repair the damaged materials must be replaced by new.
     7. Upon completion of work all protective coverings from all exposed surfaces shall be removed. All surfaces shall be cleaned using soap or detergents as recommended by the aluminium manufacturers to remove sealants, discolouration and any other foreign material. Defection of any type determined by the Project Manager shall be repaired at the Contractor's expense.
     8. Extreme care shall be taken when cleaning the exterior portion to protect all other adjacent works.
  4. **Sealing joints**
     1. The Contractor shall ensure that joints are dry and remove all loose material, dust and grease.
     2. Joints shall be prepared in accordance with sealant manufacturer's recommendations using recommended solvents and primers where necessary.
     3. Adjoining surfaces which would be impossible to clean if smeared with sealant shall be masked.
     4. Backing strips shall be inserted in all joints to be pointed with sealant. When using backing strips, the Contractor shall not leave gaps and shall not reduce depth of joint for sealant to less than the minimum recommended by the manufacturer.
     5. Cavities shall be filled and jointed with sealant in accordance with the manufacturer's recommendations. Sealant shall be tooled to form a smooth flat bead.
     6. Excess sealant shall be removed from adjoining surfaces using cleaning materials recommended by the sealant manufacturer, and shall be left clean.
  5. **Glass installation**
     1. Workmanship shall generally be in accordance with CP 152 and respective British Standards.
     2. The glass is to be delivered to the site with adequate protection to prevent damage and where possible it is to be fixed in position immediately after delivery. When fixed the Contractor is to take all necessary precautions to prevent damage during succeeding building operations and will be entirely responsible for the replacement of any broken or damaged glass at contractor’s own cost.
     3. The Contractor is to be solely responsible for determining the exact sizes of glass required, including a tolerance of 2 mm to each edge and he is recommended to check the necessary dimensions on site.
     4. No glazing is to be carried out until rebates have been painted with primer. Glazing beads as applicable are also to be primed before fixing.
     5. All mastic is to be neatly struck off to agree exactly with site lines inside and out.
     6. Rates are to include for all necessary springs, clips, setting blocks, location blocks and distance pieces and for taking off and later re‑fixing loose beads
     7. Glass apertures in timber doors are to be bedded in chamois leather glazing strip, black ribbon velvet or P.V.C. glazing strip to the approval of the Project Manager.

1. **ROOFING**
   1. **Scope**
      1. This Section deals with steel profiled sheeting used as external weatherproof cladding of roofs.
   2. **Roof Cladding**
      1. Sheet type: Spandek hiten roofing sheets manufactured by John Lysaght, No.18 Benoi Sector, Jurong, Singapore 2262 or equivalent.
      2. Structural support: timber sections as per drawings.
      3. Fastening: No. 12-14 x 45mm hexagonal head self-drilling and tapping screw seal
      4. End laps: 200mm and should be sealed with a recommend sealant for pitches below 7 degrees.
      5. Side laps: as per manufacturer’s recommendations.
   3. **Products**
      1. The profiled sheeting shall be in galvanized sheet steel with a factory per finished protective PVC film with colour to approval.
   4. **Workmanship** 
      1. Accessories: Flashing, trims, filler pieces, spacers, tapes, sealant, etc. where not specified to be the types recommended by the sheet manufacturer.
      2. Fastening: Select types and location of fastenings to meet the following requirements.
         1. Wind suction loaded: Calculate in accordance with CP 3: Chapter5: Part2, making due allowance for any internal pressure.

* Basic wind speed: 45 m/sec.
* Topography factory S1 : 1.0
* Ground roughness, building size and height Factory (S2): as determined from CP3:Chapter5: Part 2, Table 3.
* Statistical factor ( S3) : 1.0
  + - 1. Imposed loads other than wind and maintenance load, 1.5 KN/m2 concentrated on a 300mm2 which ever produces the greater stress. Maintenance point load: 0.9 KN concentrated on any 125mm2.
      2. Dead load: allow for self weight of sheeting.
      3. Roof pitch: as indicated on drawings.
      4. Distance between not less than 900 mm or as indicated on the drawings.
  1. **Fixing**
     1. **Quality of Work**: Handle and store to preserve surface using clean dry gloves. Do not slide sheets over rough surface or each other. Packs of all sheets must be kept dry in transit and stored clear of the ground under cover to prevent water and /or condensation being trapped between adjacent surfaces. If packs become wet, sheets should be separated, wiped with a clean cloth without delay and placed so that air calculation completes the drying process.
     2. **Structure**: Check that structure is in a suitable state to receive sheets before commencing fixing. Contractor must confirm acceptance to Project Manager
     3. **Structure**: Do not fix profiled sheeting until final coats of paints have been applied to outer surfaces of supporting structure.
     4. **Isolating Tape**: This has to be applied to those surfaces of the supports, which would otherwise be in contact with sheeting or accessories after fixing.
     5. **Cutting and drilling**:
        1. Cuts sheets accurately with clean, true lines and no distortion with a power saw with abrasive cutting disc.
        2. Cut openings in sheet for out lets, vent pipes, flues etc. to the minimum size necessary. Reinforce edges of openings with structural members.
        3. **Drill all holes**. Positioned at regular intervals in straight lines. Holes for primary fastenings to be 1.5 mm larger than the diameter of fastening unless self drilling type is used.
        4. Remove burrs, drilling swarf, lubricant, dust and any other foreign matter before finally fixing sheets into position.
     6. **Direction of Laying**: Lay sheets with exposed joints of side lap away from prevailing wind.
     7. **End Laps**: to be fully supported.
     8. **Sealant**:
        1. Install to manufactures recommendation.
        2. Position in straight, unbroken lines parallel to edges of sheets. Placed into corrugations. Do not allow to sag into position.
        3. Ensure continuity and effectiveness of seal , especially at corners of sheets.
        4. Do not over compress.
  2. **Fittings and Features**
     1. Profile Fillers: use where specified and wherever necessary to close off corrugation cavities from the outside and inside of the building. Position on the line of, or above, fastening and ensuring a tight fit and leaving no gaps. Where sealed laps are specified bed profile fillers in sealant on top and bottom surface, but do not obstruct channels for ventilation or condensation drainage.
     2. Flashing Trims: All fittings for flashing / trim shall be as per manufacturers recommendation and lapped at joints as follows:
        1. Vertical and sloping flashing / trims : end lap to be the same as for adjacent sheeting.
        2. Horizontal flashing / trims: end laps to be 150mm and sealed.
     3. Gutter: Ensure that gutters are fully supported at each joint and at intermediate position not more than 900mm apart. Fix with spigot ends up the slope and make all the joints fully watertight. Position sheeting to leave a clear width across the gutter of not less than 230 mm.
     4. Insulation:

75mm thick Rock Wool insulation blanket with aluminium foil backing on both sides laid between purlins at 1000 centres, including wire mesh. Manufacturer and reference - to approval.

1. **FIRE PROTECTION SYSTEM**
   1. **Hose Reels**
      1. Recess Hose reels approved to BS EN 671-1: 1995, or any other equable International Standard, Automatic operation, Right or Left hand take off. Including 30m length of Hose, 19mm diameter hose approved to PR EN 694, or any other equable international standard, and nylon twist operated jet / spray nozzle on mounting plate with integral flexi guide for hose withdrawal device. 03 or 04 fixing holes should be provided in position indicated to suit M8/M10 sized fixing screws or M12 fixing bolts. With ball valve inlet and flexible inlet water pipe.
      2. The overall width of the reel should be no more than 850mm. The overall height of the reel should be less than 850mm including Hose and integral Flexi guide for hose withdrawal guide. The overall depth of the reel should no more than 150mm. Color of the reel should be red, fitted with operating instruction plate.
      3. The Hose Reels and the related equipment’s should be approved by the NSS Fire and Rescue Service before Installation. Special permission should be taken for the size of the Hose reels.
      4. The Hose Reels nozzle retainer or hose guide and inlet valve should be fitted at height of about 900mm above floor level.
   2. **Hose Reel Cabinets.**
      1. The hose reel should be recess mounting type with or without glass paneled door for use with the above mentioned sized Hose Reels. Hose Reel Cabinet dimension should be no more than 900mm in width, 900mm in height, 300mm in depth (including door).
      2. Color of the cabinet should be Red. Special permission should be taken for other color.
      3. Recessed latch type handle should be installed. Hose reel signage should be in accordance to BS 5499 or any other equable international Standard. Fixing hole should be provided.
      4. The Hose Reel cabinets should be approved by the NSS fire and Rescue Service before Installation.
   3. **Water Supply for Hose Reel System.**
      1. As a minimum, the water supply to the hose reel should be such that when the two far most reels in the premises are in use simultaneously, each should provide a jet of approximately 6m in length and will deliver not less then 0.5litre/s (30 litre/min).
      2. Minimum Quantity of water storage required for hose reel system only.
      3. Minimum storage required for the first hose reel; 2275litre.
      4. For each additional hose reel; 1137.5litre to a maximum of 9100litre
      5. Tank or inter-connected tanks supplying water for the hose reel should be automatically supplied from the fresh water main(s) controlled by ball valve of a minimum diameter 50mm. Rain water collected from roof can also be stored.
      6. Tanks supplying water for domestic purposes should not be used as suction tanks for hose reel installation unless arrangement have been made these domestic supplies to be drawn off in such a manner that the reserve of water for the hose reel installation is always preserved.
      7. The piping details of the supply o f water for the hose reel system and the water supply system should be approved by the NSS fire and Rescue Service before Installation.
      8. Special permission should be taken if it is different from the above.
   4. **Hose Reel Booster Pump system.**
      1. Hose Reel booster pump set, complete with In and Out galvanized steel pipe work with or without expansion vessel.
      2. Where the water pressure in the hose reel mains needs to be boosted, the provision of an electrically driven pump is usually a convenient method. A duplicate standby pump should be always provided.
      3. Both motors and pump should be sited in fire-protected position and the electrical supply to them should be an Exclusive Circuit with the cables following a route of negligible fire risk or be provided with adequate protection.
      4. The booster pumps systems should come into operation automatically on a drop in pressure or a flow of water. Both pumps should be automatically primed at all times.
      5. All pumps should also be capable of being started or stopped manually. The standby pumps should be so arranged that it would operate automatically on a failure for any reason of the duty pump.
      6. 16.4.2 The Hose Reel Booster Pump set should be approved by the NSS Fire and Rescue Service before installation.
      7. Special permission should be taken if it is different from above.
   5. **Fire Extinguishers.**
      1. 2Kg Co2 stored pressure Extinguisher approved to BS En 3. Aluminium alloy Body approved to BS5045 Part 3 or any other equable International Standard. Red Body with black band or black colored head cap, swivel Horn, English screen. Fully charged.
      2. The Extinguisher Should be approved by the NSS Fire and Rescue Service before Installation. Special permission should be taken if it is different from above.
      3. 9 liter Water Extinguisher (Gal Cartridge Type) approved to BS EN 3 or any other equable International Standard. Red body head cap. English screen, fully charged.
      4. The Fire Extinguisher should be approved by the NSS Fire and Rescue Service before Installation. Special permission should be taken if it is different from the above.
      5. Fire Extinguishers should be located in conspicuous positions on bracket or stands where they will be readily seen by person. The carrying handle of larger heavier extinguishers should be about 01m from the floor level. But smaller Extinguisher should be mounted so as to position the handle 1.5m from the floor level. Extinguisher installing on the cabinet the height should be approved by NSS Fire and Rescue Service.
   6. **Cabinet for the Extinguishers.**
      1. Cabinets for the Extinguishers should be of stainless steel with or without glass-fronted doors. Color of the cabinet Red or to suit the requirements of architectural surroundings. Recessed Latch Type handle should be installed.
      2. Fire Extinguisher Single Cabinets dimension should be no more than 190mm in width, 640mm in height, 180mm in depth (including door),
      3. Fire Extinguisher Double Cabinets dimension should no more than 440mm in width, 640mm in height, 180mm in depth (including door).
      4. The cabinets for the Fire Extinguisher should be approved by the NSS fire Rescue Service before installation. Special permission should be taken if different from above.
   7. **Fire Doors**
      1. All fire doors should be opened to the direction of the flow of the people while in emergency.
      2. These doors should be installed with self-closing device including the panic latch. These panic Latch devices should conform to BS 5725 Pt 1 or any other equable international standard.
      3. Fire doors conforming to the method of construction as stipulated below shall be deemed to meet the requirements of the fire-resisting period.
      4. Doors frames constructed in accordance with one of the following specification should be deemed to satisfy the requirements for doors having fire resisting period of half-hour (30min).
      5. A single door 900 millimeters wide x 2100 millimeters high maximum or double doors1800 millimeters high maximum construction of solid hardwood core of not less than 37 millimeters laminated with adhesives conforming to either BS 745 “Aminal Glues”, or BS 1204, “Synthetic resin adhesives (phenolic and aminoplastic) for wood” Part 1, “Gap-filling adhesives” or BS 1444 “Cold – setting casein glue for wood”, or any other equable International Standard, faced both sides with plywood to a total thickness of not less than 43mm with all edges finished with a solid edge strip full width of the door. The meeting stiles of double doors shall be rabbeted 12mm deep or maybe butted provided the clearance is kept to a minimum.
      6. Doors may be double swing provided they are mounted on hydraulic floor springs and clearance at floor not exceeding 4.77mm and frame and meeting stiles not exceeding 3mm;
      7. A vision panel should be incorporated provided it does not exceed 0.065 square meter per leaf with no dimension more than 1370mm and should be glazed with 6mm Georgian wired glass in hardwood stops;
      8. Doors constructed in accordance with BS459 part 3 : 1951 or any other equable International Standard fire check flush doors and wood and metal frames (half hour type);
      9. Timber frames for single swing half hour fire doors of overall width of 60mm including 25mm rabbet and depth to suit door thickness plus 34mm stop;
      10. Metal frames half hour fire doors shall be of sheet steel not lighter than 18 gauge of overall width 50mm including 18mm rabbet and depth to suit the door thickness plus 53mm stop;
      11. Timber or metal frames for double swing doors should be as specified above with minimum clearances between frame and door;
      12. Double doors with rabbeted meeting stiles should be provided with co-coordinating device to ensure that leafs close in the proper sequence;
      13. Fire doors may held open provided the hold open device incorporated a heat activated device to release the door. Heat activated devices shall not be permitted on fire doors protection openings to protected corridors or protected staircase
      14. The Fire doors and its related devise should be approved by NSS fire and rescue Service before Installation.
      15. Special permission should be taken if it is different from above.
   8. **Fire Exit Signs** 
      1. Photo luminescent Fire exit signs should sign each fire Exit door. The Symbol height should be not more than 100mm.
      2. The fire Exit should be approved by the NSS fire and Rescue Service before Installation.
      3. Special Permission should be taken if it is different from above.
   9. **Fire Detection and Alarm System.**
      1. Fire detection and Alarm system should confirm to BS 5839 or any other equable international Standard. Fire Detection and alarm system should be analogue Addressable System with mimic diagram. A system in which signals from each detector and/or call point are individually identified at the control panel. Fire Detection and alarm system should consist of Automatic Detectors, Manual Call Points, Control and indicating equipment, etc. It should also covers System capable of providing signals to initiate, in event of fire, the operation of ancillary services such as fixed fire extinguishing systems and other precautions and actions. Main Fire Control Panel should be located at easy access point.
      2. Red Xenon Beacon should be weather resistant IP65 rate Xenon.
      3. 24 Tone Wall Sounder Compact should confirm BS 5839 Pt. l or any other equable international standard.
      4. Wiring for detectors should be Fire Resistant Cable.
      5. Heat Detectors should comply with BS5445 or any other equable International Standard.
      6. The Fire Detections and Alarm System and all related equipment’s should be approved by MNDF fire and Rescue Service before Installation including all the relevant equipments.
      7. Wiring details and the positioning of detectors, Call points, etc. for Fire Detection and alarm system should be approved by the MNDF Fire and Rescue Service before Installation.
      8. Special permission should be taken if it is different from above.

2. Environment, Health and Safety Management Requirement

ENVIRONMENTAL SAFEGUARDS

A. Initial Environmental Examination (IEE) / Environmental Management Plan (EMP)

(i) The IEE has been carried out to assess the environmental impacts of proposed project and provide mitigation and monitoring measures to ensure that there are no significant impacts. An EMP has been developed to provide mitigation measures to reduce all negative impacts to acceptable levels. Locations and site-selection of the proposed infrastructures were considered to further reduce impacts. EMP is attached at Appendix A.

(ii) The attached IEE has been prepared based on the conceptual designs / preliminary designs, and the IEE and EMP needs to be updated during the detailed design to reflect any changes / modifications in project or site conditions. IEE and EMP will be updated by PIU, and contractor shall provide necessary support.

(iii) The updated IEE and EMP will supersede the draft or previous versions, and will be applicable to the contract

B. Site-specific Environmental Management Plan (SEMP) (refers also to SSEHSMP, HSMP)

(i) The Contractor shall prepare and submit to the Employer’s Representative, for review and approval, a Site-specific Environmental Management Plan (SEMP) consistent with the Environmental Management Plan (EMP) in the latest / final IEE, including site-specific Health and Safety Management Plan (SHMP) in accordance with the H&S COVID-19 Plan (HS-C19 Plan) submitted during the bidding process and updated as necessary. The SEMP shall include (i) proposed sites/locations for construction work camps, storage areas, hauling roads, laydown areas, disposal areas for solid and hazardous wastes; (ii) specific mitigation measures following the approved EMP; (iii) monitoring program as per SEMP; and (iv) budget for SEP implementation. No works are allowed to commence prior to approval of SEMP.

(ii) No civil works shall commence until the Site-specific Environmental Management Plan (SEMP), including Health & Safety Plan (SHMP) is approved by the Employer.”

(iii) A copy of the EMP and approved SEMP will be kept on site during the construction period at all times. The EMP forms part of the of contract agreement. Non-compliance with, or any deviation from, the conditions set out in this document constitutes a failure in compliance.

(iv) For civil works, the contractor will be required to (i) carry out all of the mitigation and monitoring measures set forth in the approved SEMP; and (ii) implement any corrective or preventative actions set out in safeguards monitoring reports that the employer will prepare from time to time to monitor implementation of this IEE and SEMP. The contractor shall allocate budget for compliance with these SEMP measures, requirements and actions.

(v) In order to prevent environmental pollution arising from the construction activities related to the performance of this Contract, the Contractor shall comply with all applicable local laws and regulations concerning pollution and waste material disposal, including the SEMP and monitoring plan in the EMP, as well as the specific requirements stated in this section and elsewhere in the Specifications.”

vi) The Initial Environment Examination Report is part of the Contract. It is the responsibility of the contractor to review the requirements in the IEE Report, comply with the requirements of the EMP, and comply with all its provisions.

(vii) Prior to commencement of the works, the contractor will submit a compliance report to Employer’s Representative that all identified pre-construction mitigation measures as detailed in the EMP are undertaken. Contractor should confirm that the resources for EMP compliance are mobilized.

(viii) During construction, results from internal monitoring by the contractor will be reflected in their monthly EMP implementation reports submitted to the Employer’s Representative.

C. Construction work-site Health and Safety

(i) With respect to Health and Safety, the Contractor shall:

a) Implement safe working and reporting procedures and utilize safety awareness procedures in every element during construction and operation and maintenance period

b) Give emphasis to site safety including:

• Safe working procedures in all plant operation and maintenance activities

• Cleanliness and care of the work sites

• Accident and hazardous conditions reporting

• Safe practice in the work sites

(ii) The Contractor shall produce a Health and Safety Management Plan that shall include but not be limited to the following subjects:

a) Health and Safety Policy;

b) Person responsible for Health and Safety at Company level

c) Person responsible for Health and Safety at site

d) Health and Safety COVID-19 Plan (HS-C19 Plan), in accordance with the relevant government regulations and guidelines on COVID-19 prevention and control, or in the absence thereof, to international good practice guidelines such as World Health Organization. 2020. Considerations for public health and social measures in the workplace in the context of COVID-19. Geneva. Available here: https://www.who.int/publications-detail/considerations-for-public-health-and-social-measures-in-the-workplace-in-the-context-of-covid-19

e) Register of chemicals with details of safe handling, storage, measures to be taken in case of uncontrolled release, spillage or splashing

f) Personal protective equipment

g) Confined Spaces

h) Manual Handling

i) Noise

j) Work at height

k) Working in / near water bodies, rivers, tanks etc.,

l) Night works

m) Slip and Trips

n) Occupational infections

o) Hazardous condition reporting

p) Emergency and out of hours contact details

q) Accident reporting

r) Safe practices in the work sites.

s) Incident and Emergency Management

Incident and Emergency Management. The Health and Safety Plan shall also include an Emergency Response Plan as required. This shall identify the potential incidents and emergencies, which could occur on the work sites and set out a procedure to be followed should these happen. It shall be the responsibility of the Contractor to ensure that employees / workers (including those of subcontractors) are made aware of these procedures and to display, in prominent positions, posters stating these procedures with emergency telephone contacts. The Contractor shall be responsible for ensuring that emergency procedures are agreed with the Emergency Services and that emergency drills are carried out in accordance with statutory requirements where these exist in accordance with good management practice.

The Contractor shall notify immediately the Engineer or, in his absence, the Employer, if any accident occurs whether on or off the work sites which results in any injury to any person whether directly concerned with the Site or a third party. Such notification may initially be verbal and shall be followed by a written report within 24 hours of the accident.

Safety Meetings. Hold informal weekly site safety inspections and safety discussions and shall hold meetings of a Joint Safety Committee to discuss safety issues and procedures to improve safety. Minutes of the meetings shall be prepared by the Contractor and shall be distributed, as appropriate, to attendees and the Engineer

HSMP update. Contractor should maintain and update the Health and Safety Management Plan consistent with the EMP, at least yearly, and submit to the employer for approval.

D. Labour Welfare.

Contractor must ensure that all workers (including those of subcontractors’, if any) are paid and treated according to the labour legislations

Labour Contractor shall ensure full compliance with labour legislations in force, including core labour standards. Contractor should also ensure that subcontractors and suppliers, if any engaged by contractor for the purpose of project, also implement labor legislations requirements.

E. Grievance Redress and Record Keeping

(i) Contractor should maintain grievance registers at each site, maintain a record of grievances registered, redressed, outstanding complaints, minutes of GRM meetings held at the field level. Adhere to timelines for grievance resolution as proposed in the project GRM.

*Instructions to Contractor*

1. *Based on the EIA undertaken for the project and this specific contract, the Employer shall provide key EHS risks and impacts and expectations on contractors to manage the risks and impacts. This may include as appropriate, but not limited to a summary of: key expectations in managing labor and working conditions, protection of the environment, health and safety and security of the site, community health and safety, management of safety of hazardous materials, resource efficiency and pollution prevention and management, biodiversity conservation and sustainable management of living natural resources etc. Any summary (key) information provided here shall not be inconsistent with the more detailed requirements in the bidding document*
2. *The Employer should highlight the requirement of a Site Specific Environmental/ Health and Safety Management Plan (SSEHSMP) to be prepared based on the outline Environmental Health and Safety Management Plan (EHSMP) submitted as part of the Contractor’s technical proposal. The SSEHSMP shall be submitted within the contractual timeline (e.g. 28 days) outlined in the Contract Conditions. The Engineer/Project Manager shall endeavour to issue no-objection of the SSEHSMP within a prescribed period (e.g.10 days) upon receipt of the SSESHMP, if the EHS requirements for the plan is met. No physical works shall commence on site prior to the confirmation of no objection of the SSEHSMP has been obtained from the Engineer as per Contract Conditions.*
3. *Minimum Content of Requirements*

*In preparing detailed specifications for requirements, the specialists should refer to and consider:*

• *project reports e.g. EIA/EMP (IEE)*

• *consent/permit conditions*

• *required standards including ADB Safeguard Policy Statement and related EHS Guidelines*

• *relevant international conventions or treaties etc., national legal and/or regulatory requirements and standards (where these represent higher standards than the ADB Guidelines)*

• r*elevant international standards and HPA guidelines*

• *relevant standards set by City Council.*

• *grievance redress mechanism including types of grievances to be recorded and how to protect confidentiality*

1. *The detail specification for EHS should, to the extent possible, describe the intended outcome rather than the method of working.*
2. *The EHS requirements should be prepared in manner that does not conflict with the relevant General Conditions of Contract (and the corresponding Particular Conditions if any) and other parts of the specifications.*

**REFER TO ATTACHMENT VOLUME 2 SUPPLEMENTARY INFORMATION TO THE BIDDING DOCUMENTS (I.E.E.)**

**PAGE 59, SECTION 1 1. Workforce Organization and Orientation for detailed information on requirements of SSEHSMP**

3. Drawings

4. Supplementary Information

Regarding Works to Be Procured

**Refer to VOLUME 2 Bidding Documents.**

**SUPPLEMENTARY INFORMATION**

**(Separate File)**

|  |  |
| --- | --- |
| **NO.** | **SUPPLEMENTARY DOCUMENTS** |
| 1 | Initial Environmental Examination (IEE), including EMP |
| 2 | Environmental Permit (EP) to be issued as addendum when available |
| 3 | Utility Service Confirmation Documents |
| 4 | Land Acquisition Documents |
| 5. | Concept Design Presentation |

5. Personnel Requirements

Using [Form PER - 1](#per1) and [PER - 2](#per2) in Section 4 (Bidding Forms), the Bidder must demonstrate that it has personnel who meet the following requirements:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **No.** | **Position** | **No(s)** | **Total Work Experience**  [years] | **Experience in Similar Work**  [years] |
| 1 | Project Manager (Bachelor’s degree in project management/ Engineering or related field) having experience in managing building construction projects of more than one storey. | 1 | 7 | 5 |
| **Design Team** | | | | |
| 2 | Architect (Degree in Architecture with experience in designing of building construction projects of more than one storey).  (MNPHI registered licensed Architect) | 1 | 7 | 5 |
| 3 | Civil Engineer (Degree in Civil Engineering with experience in structural designing of building construction projects of more than one storey).  (MNPHI registered licensed Engineer) | 1 | 7 | 5 |
| **Construction Team** | | | | |
| 4 | Civil Engineer (Degree in Civil/ Structural Engineering or related field) with experience in building construction of projects of more than one storey.). | 1 | 7 | 5 |
| 5 | Electrical Engineer (Degree in Electrical/ Mechanical Engineering with experience in design of electrical and mechanical works of more than one storey).  (Utility Regulatory Authority registered licensed Electrical Engineer for design and installation of electrical works) | 1 | 7 | 5 |
| 6 | Site Supervisor with experience of site supervision of similar works. | 1 | 5 | 5 |
| 7 | Environmental Health and Safety officer (degree in Environment Management, Occupational Health and Safety Management or related field) with experience in Environmental Health and Safety management at construction sites. | 1 | 5 | 4 |

The Bidder shall provide details of the proposed personnel and their experience records in the relevant Information Forms included (PER – 1 & PER-2) in Section 4 (Bidding Forms) – Technical Proposal.

6. Equipment Requirements

Using [Form EQU](#equ) in Section 4 (Bidding Forms), the Bidder must demonstrate that it has the key equipment listed below:

|  |  |  |
| --- | --- | --- |
| **No.** | **Equipment Type and Characteristics** | **Minimum Number Required** |
| 1 | Excavator | 1 |
| 2 | Dump Truck | 1 |
| 3 | Concrete Mixer (3 bags, 2 bags and 1 bag) | 1 |
| 4 | Vibrator | 1 |
| 5 | Bar Bending Machine | 1 |
| 6 | Electrical tools | 1 |
|  |  |  |

|  |
| --- |
| Republic of the Maldives  Ministry of Family Gender and Social Services  Ministry of National Housing and Planning |
| **Lump Sum Contract**  **Civil Works Small** |
| Construction of 1 new DV/GBV shelter at Addu  Contract No: MNPHI/CW-01  Section 7: [General Conditions of Contract](#SECT7)  Section 8: [Particular Conditions of Contract](#SECT8)  Section 9: [Contract Forms](#SECT9) |
| Project Name:  Strengthening Gender Inclusive Initiatives Project  Project Number: 54373-001  **22mm_BB** |
| Date Issued: xx xxxx 2023 |

Section 7: General Conditions of Contract

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A. General

|  |  |
| --- | --- |
| 1. Definitions | 1.1 Boldface type is used to identify defined terms.   1. The **Accepted Contract Amount** means the amount accepted in the Letter of Acceptance for the execution and completion of the Works and the remedying of any defects. 2. The **Activity Schedule** is a schedule of the activities comprising the construction, installation, testing, and commissioning of the Works in a lump sum contract. It includes a lump sum price for each activity, which is used for valuations and for assessing the effects of Variations and Compensation Events. 3. The **Adjudicator** is the person appointed jointly by the Employer and the Contractor to resolve disputes in the first instance, as provided for in GCC 29.1 [Appointment of Adjudicator] hereunder. 4. **Bank** means the financing institutions named in the **Particular Conditions of Contract (PCC)**. 5. **Bill of Quantities** means the priced and completed Bill of Quantities forming part of the Bid. 6. **Compensation Events** are those defined in GCC 51.1 [Compensation Events] hereunder. 7. The **Completion Date** is the date of completion of the Works as certified by the Project Manager, in accordance with GCC 69.1 [Completion]. 8. The **Contract** is the Contract between the Employer and the Contractor to execute, complete, and maintain the Works. It consists of the documents listed in GCC 2.3 below. 9. The **Contractor** is the party whose Bid to carry out the Works has been accepted by the Employer. 10. The **Contractor’s Bid** is the completed bidding document submitted by the Contractor to the Employer. 11. The **Contract Price** is the Accepted Contract Amount stated in the Letter of Acceptance and thereafter as adjusted in accordance with the Contract. 12. **Days** are calendar days; months are calendar months. 13. **Dayworks** are varied work inputs subject to payment on a time basis for the Contractor’s employees and Equipment, in addition to payments for associated Materials and Plant. 14. A **Defect** is any part of the Works not completed in accordance with the Contract. 15. The **Defects Liability Certificate** is the certificate issued by the Project Manager upon correction of defects by the Contractor. 16. The **Defects Liability Period** is the period calculated from the Completion Date where the Contractor remains responsible for remedying defects. 17. **Drawings** include calculations and other information provided or approved by the Project Manager for the execution of the Contract. 18. The **Employer** is the party who employs the Contractor to carry out the Works, as specified in the **PCC.** 19. **Equipment** is the Contractor’s machinery and vehicles brought temporarily to the Site to construct the Works. 20. **Force Majeure** means an exceptional event or circumstance: which is beyond a Party's control; which such Party could not reasonably have provided against before entering into the Contract; which, having arisen, such Party could not reasonably have avoided or overcome; and, which is not substantially attributable to the other Party. 21. **In writing** or **written** means hand-written, type-written, printed, or electronically made, and resulting in a permanent record. 22. The **Initial Contract Price** is the Contract Price listed in the Employer’s Letter of Acceptance. 23. The **Intended Completion Date** is the date on which it is intended that the Contractor shall complete the Works. The Intended Completion Date is specified in the **PCC**. The Intended Completion Date may be revised only by the Project Manager by issuing an extension of time or an acceleration order. 24. **Letter of Acceptance** means the formal acceptance by the Employer of the Bid and denotes the formation of the Contract at the date of acceptance. 25. **Materials** are all supplies, including consumables, used by the Contractor for incorporation in the Works. 26. **Party** means the Employer or the Contractor, as the context requires. 27. **PCC** means Particular Conditions of Contract. 28. **Plant** is any integral part of the Works that shall have a mechanical, electrical, chemical, or biological function. 29. The **Project Manager** is the person named in the **PCC** (or any other competent person appointed by the Employer and notified to the Contractor, to act in replacement of the Project Manager) who is responsible for supervising the execution of the Works and administering the Contract. 30. **Retention Money** means the aggregate of all monies retained by the Employer pursuant to GCC 55.1 [Retention]. 31. **Schedules** means the document(s) entitled schedules, completed by the Contractor and submitted with the Letter of Bid, as included in the Contract. Such document may include the Bill of Quantities, data, lists, and schedules of rates and/or prices. 32. The **Site** is the area defined as such in the **PCC**. 33. **Site Investigation Reports** are those that were included in the bidding documents and are factual and interpretative reports about the surface and subsurface conditions at the Site. 34. **Specification** means the Specification of the Works included in the Contract and any modification or addition made or approved by the Project Manager. 35. The **Start Date** is given in the **PCC**. It is the latest date when the Contractor shall commence execution of the Works. It does not necessarily coincide with any of the Site Possession Dates. 36. A **Subcontractor** is a person or corporate body who has a Contract with the Contractor to carry out a part of the work in the Contract, which includes work on the Site. 37. **Temporary Works** are works designed, constructed, installed, and removed by the Contractor that are needed for construction or installation of the Works. 38. A **Variation** is an instruction given by the Project Manager which varies the Works. 39. The **Works** are what the Contract requires the Contractor to construct, install, and turn over to the Employer, as defined in the **PCC.** |
| 2. Interpretation | 2.1 In interpreting these GCC, singular also means plural, male also means female or neuter, and the other way around. Headings have no significance. Words have their normal meaning under the language of the Contract unless specifically defined. The Project Manager shall provide instructions clarifying queries about these GCC. |
|  | 2.2 If sectional completion is specified in the **PCC**, references in the GCC to the Works, the Completion Date, and the Intended Completion Date apply to any Section of the Works (other than references to the Completion Date and Intended Completion Date for the whole of the Works). |
|  | 2.3 The documents forming the Contract shall be interpreted in the following order of priority:   1. Contract Agreement, 2. Letter of Acceptance, 3. Letter of Bid, 4. Particular Conditions of Contract, 5. the List of Eligible Countries that was specified in Section 5 of the bidding document, 6. General Conditions of Contract, 7. Specifications, 8. Drawings, 9. Completed Activity Schedules or Bill of Quantities, and 10. any other document listed in the **PCC** as forming part of the Contract. |
| 3. Language and Law | 3.1 The language of the Contract and the law governing the Contract are stated in the **PCC**.  3.2 Throughout the execution of the Contract, the Contractor shall comply with the import of goods and services prohibitions in the Employer’s country when   1. by an act of compliance with a decision of the United Nations Security Council taken under Chapter VII of the Charter of the United Nations, the Recipient’s Country prohibits any import of goods from, or any payments to, a particular country, person, or entity. Where the Recipient’s country prohibits payments to a particular firm or for particular goods by such an act of compliance, that firm may be excluded. |
| 4. Contract Agreement | 4.1 The Parties shall enter into a Contract Agreement within 28 days after the Contractor receives the Letter of Acceptance, unless the Particular Conditions establish otherwise. The Contract Agreement shall be based upon the attached Contract forms in Section 8. The costs of stamp duties and similar charges (if any) imposed by law in connection with entry into the Contract Agreement shall be borne by the Employer. |
| 5. Assignment | 5.1 Neither Party shall assign the whole or any part of the Contract or any benefit or interest in or under the Contract. However, either Party   1. may assign the whole or any part with the prior agreement of the other Party, at the sole discretion of such other Party; and 2. may, as security in favor of a bank or financial institution, assign its right to any moneys due, or to become due, under the Contract. |
| 6. Care and Supply of Documents | 6.1 The Specification and Drawings shall be in the custody and care of the Employer. Unless otherwise stated in the Contract, two copies of the Contract and of each subsequent Drawing shall be supplied to the Contractor, who may make or request further copies at the cost of the Contractor. |
|  | 6.2 Each of the Contractor’s Documents shall be in the custody and care of the Contractor, unless and until taken over by the Employer. Unless otherwise stated in the Contract, the Contractor shall supply to the Engineer six copies of each of the Contractor’s Documents. |
|  | 6.3 The Contractor shall keep, on the Site, a copy of the Contract, publications named in the Specification, the Contractor’s Documents (if any), the Drawings and Variations and other communications given under the Contract. The Employer’s Personnel shall have the right of access to all these documents at all reasonable times.  6.4 If a Party becomes aware of an error or defect in a document which was prepared for use in executing the Works, the Party shall promptly give notice to the other Party of such error or defect. |
| 7. Confidential Details | 7.1 The Contractor’s and the Employer’s Personnel shall disclose all such confidential and other information as may be reasonably required in order to verify the Contractor’s compliance with the Contract and allow its proper implementation. |
|  | 7.2 Each of them shall treat the details of the Contract as private and confidential, except to the extent necessary to carry out their respective obligations under the Contract or to comply with applicable Laws. Each of them shall not publish or disclose any particulars of the Works prepared by the other Party without the previous agreement of the other Party. However, the Contractor shall be permitted to disclose any publicly available information, or information otherwise required to establish his qualifications to compete for other projects. |
|  | 7.3 Notwithstanding the above, the Contractor may furnish to its Subcontractor(s) such documents, data and other information it receives from the Employer to the extent required for the Subcontractor(s) to perform its work under the Contract, in which event the Contractor shall obtain from such Subcontractor(s) an undertaking of confidentiality similar to that imposed on the Contractor under this Clause. |
| 8. Compliance with Laws | 8.1 The Contractor shall, in performing the Contract, comply with applicable Laws. |
|  | 8.2 Unless otherwise stated in the Particular Conditions,   1. the Employer shall acquire and pay for all permits, approvals, and/or licenses from all local, state, or national government authorities or public service undertakings in the [Employer’s Country or country where the Site is located] which (i) such authorities or undertakings require the Employer to obtain in the Employer’s name, and (ii) are necessary for the execution of the Contract, including those required for the performance by both the Contractor and the Employer of their respective obligations under the Contract; 2. the Contractor shall acquire and pay for all permits, approvals, and/or licenses from all local, state, or national government authorities or public service undertakings in the [Employer’s Country or country where the Site is located] which such authorities or undertakings require the Contractor to obtain in its name and which are necessary for the performance of the Contract, including, without limitation, visas for the Contractor’s and Subcontractor’s personnel and entry permits for all imported Contractor’s Equipment. The Contractor shall acquire all other permits, approvals, and/or licenses that are not the responsibility of the Employer under Subclause 8.2(a) hereof and that are necessary for the performance of the Contract. The Contractor shall indemnify and hold harmless the Employer from and against any and all liabilities, damages, claims, fines, penalties, and expenses of whatever nature arising or resulting from the violation of such laws by the Contractor or its personnel, including the Subcontractors and their personnel, but without prejudice to Subclause 8.1 hereof. |
| 9. Joint and Several Liability | 9.1 If the Contractor is a Joint Venture of two or more persons, all such persons shall be jointly and severally liable to the Employer for the fulfillment of the provisions of the Contract, and shall designate one of such persons to act as a leader with authority to bind the Joint Venture. The composition or the constitution of the Joint Venture shall not be altered without the prior consent of the Employer. |
| 10. Project Manager’s Decisions | 10.1 Except where otherwise specifically stated, the Project Manager shall decide contractual matters between the Employer and the Contractor in the role representing the Employer. |
| 11. Delegation | 11.1 The Project Manager may delegate any of his duties and responsibilities to other people, except to the Adjudicator, after notifying the Contractor, and may cancel any delegation after notifying the Contractor. |
| 12. Communica­tions | 12.1 Communications between parties that are referred to in the Conditions shall be effective only when in writing. A notice shall be effective only when it is delivered. |
| 13. Subcontracting | 13.1 The Contractor may subcontract with the approval of the Project Manager, but may not assign the Contract without the approval of the Employer in writing. Subcontracting shall not alter the Contractor’s obligations. |
| 14. Other Contractors | 14.1 The Contractor shall cooperate and share the Site with other contractors, public authorities, utilities, and the Employer between the dates given in the Schedule of Other Contractors, as referred to in the **PCC.** The Contractor shall also provide facilities and services for them as described in the Schedule. The Employer may modify the Schedule of Other Contractors, and shall notify the Contractor of any such modification. |
| 15. Personnel and Equipment | 15.1 The Contractor shall employ the key personnel and use the equipment identified in its Bid to carry out the functions stated in the Schedule or other personnel and equipment approved by the Project Manager. The Project Manager shall approve any proposed replacement of key personnel and equipment only if their relevant qualifications or characteristics are substantially equal to or better than those proposed in the Bid. |
|  | 15.2 If the Project Manager asks the Contractor to remove a person who is a member of the Contractor’s staff or work force, stating the reasons, the Contractor shall ensure that the person leaves the Site within 7 days and has no further connection with the work in the Contract.  15.3 Should any employee of the Contractor be determined, based on reasonable evidence, to have engaged in corrupt, fraudulent, collusive, coercive, or obstructive practices or other integrity violations during the execution of the Works, then that employee shall be removed in accordance with Clause 15.2 above. |
| 16. Employer’s and Contractor’s Risks | 16.1 The Employer carries the risks which this Contract states are Employer’s risks, and the Contractor carries the risks which this Contract states are Contractor’s risks. |
| 17. Employer’s Risks | 17.1 From the Start Date until the Defects Liability Certificate has been issued, the following are Employer’s risks:  (a) The risk of personal injury, death, or loss of or damage to property (excluding the Works, Plant, Materials, and Equipment), which are due to  (i) use or occupation of the Site by the Works or for the purpose of the Works, which is the unavoidable result of the Works, or  (ii) negligence, breach of statutory duty, or interference with any legal right by the Employer or by any person employed by or contracted to him except the Contractor.  (b) The risk of damage to the Works, Plant, Materials, and Equipment to the extent that it is due to a fault of the Employer or in the Employer’s design, or due to war or radioactive contamination directly affecting the country where the Works are to be executed. |
|  | 17.2 From the Completion Date until the Defects Liability Certificate has been issued, the risk of loss of or damage to the Works, Plant, and Materials is an Employer’s risk except loss or damage due to  (a) a Defect which existed on the Completion Date,  (b) an event occurring before the Completion Date, which was not itself an Employer’s risk, or  (c) the activities of the Contractor on the Site after the Completion Date. |
| 18. Contractor’s Risks | 18.1 From the Starting Date until the Defects Liability Certificate has been issued, the risks of personal injury, death, and loss of or damage to property (including, without limitation, the Works, Plant, Materials, and Equipment) which are not Employer’s risks, are Contractor’s risks. |
| 19. Insurance | 19.1 The Contractor shall provide, in the joint names of the Employer and the Contractor, insurance cover from the Start Date to the end of the Defects Liability Period, in the amounts and deductibles stated in the **PCC** for the following events, which are due to the Contractor’s risks:  (a) loss of or damage to the Works, Plant, and Materials;  (b) loss of or damage to Equipment;  (c) loss of or damage to property (except the Works, Plant, Materials, and Equipment) in connection with the Contract; and  (d) personal injury or death. |
|  | 19.2 Policies and certificates for insurance shall be delivered by the Contractor to the Project Manager for the Project Manager’s approval before the Start Date. All such insurance shall provide for compensation to be payable in the types and proportions of currencies required to rectify the loss or damage incurred. |
|  | 19.3 If the Contractor does not provide any of the policies and certificates required, the Employer may effect the insurance, which the Contractor should have provided and recover the premiums the Employer has paid from payments otherwise due to the Contractor or, if no payment is due, the payment of the premiums shall be a debt due. |
|  | 19.4 Alterations to the terms of an insurance shall not be made without the approval of the Project Manager. |
|  | 19.5 Both parties shall comply with any conditions of the insurance policies. |
| 20. Site Investigation Reports | 20.1 The Contractor, in preparing the Bid, shall rely on any Site Investigation Reports referred to in the **PCC,** supplemented by any information available to the Contractor. |
| 21. Contractor to Construct the Works | 21.1 The Contractor shall construct and install the Works in accordance with the Specifications and Drawings. |
| 22. The Works to Be Completed by the Intended Completion Date | 22.1 The Contractor may commence execution of the Works on the Start Date and shall carry out the Works in accordance with the Program submitted by the Contractor, as updated with the approval of the Project Manager, and complete them by the Intended Completion Date. |
| 23. Designs by Contractor and Approval by the Project Manager | 23.1 The Contractor shall carry out design to the extent specified in the **PCC**. The Contractor shall promptly submit to the Employer all designs prepared by him. Within 14 days of receipt, the Employer shall notify any comments. The Contractor shall not construct any element of the permanent work designed by him within 14 days after the design has been submitted to the Employer or where the design for that element has been rejected. Design that has been rejected shall be promptly amended and resubmitted. The Contractor shall resubmit all designs commented on, taking these comments into account as necessary. |
|  | 23.2 The Contractor shall submit Specifications and Drawings showing the proposed Temporary Works to the Project Manager, who is to approve them if they comply with the Specifications and Drawings. |
|  | 23.3 The Contractor shall be responsible for design of Temporary Works. |
|  | 23.4 The Project Manager’s approval shall not alter the Contractor’s responsibility for design of the Temporary Works. |
|  | 23.5 The Contractor shall obtain approval of third parties to the design of the Temporary Works, where required. |
|  | 23.6 All Drawings prepared by the Contractor for the execution of the temporary or permanent Works, are subject to prior approval by the Project Manager before this use. |
| 24. Safety | 24.1 The Contractor shall be responsible for the safety of all activities on the Site. |
| 25. Discoveries | 25.1 Anything of historical or other interest or of significant value unexpectedly discovered on the Site shall be the property of the Employer. The Contractor shall notify the Project Manager of such discoveries and carry out the Project Manager’s instructions for dealing with them. |
| 26. Possession of the Site | 26.1 The Employer shall give possession of all parts of the Site to the Contractor. If possession of a part is not given by the date stated in the **PCC,** the Employer shall be deemed to have delayed the start of the relevant activities, and this shall be a Compensation Event. |
| 27. Access to the Site | 27.1 The Contractor shall allow the Project Manager and any person authorized by the Project Manager access to the Site and to any place where work in connection with the Contract is being carried out or is intended to be carried out. |
| 28. Instructions, Inspections, and Audits | 28.1 The Contractor shall carry out all instructions of the Project Manager, which comply with the applicable laws where the Site is located.  28.2 The Contractor shall keep, and shall make all reasonable efforts to cause its Subcontractors and Consultants to keep accurate and systematic accounts and records in respect of the Works in such form and details as will clearly identify relevant time changes and costs. |
|  | 28.3 The Contractor shall permit ADB or its representative to inspect the Contractor’s site, assets, accounts, records, and other documents relating to the submission of bids and contract performance and to have them audited by auditors appointed by ADB. The Contractor shall maintain all documents and records related to the bid submission and execution of the Contract for at least 5 years after completing the works contemplated in the relevant contracts or the period prescribed in applicable law, whichever is longer. The Contractor shall provide any documents necessary for the investigation of allegations of corrupt, fraudulent, collusive, coercive, or obstructive practices or other integrity violations and require its employees or agents with knowledge of the Contract to respond to questions from ADB.  28.4 ADB’s right to inspect the Site and/or the Contractor’s accounts and records relating to the performance of the Contract stated in Sub-Clause 28.3 and 74.2 (e) shall survive termination and/ or expiration of this Contract. |
| 29. Appointment of the Adjudicator | 29.1 The Adjudicator shall be appointed jointly by the Employer and the Contractor, at the time of the Employer’s issuance of the Letter of Acceptance. If, in the Letter of Acceptance, the Employer does not agree on the appointment of the Adjudicator, the Employer will request the Appointing Authority designated in the **PCC**, to appoint the Adjudicator within 14 days of receipt of such request. |
|  | 29.2 Should the Adjudicator resign or die, or should the Employer and the Contractor agree that the Adjudicator is not functioning in accordance with the provisions of the Contract, a new Adjudicator shall be jointly appointed by the Employer and the Contractor. In case of disagreement between the Employer and the Contractor, within 30 days, the Adjudicator shall be designated by the Appointing Authority at the request of either party, within 14 days of receipt of such request. |
| 30. Procedure for Disputes | 30.1 If the Contractor believes that a decision taken by the Project Manager was either outside the authority given to the Project Manager by the Contract or that the decision was wrongly taken, the decision shall be referred to the Adjudicator within 14 days of the notification of the Project Manager’s decision. |
|  | 30.2 The Adjudicator shall give a decision in writing within 28 days of receipt of a notification of a dispute. |
|  | 30.3 The Adjudicator shall be paid by the hour at the rate specified in the **PCC,** together with reimbursable expenses of the types specified in the **PCC**, and the cost shall be divided equally between the Employer and the Contractor, whatever decision is reached by the Adjudicator. Either party may refer a decision of the Adjudicator to an Arbitrator within 28 days of the Adjudicator’s written decision. If neither party refers the dispute to arbitration within the above 28 days, the Adjudicator’s decision shall be final and binding. |
|  | 30.4 The arbitration shall be conducted in accordance with the arbitration procedures published by the institution named and in the place specified in the **PCC**. |
| **B. Staff and Labor** | |
| 31. Forced Labor | 31.1 The Contractor shall not employ forced labor, which consists of any work or service, not voluntarily performed, that is exacted from an individual under threat of force or penalty. This covers any kind of involuntary or compulsory labor, such as indentured labor, bonded labor, or similar labor–contracting arrangements. |
| 32. Child Labor | 32.1 The Contractor shall not employ children in a manner that is economically exploitative, or is likely to be hazardous, or to interfere with, the child's education, or to be harmful to the child's health or physical, mental, spiritual, moral, or social development. Where national laws have provisions for employment of minors, the Contractor shall follow those laws applicable to the Contractor. Children below the age of 18 years shall not be employed in dangerous work. |
| 33. Workers’ Organizations | 33.1 In countries where national law recognizes workers’ rights to form and to join workers’ organizations of their choosing without interference and to bargain collectively, the Contractor shall comply with national law. Where national law substantially restricts workers’ organizations, the Contractor shall enable alternative means for the Contractor’s Personnel to express their grievances and protect their rights regarding working conditions and terms of employment. In either case described above, and where national law is silent, the Contractor shall not discourage the Contractor’s Personnel from forming or joining workers’ organizations of their choosing or from bargaining collectively, and shall not discriminate or retaliate against the Contractor’s Personnel who participate, or seek to participate, in such organizations and bargain collectively. The Contractor shall engage with such workers representatives. Worker organizations are expected to fairly represent the workers in the workforce. |
| 34. Nondiscrimina tion and Equal Opportunity | 34.1 The Contractor shall not make employment decisions on the basis of personal characteristics unrelated to inherent job requirements. The Contractor shall base the employment relationship on the principle of equal opportunity and fair treatment, and shall not discriminate with respect to aspects of the employment relationship, including recruitment and hiring, compensation (including wages and benefits), working conditions and terms of employment, access to training, promotion, termination of employment or retirement, and discipline. In countries where national law provides for non-discrimination in employment, the Contractor shall comply with national law. When national laws are silent on nondiscrimination in employment, the Contractor shall meet this Subclause’s requirements. Special measures of protection or assistance to remedy past discrimination or selection for a particular job based on the inherent requirements of the job shall not be deemed discrimination. |

**C. Time Control**

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| 35. Program | 35.1 Within the time stated in the **PCC**, after the date of the Letter of Acceptance, the Contractor shall submit to the Project Manager for approval a Program showing the general methods, arrangements, order, and timing for all the activities in the Works. In the case of a lump sum contract, the activities in the Program shall be consistent with those in the Activity Schedule. |
|  | 35.2 An update of the Program shall be a program showing the actual progress achieved on each activity and the effect of the progress achieved on the timing of the remaining work, including any changes to the sequence of the activities. |
|  | 35.3 The Contractor shall submit to the Project Manager for approval an updated Program at intervals no longer than the period stated in the **PCC.** If the Contractor does not submit an updated Program within this period, the Project Manager may withhold the amount stated in the **PCC** from the next payment certificate and continue to withhold this amount until the next payment after the date on which the overdue Program has been submitted. In the case of a lump sum contract, the Contractor shall provide an updated Activity Schedule within 14 days of being instructed to by the Project Manager. |
|  | 35.4 The Project Manager’s approval of the Program shall not alter the Contractor’s obligations. The Contractor may revise the Program and submit it to the Project Manager again at any time. A revised Program shall show the effect of Variations and Compensation Events. |
| 36. Extension of the Intended Completion Date | 36.1 The Project Manager shall extend the Intended Completion Date if a Compensation Event occurs or a Variation is issued which makes it impossible for Completion to be achieved by the Intended Completion Date without the Contractor taking steps to accelerate the remaining work, which would cause the Contractor to incur additional cost. |
|  | 36.2 The Project Manager shall decide whether and by how much to extend the Intended Completion Date within 21 days of the Contractor asking the Project Manager for a decision upon the effect of a Compensation Event or Variation and submitting full supporting information. If the Contractor has failed to give early warning of a delay or has failed to cooperate in dealing with a delay, the delay by this failure shall not be considered in assessing the new Intended Completion Date. |
| 37. Acceleration | 37.1 When the Employer wants the Contractor to finish before the Intended Completion Date, the Project Manager shall obtain priced proposals for achieving the necessary acceleration from the Contractor. If the Employer accepts these proposals, the Intended Completion Date shall be adjusted accordingly and confirmed by both the Employer and the Contractor. |
|  | 37.2 If the Contractor’s priced proposals for an acceleration are accepted by the Employer, they are incorporated in the Contract Price and treated as a Variation. |
| 38. Delays Ordered by the Project Manager | 38.1 The Project Manager may instruct the Contractor to delay the start or progress of any activity within the Works. |
| 39. Management Meetings | 39.1 Either the Project Manager or the Contractor may require the other to attend a management meeting. The business of a management meeting shall be to review the plans for remaining work and to deal with matters raised in accordance with the early warning procedure. |
|  | 39.2 The Project Manager shall record the business of management meetings and provide copies of the record to those attending the meeting and to the Employer. The responsibility of the parties for actions to be taken shall be decided by the Project Manager either at the management meeting or after the management meeting and stated in writing to all who attended the meeting. |
| 40. Early Warning | 40.1 The Contractor shall warn the Project Manager at the earliest opportunity of specific likely future events or circumstances that may adversely affect the quality of the work, increase the Contract Price, or delay the execution of the Works. The Project Manager may require the Contractor to provide an estimate of the expected effect of the future event or circumstance on the Contract Price and Completion Date. The estimate shall be provided by the Contractor as soon as reasonably possible. |
|  | 40.2 The Contractor shall cooperate with the Project Manager in making and considering proposals for how the effect of such an event or circumstance can be avoided or reduced by anyone involved in the work and in carrying out any resulting instruction of the Project Manager. |

D. Quality Control

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| 41. Identifying Defects | 41.1 The Project Manager shall check the Contractor’s work and notify the Contractor of any Defects that are found. Such checking shall not affect the Contractor’s responsibilities. The Project Manager may instruct the Contractor to search for a Defect and to uncover and test any work that the Project Manager considers may have a Defect. |
| 42. Tests | 42.1 If the Project Manager instructs the Contractor to carry out a test not specified in the Specification to check whether any work has a Defect and the test shows that it does, the Contractor shall pay for the test and any samples. If there is no Defect, the test shall be a Compensation Event. |
| 43. Correction of Defects | 43.1 The Project Manager shall give notice to the Contractor of any Defects before the end of the Defects Liability Period, which begins at Completion, and is defined in the **PCC.** The Defects Liability Period shall be extended for as long as Defects remain to be corrected. |
|  | 43.2 Every time notice of a Defect is given, the Contractor shall correct the notified Defect within the length of time specified by the Project Manager’s notice. |
| 44. Uncorrected Defects | 44.1 If the Contractor has not corrected a Defect within the time specified in the Project Manager’s notice, the Project Manager shall assess the cost of having the Defect corrected, and the Contractor shall pay this amount. |

E. Cost Control

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| 45. Contract Price | 45.1 In the case of an admeasurement contract, the Bill of Quantities shall contain priced items for the Works to be performed by the Contractor. The Bill of Quantities is used to calculate the Contract Price. The Contractor will be paid for the quantity of the work accomplished at the rate in the Bill of Quantities for each item. |
|  | 45.2 In the case of a lump sum contract, the Activity Schedule shall contain the priced activities for the Works to be performed by the Contractor. The Activity Schedule is used to monitor and control the performance of activities on which basis the Contractor will be paid. If payment for Materials on Site shall be made separately, the Contractor shall show delivery of Materials to the Site separately on the Activity Schedule. |
| 46. Changes in the Contract Price | 46.1 In the case of an admeasurement contract:  (a) If the final quantity of the work done differs from the quantity in the Bill of Quantities for the particular item by more than 25%, provided the change exceeds 1% of the Initial Contract Price, the Project Manager shall adjust the rate to allow for the change.  (b) The Project Manager shall not adjust rates from changes in quantities if thereby the Initial Contract Price is exceeded by more than 15%, except with the prior approval of the Employer.  (c) If requested by the Project Manager, the Contractor shall provide the Project Manager with a detailed cost breakdown of any rate in the Bill of Quantities. |
|  | 46.2 In the case of a lump sum contract, the Activity Schedule shall be amended by the Contractor to accommodate changes of Program or method of working made at the Contractor’s own discretion. Prices in the Activity Schedule shall not be altered when the Contractor makes such changes to the Activity Schedule. |
| 47. Variations | 47.1 All Variations shall be included in updated Programs, and, in the case of a lump sum contract, also in the Activity Schedule, produced by the Contractor. |
|  | 47.2 The Contractor shall provide the Project Manager with a quotation for carrying out the Variation when requested to do so by the Project Manager. The Project Manager shall assess the quotation, which shall be given within seven (7) days of the request or within any longer period stated by the Project Manager and before the Variation is ordered. |
|  | 47.3 If the Contractor’s quotation is unreasonable, the Project Manager may order the Variation and make a change to the Contract Price, which shall be based on the Project Manager’s own forecast of the effects of the Variation on the Contractor’s costs. |
|  | 47.4 If the Project Manager decides that the urgency of varying the work would prevent a quotation being given and considered without delaying the work, no quotation shall be given and the Variation shall be treated as a Compensation Event. |
|  | 47.5 The Contractor shall not be entitled to additional payment for costs that could have been avoided by giving early warning. |
|  | 47.6 In the case of an admeasurement contract, if the work in the Variation corresponds to an item description in the Bill of Quantities and if, in the opinion of the Project Manager, the quantity of work above the limit stated in GCC 46.1 [Changes in the Contract Price] or the timing of its execution do not cause the cost per unit of quantity to change, the rate in the Bill of Quantities shall be used to calculate the value of the Variation. If the cost per unit of quantity changes, or if the nature or timing of the work in the Variation does not correspond with items in the Bill of Quantities, the quotation by the Contractor shall be in the form of new rates for the relevant items of work. |
| 48. Cash Flow Forecasts | 48.1 When the Program, or, in the case of a lump sum contract, the Activity Schedule, is updated, the Contractor shall provide the Project Manager with an updated cash flow forecast. The cash flow forecast shall include different currencies, as defined in the Contract, converted as necessary using the Contract exchange rates. |
| 49. Payment Certificates | 49.1 The Contractor shall submit to the Project Manager monthly statements of the estimated value of the work executed less the cumulative amount certified previously. |
|  | 49.2 The Project Manager shall check the Contractor’s monthly statement and certify the amount to be paid to the Contractor. |
|  | 49.3 The value of work executed shall be determined by the Project Manager. |
|  | 49.4 The value of work executed shall comprise,  (a) in the case of an admeasurement contract, the value of the quantities of work in the Bill of Quantities that have been completed; or  (b) in the case of a lump sum contract, the value of work executed shall comprise the value of completed activities in the Activity Schedule. |
|  | 49.5 The value of work executed shall include the valuation of Variations and Compensation Events. |
|  | 49.6 The Project Manager may exclude any item certified in a previous certificate or reduce the proportion of any item previously certified in any certificate in the light of later information. |
| 50. Payments | 50.1 Payments shall be adjusted for deductions for advance payments and retention. The Employer shall pay the Contractor the amounts certified by the Project Manager within 28 days of the date of each certificate. If the Employer makes a late payment, the Contractor shall be paid interest on the late payment in the next payment. Interest shall be calculated from the date by which the payment should have been made up to the date when the late payment is made at the prevailing rate of interest for commercial borrowing for each of the currencies in which payments are made. |
|  | 50.2 If an amount certified is increased in a later certificate or as a result of an award by the Adjudicator or an Arbitrator, the Contractor shall be paid interest upon the delayed payment as set out in this clause. Interest shall be calculated from the date upon which the increased amount would have been certified in the absence of dispute. |
|  | 50.3 Unless otherwise stated, all payments and deductions shall be paid or charged in the proportions of currencies comprising the Contract Price. |
|  | 50.4 Items of the Works for which no rate or price has been entered in shall not be paid for by the Employer and shall be deemed covered by other rates and prices in the Contract. |
| 51. Compensation Events | 51.1 The following shall be Compensation Events:  (a) The Employer does not give access to a part of the Site by the Site Possession Date pursuant to GCC 26.1 [Possession of the Site].  (b) The Employer modifies the Schedule of Other Contractors in a way that affects the work of the Contractor under the Contract.  (c) The Project Manager orders a delay or does not issue Drawings, Specifications, or instructions required for execution of the Works on time.  (d) The Project Manager instructs the Contractor to uncover or to carry out additional tests upon work, which is then found to have no Defects.  (e) The Project Manager unreasonably does not approve a subcontract to be let.  (f) Ground conditions are substantially more adverse than could reasonably have been assumed before issuance of the Letter of Acceptance from the information issued to Bidders (including the Site Investigation Reports), from information available publicly and from a visual inspection of the Site.  (g) The Project Manager gives an instruction for dealing with an unforeseen condition, caused by the Employer, or additional work required for safety or other reasons.  (h) Other contractors, public authorities, utilities, or the Employer does not work within the dates and other constraints stated in the Contract, and they cause delay or extra cost to the Contractor.  (i) The advance payment is delayed.  (j) The effects on the Contractor of any of the Employer’s Risks.  (k) The Project Manager unreasonably delays issuing a Certificate of Completion. |
|  | 51.2 If a Compensation Event would cause additional cost or would prevent the work being completed before the Intended Completion Date, the Contract Price shall be increased and/or the Intended Completion Date shall be extended. The Project Manager shall decide whether and by how much the Contract Price shall be increased and whether and by how much the Intended Completion Date shall be extended. |
|  | 51.3 As soon as information demonstrating the effect of each Compensation Event upon the Contractor’s forecast cost has been provided by the Contractor, it shall be assessed by the Project Manager, and the Contract Price shall be adjusted accordingly. If the Contractor’s forecast is deemed unreasonable, the Project Manager shall adjust the Contract Price based on the Project Manager’s own forecast. The Project Manager shall assume that the Contractor shall react competently and promptly to the event. |
|  | 51.4 The Contractor shall not be entitled to compensation to the extent that the Employer’s interests are adversely affected by the Contractor’s not having given early warning or not having cooperated with the Project Manager. |
| 52. Tax | 52.1 The Project Manager shall adjust the Contract Price if taxes, duties, and other levies are changed between the date 28 days before the submission of bids for the Contract and the date of the last Completion certificate. The adjustment shall be the change in the amount of tax payable by the Contractor, provided such changes are not already reflected in the Contract Price or are a result of GCC 54.1 [Price Adjustment]. |
| 53. Currencies | 53.1 Where payments are made in currencies other than the currency of the Employer’s country specified in the **PCC,** the exchange rates used for calculating the amounts to be paid shall be the exchange rates stated in the Contractor’s Bid. |
| 54. Price Adjustment | 54.1 Prices shall be adjusted for fluctuations in the cost of inputs only if provided for in the **PCC.** If so provided, the amounts certified in each payment certificate, before deducting for Advance Payment, shall be adjusted by applying the respective price adjustment factor to the payment amounts due in each currency. A separate formula of the type indicated below applies to each Contract currency:  **Pc = Ac + Bc Imc/Ioc**  where:  Pc is the adjustment factor for the portion of the Contract Price payable in a specific currency “c.”  Ac and Bc are coefficients**[[7]](#footnote-7)** specified in the **PCC,** representing the nonadjustable and adjustable portions, respectively, of the Contract Price payable in that specific currency “c;” and  Imc is a consolidated index prevailing at the end of the month being invoiced and Ioc is the same consolidated index prevailing 28 days before Bid opening for inputs payable; both in the specific currency “c.” |
|  | 54.2 If the value of the index is changed after it has been used in a calculation, the calculation shall be corrected and an adjustment made in the next payment certificate. The index value shall be deemed to take account of all changes in cost due to fluctuations in costs. |
| 55. Retention | 55.1 The Employer shall retain from each payment due to the Contractor the proportion stated in the **PCC** until Completion of the whole of the Works. |
|  | 55.2 Upon the issue of a Certificate of Completion of the Works by the Project Manager, in accordance with GCC 69.1 [Completion], half the total amount retained shall be repaid to the Contractor and half when the Defects Liability Period has passed and the Project Manager has certified that all Defects notified by the Project Manager to the Contractor before the end of this period have been corrected. The Contractor may substitute retention money with an “on demand” bank guarantee. |
| 56. Liquidated Damages | 56.1 The Contractor shall pay liquidated damages to the Employer at the rate per day stated in the **PCC** for each day that the Completion Date is later than the Intended Completion Date. The total amount of liquidated damages shall not exceed the amount defined in the **PCC.** The Employer may deduct liquidated damages from payments due to the Contractor. Payment of liquidated damages shall not affect the Contractor’s liabilities. |
|  | 56.2 If the Intended Completion Date is extended after liquidated damages have been paid, the Project Manager shall correct any overpayment of liquidated damages by the Contractor by adjusting the next payment certificate. The Contractor shall be paid interest on the overpayment, calculated from the date of payment to the date of repayment, at the rates specified in GCC 50.1 [Payments]. |
| 57. Bonus | 57.1 The Contractor shall be paid a Bonus calculated at the rate per calendar day stated in the **PCC** for each day (less any days for which the Contractor is paid for acceleration) that the Completion is earlier than the Intended Completion Date. The Project Manager shall certify that the Works are complete, although they may not be due to be complete. |
| 58. Advance Payment | 58.1 The Employer shall make advance payment to the Contractor of the amounts stated in the **PCC** by the date stated in the **PCC,** against provision by the Contractor of an unconditional bank guarantee in a form and by a bank acceptable to the Employer in amounts and currencies equal to the advance payment. The guarantee shall remain effective until the advance payment has been repaid, but the amount of the guarantee shall be progressively reduced by the amounts repaid by the Contractor. Interest shall not be charged on the advance payment. |
|  | 58.2 The Contractor is to use the advance payment only to pay for Equipment, Plant, Materials, and mobilization expenses required specifically for execution of the Contract. The Contractor shall demonstrate that advance payment has been used in this way by supplying copies of invoices or other documents to the Project Manager. |
|  | 58.3 The advance payment shall be repaid by deducting proportionate amounts from payments otherwise due to the Contractor, following the schedule of completed percentages of the Works on a payment basis. No account shall be taken of the advance payment or its repayment in assessing valuations of work done, Variations, price adjustments, Compensation Events, Bonuses, or Liquidated Damages. |
| 59. Securities | 59.1 The Performance Security shall be provided to the Employer no later than the date specified in the Letter of Acceptance and shall be issued in an amount specified in the **PCC,** by a bank acceptable to the Employer, and denominated in the types and proportions of the currencies in which the Contract Price is payable. The Performance Security shall be valid until a date 28 days from the date of issue of the Certificate of Completion in the case of a bank guarantee. |
| 60. Dayworks | 60.1 If applicable, the Dayworks rates in the Contractor’s Bid shall be used for small additional amounts of work only when the Project Manager has given written instructions in advance for additional work to be paid for in that way. |
|  | 60.2 All work to be paid for as Dayworks shall be recorded by the Contractor on forms approved by the Project Manager. Each completed form shall be verified and signed by the Project Manager within 2 days of the work being done. |
|  | 60.3 The Contractor shall be paid for Dayworks subject to obtaining signed Dayworks forms. |
| 61. Cost of Repairs | 61.1 Loss or damage to the Works or Materials to be incorporated in the Works between the Start Date and the end of the Defects Correction periods shall be remedied by the Contractor at the Contractor’s cost if the loss or damage arises from the Contractor’s acts or omissions. |
| **F. Force Majeure** | |
| 62. Definition of Force Majeure | 62.1 In this Clause, “Force Majeure” means an exceptional event or circumstance,  (a) which is beyond a Party’s control;  (b) which such Party could not reasonably have provided against before entering into the Contract;  (c) which, having arisen, such Party could not reasonably have avoided or overcome; and  (d) which is not substantially attributable to the other Party. |
|  | 62.2 Force Majeure may include, but is not limited to, exceptional events or circumstances of the kind listed below, so long as conditions (a) to (d) above are satisfied:  (a) war, hostilities (whether war be declared or not), invasion, act of foreign enemies;  (b) rebellion, terrorism, sabotage by persons other than the Contractor’s Personnel, revolution, insurrection, military or usurped power, or civil war;  (c) riot, commotion, disorder, strike or lockout by persons other than the Contractor’s Personnel;  (d) munitions of war, explosive materials, ionizing radiation or contamination by radio-activity, except as may be attributable to the Contractor’s use of such munitions, explosives, radiation or radio-activity; and  (e) natural catastrophes such as earthquake, hurricane, typhoon, or volcanic activity. |
| 63. Notice of Force Majeure | 63.1 If a Party is or will be prevented from performing its substantial obligations under the Contract by Force Majeure, then it shall give notice to the other Party of the event or circumstances constituting the Force Majeure and shall specify the obligations, the performance of which is or will be prevented. The notice shall be given within 14 days after the Party became aware, or should have become aware, of the relevant event or circumstance constituting Force Majeure. |
|  | 63.2 The Party shall, having given notice, be excused from performance of its obligations for so long as such Force Majeure prevents it from performing them. |
|  | 63.3 Notwithstanding any other provision of this Clause, Force Majeure shall not apply to obligations of either Party to make payments to the other Party under the Contract. |
| 64. Duty to Minimize Delay | 64.1 Each Party shall at all times use all reasonable endeavours to minimize any delay in the performance of the Contract as a result of Force Majeure. |
|  | 64.2 A Party shall give notice to the other Party when it ceases to be affected by the Force Majeure. |
| 65. Consequences of Force Majeure | 65.1 If the Contractor is prevented from performing its substantial obligations under the Contract by Force Majeure of which notice has been given under GCC Subclause 63 [Notice of Force Majeure], and suffers delay and/or incurs Cost by reason of such Force Majeure, the Contractor shall be entitled subject to GCC Subclause 30.1 [Procedure for Disputes] to  (a) an extension of time for any such delay, if completion is or will be delayed, under GCC Subclause 36 [Extension of the Intended Completion Date]; and  (b) if the event or circumstance is of the kind described in sub-paragraphs (a) to (d) of GCC Subclause 62.2 [Definition of Force Majeure] and, in the case of subparagraphs (b) to (d), occurs in the Country, payment of any such Cost, including the costs of rectifying or replacing the Works and/or Goods damaged or destructed by Force Majeure, to the extent they are not indemnified through the insurance policy referred to in GCC Subclause 19 [Insurance]. |
|  | 65.2 After receiving this notice, the Project Manager shall proceed in accordance with GCC Subclause 10 [Project Manager’s Decisions] to agree or determine these matters. |
| 66. Force Majeure Affecting Subcontractor | 66.1 If any Subcontractor is entitled under any contract or agreement relating to the Works to relief from force majeure on terms additional to or broader than those specified in this Clause, such additional or broader Force Majeure events or circumstances shall not excuse the Contractor’s nonperformance or entitle him to relief under this Clause. |
| 67. Optional Termination, Payment and Release | 67.1 If the execution of substantially all the Works in progress is prevented for a continuous period of 84 days by reason of Force Majeure of which notice has been given under GCC Subclause 63 [Notice of Force Majeure], or for multiple periods which total more than 140 days due to the same notified Force Majeure, then either Party may give to the other Party a notice of termination of the Contract. In this event, the termination shall take effect 7 days after the notice is given, and the Contractor shall proceed in accordance with GCC Subclause 73.5 [Termination]. |
|  | 67.2 Upon such termination, the Project Manager shall determine the value of the work done and issue a Payment Certificate, which shall include  (a) the amounts payable for any work carried out for which a price is stated in the Contract;  (b) the Cost of Plant and Materials ordered for the Works which have been delivered to the Contractor, or of which the Contractor is liable to accept delivery: this Plant and Materials shall become the property of (and be at the risk of) the Employer when paid for by the Employer, and the Contractor shall place the same at the Employer’s disposal;  (c) other Costs or liabilities which in the circumstances were reasonably and necessarily incurred by the Contractor in the expectation of completing the Works;  (d) the Cost of removal of Temporary Works and Contractor’s Equipment from the Site and the return of these items to the Contractor’s works in his country (or to any other destination at no greater cost); and  (e) the Cost of repatriation of the Contractor’s staff and labor employed wholly in connection with the Works at the date of termination. |
| 68. Release from Performance | 68.1 Notwithstanding any other provision of this Clause, if any event or circumstance outside the control of the Parties (including, but not limited to, Force Majeure) arises, which makes it impossible or unlawful for either or both Parties to fulfill its or their contractual obligations or which, under the law governing the Contract, entitles the Parties to be released from further performance of the Contract, then upon notice by either Party to the other Party of such event or circumstance,  (a) the Parties shall be discharged from further performance, without prejudice to the rights of either Party in respect of any previous breach of the Contract; and  (b) the sum payable by the Employer to the Contractor shall be the same as would have been payable under GCC Subclause 67 [Optional Termination, Payment and Release] if the Contract had been terminated under GCC Subclause 67. |

G. Finishing the Contract

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| 69. Completion | 69.1 The Contractor shall request the Project Manager to issue a certificate of Completion of the Works, and the Project Manager shall do so upon deciding that the work is completed. |
| 70. Taking Over | 70.1 The Employer shall take over the Site and the Works within 7 days of the Project Manager’s issuing a certificate of Completion. |
| 71. Final Account | 71.1 The Contractor shall supply the Project Manager with a detailed account of the total amount that the Contractor considers payable under the Contract before the end of the Defects Liability Period. The Project Manager shall issue a Defects Liability Certificate and certify any final payment that is due to the Contractor within 56 days of receiving the Contractor’s account if it is correct and complete. If it is not, the Project Manager shall issue within 56 days a schedule that states the scope of the corrections or additions that are necessary. If the Final Account is still unsatisfactory after it has been resubmitted, the Project Manager shall decide on the amount payable to the Contractor and issue a payment certificate. |
| 72. Operating and Maintenance Manuals | 72.1 If “as built” Drawings and/or operating and maintenance manuals are required, the Contractor shall supply them by the dates stated in the **PCC.** |
|  | 72.2 If the Contractor does not supply the Drawings and/or manuals by the dates stated in the **PCC** pursuant to GCC 72.1**,** or they do not receive the Project Manager’s approval, the Project Manager shall withhold the amount stated in the **PCC** from payments due to the Contractor. |
| 73. Termination | 73.1 The Employer or the Contractor may terminate the Contract if the other party causes a fundamental breach of the Contract. |
|  | 73.2 Fundamental breaches of Contract shall include, but shall not be limited to, the following:  (a) the Contractor stops work for 28 days when no stoppage of work is shown on the current Program and the stoppage has not been authorized by the Project Manager;  (b) the Project Manager instructs the Contractor to delay the progress of the Works, and the instruction is not withdrawn within 28 days;  (c) the Employer or the Contractor is made bankrupt or goes into liquidation other than for a reconstruction or amalgamation;  (d) a payment certified by the Project Manager is not paid by the Employer to the Contractor within 84 days of the date of the Project Manager’s certificate;  (e) the Project Manager gives Notice that failure to correct a particular Defect is a fundamental breach of Contract and the Contractor fails to correct it within a reasonable period of time determined by the Project Manager;  (f) the Project Manager gives two consecutive Notices to update the Program and accelerate the works to ensure compliance with GCC Subclause 22.1 [The Works to Be Completed by the Intended Completion Date] and the Contractor fails to update the Program and demonstrate acceleration of the works within a reasonable period of time determined by the Project Manager;  (g) the Contractor does not maintain a Security, which is required;  (h) the Contractor has delayed the completion of the Works by the number of days for which the maximum amount of liquidated damages can be paid, as defined in the **PCC**; and  (i) if the Contractor, in the judgment of the Employer has engaged in integrity violations in competing for or in executing the Contract, pursuant to GCC 74.1 [Fraud and Corruption]. |
|  | 73.3 When either party to the Contract gives notice of a breach of Contract to the Project Manager for a cause other than those listed under GCC 73.2 above, the Project Manager shall decide whether the breach is fundamental or not. |
|  | 73.4 Notwithstanding the above, the Employer may terminate the Contract for convenience. |
|  | 73.5 If the Contract is terminated, the Contractor shall stop work immediately, make the Site safe and secure, and leave the Site as soon as reasonably possible. |
| 74. Fraud and Corruption | 74.1 If the Employer determines, based on reasonable evidence, that the Contractor has engaged in corrupt, fraudulent, collusive or coercive practices, or other integrity violations, including the failure to disclose any required information which constitutes a fraudulent practice, in competing for or in executing the Contract, then the Employer may, after giving 14 days notice to the Contractor, terminate the Contract and expel him from the Site, and the provisions of Clause 73 {Termination] shall apply as if such termination had been made under Sub-Clause 73.2 (i).  74.2 ADB requires Recipients (including beneficiaries of ADB-financed activity) and their personnel, as well as firms and individuals participating in an ADB-financed activity, including but not limited to, Bidders, Suppliers, Contractors, agents, subcontractors, Consultants, service providers, subsuppliers, manufacturers (including their respective officers, directors, employees and personnel) under ADB-financed contracts to observe the highest standard of ethics during the procurement and execution of such contracts in accordance with ADB’s Anticorruption Policy (1998, as amended from time to time). In pursuance of this policy, the ADB   * 1. defines, for the purposes of this provision, the terms set forth below as follows:  “corrupt practice” means the offering, giving, receiving, or soliciting, directly or indirectly, anything of value to influence improperly the actions of another party;“fraudulent practice” means any act or omission, including a misrepresentation, that knowingly or recklessly misleads, or attempts to mislead, a party to obtain a financial or other benefit or to avoid an obligation;“coercive practice” means 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;“collusive practice” means an arrangement between two or more parties designed to achieve an improper purpose, including influencing improperly the actions of another party;“abuse” means theft, waste, or improper use of assets related to ADB-related activity, either committed intentionally or through reckless disregard;“conflict of interest” means any situation in which a party has interests that could improperly influence that party’s performance of official duties or responsibilities, contractual obligations, or compliance with applicable laws and regulations; and“integrity violation" is any act, as defined under ADB’s Integrity Principles and Guidelines (2015, as amended from time to time), which violates ADB’s Anticorruption Policy, including (i) to (vi) above and the following: obstructive practice, violations of ADB sanctions, retaliation against whistleblowers or witnesses, and other violations of ADB's Anticorruption Policy, including failure to adhere to the highest ethical standard.  * + 1. will reject a proposal for award if it determines that the Bidder recommended for award or any of its officers, directors, employees, personnel, Consultants, subcontractors, service providers, suppliers or manufacturers has, directly or through an agent, engaged in corrupt, fraudulent, collusive, coercive, or obstructive practices or other integrity violations in competing for the Contract;     2. will cancel the portion of the financing allocated to a contract if it determines at any time that representatives of the Recipient or of a beneficiary of ADB-financing engaged in corrupt, fraudulent, collusive, coercive, or obstructive practices or other integrity violations during the procurement or the execution of that contract, without the Recipient having taken timely and appropriate action satisfactory to ADB to remedy the situation, including by failing to inform ADB in a timely manner at the time they knew of the integrity violations;     3. will impose remedial actions on a firm or an individual, at any time, in accordance with ADB’s Anticorruption Policy and Integrity Principles and Guidelines, including declaring ineligible, either indefinitely or for a stated period of time, to participate**[[8]](#footnote-8)** in ADB-financed, -administered, or -supported activities or to benefit from an ADB-financed, -administered, or -supported contract, financially or otherwise, if it at any time determines that the firm or individual has, directly or through an agent, engaged in corrupt, fraudulent, collusive, coercive, or obstructive practices or other integrity violations; and     4. will have the right to require that a provision be included in bidding documents and in contracts financed, administered, or supported by ADB, requiring Bidders, suppliers and contractors, Consultants, manufacturers, service providers and other third parties engaged or involved in ADB-related activities, and their respective officers, directors, employees and personnel, to permit ADB or its representative to inspect the site and their assets, accounts and records and other documents relating to the bid submission and contract performance and to have them audited by auditors appointed by ADB. |
|  | 74.3 All Bidders, Consultants, contractors, suppliers, manufacturers, service providers, and other third parties engaged or involved in ADB-related activities and their respective officers, directors, employees and personnel are obliged to cooperate fully in any investigation when requested by ADB to do so. As determined on a case by case basis by ADB, such cooperation includes, but is not limited to, the following:   * + 1. being available to be interviewed and replying fully and truthfully to all questions asked;     2. providing ADB with any items requested that are within the party’s control including, but not limited to, documents and other physical objects;     3. upon written request by ADB, authorizing other related entities to release directly to ADB such information that is specifically and materially related, directly or indirectly, to the said entities or issues which are the subject of the investigation;     4. cooperating with all reasonable requests to search or physically inspect their person and/or work areas, including files, electronic databases, and personal property used on ADB activities, or that utilizes ADB’s Information and Communications Technology (ICT) resources or systems (including mobile phones, personal electronic devices, and electronic storage devices such as external disk drives);     5. cooperating in any testing requested by ADB, including but not limited to, fingerprint identification, handwriting analysis, and physical examination and analysis; and     6. preserving and protecting confidentiality of all information discussed with, and as required by, ADB.   74.4 All Bidders, Consultants, contractors and suppliers shall require their officers, directors, employees, personnel, agents to ensure that, in its contracts with its Consultants, Subcontractors and other third parties engaged or involved in ADB-related activities, such Consultants, Subcontractors and other third parties similarly are obliged to cooperate fully in any investigation when requested by ADB to do so.  74.5 The Contractor undertakes that no fees, gratuities, rebates, gifts, commissions or other payments, other than those shown in the bid, have been given or received in connection with the procurement process or in the contract execution.**[[9]](#footnote-9)** |
| 75. Payment upon Termination | 75.1 If the Contract is terminated because of a fundamental breach of Contract by the Contractor, the Project Manager shall issue a certificate for the value of the work done and Materials ordered less advance payments received up to the date of the issue of the certificate and less the percentage to apply to the value of the work not completed, as indicated in the **PCC.** Additional Liquidated Damages shall not apply. If the total amount due to the Employer exceeds any payment due to the Contractor, the difference shall be a debt payable to the Employer. |
|  | 75.2 If the Contract is terminated for the Employer’s convenience or because of a fundamental breach of Contract by the Employer, the Project Manager shall issue a certificate for the value of the work done, Materials ordered, the reasonable cost of removal of Equipment, repatriation of the Contractor’s personnel employed solely on the Works, and the Contractor’s costs of protecting and securing the Works, and less advance payments received up to the date of the certificate. |
| 76. Property | 76.1 All Materials on the Site, Plant, Equipment, Temporary Works, and Works shall be deemed to be the property of the Employer if the Contract is terminated because of the Contractor’s default. |
| 77. Release from Performance | 77.1 If the Contract is frustrated by the outbreak of war or by any other event entirely outside the control of either the Employer or the Contractor, the Project Manager shall certify that the Contract has been frustrated. The Contractor shall make the Site safe and stop work as quickly as possible after receiving this certificate and shall be paid for all work carried out before receiving it and for any work carried out afterward to which a commitment was made. |
| 78. Suspension of ADB Loan or Credit | 78.1 In the event that ADB suspends the Loan or Credit to the Employer, from which part of the payments to the Contractor are being made,  (a) the Employer is obligated to notify the Contractor, with copy to the Project Manager, of such suspension within 7 days of having received ADB’s suspension notice.  (b) if the Contractor has not received sums due it within the 28 days for payment provided for in GCC 50.1 [Payments], the Contractor may immediately issue a 14-day termination notice. |
| 79. Eligibility | 79.1 The Contractor shall have the nationality of an eligible country as specified in Section 5 (Eligible Countries) of the bidding document. The Contractor shall be deemed to have the nationality of a country if the Contractor is a citizen or is constituted, incorporated, or registered, and operates in conformity with the provisions of the laws of that country. This criterion shall also apply to the determination of the nationality of proposed subcontractors or suppliers for any part of the Contract including related services. |
|  | 79.2 The materials, equipment, and services to be supplied under the Contract shall have their origin in eligible source countries as specified in Section 5 (Eligible Countries) of the bidding document and all expenditures under the Contract will be limited to such materials, equipment, and services. At the Employer’s request, the Contractor may be required to provide evidence of the origin of materials, equipment, and services. |
|  | 79.3 For purposes of GCC 79.2, “origin” means the place where the materials and equipment are mined, grown, produced, or manufactured, and from which the services are provided. Materials and equipment are produced when, through manufacturing, processing, or substantial or major assembling of components, a commercially recognized product results that differs substantially in its basic characteristics or in purpose or utility from its components. |

Section 8: Particular Conditions of Contract

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

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| **A. GENERAL** | |
| **GCC 1.1 (d)** | The financing institution is **Asian Development Bank (ADB)** |
| **GCC 1.1 (r)** | The Employer is **Ministry of National Planning, Housing and Infrastructure** |
| **GCC 1.1 (w)** | The Intended Completion Date for the whole of the Works shall be **314 days from the Start Date** |
| **GCC 1.1 (cc)** | The Project Manager is **Ministry of National Planning, Housing and Infrastructure,**  **Ameenee Magu, Maafannu, Male’ 20392, Republic of Maldives** |
| **GCC 1.1 (ff)** | The Site is located at **S. Hithadhoo, Addu City, Republic of Maldives** and is defined in the drawings (drawing no 1 of 4, Location Plan). |
| **GCC 1.1 (ii)** | The Start Date shall be **7 days from signing of the contract agreement** |
| **GCC 1.1 (mm)** | The Works consist of **design and construction of GBV Shelters at S. Hithadhoo (refer employer’s requirements for details)** |
| **GCC 2.2** | Sectional Completions are: **Not Applicable** |
| **GCC 2.3 (j)** | The following documents also form part of the Contract:   * + 1. Environmental Management Plan (EMP);     2. Gender Equality and Social Inclusion Action Plan (GESI-AP);     3. Initial Environmental Examination (IEE); and     4. Site Specific Environmental Management Plan (SEMP)     5. Land Acquisition and Resettlement Due Diligence Report. |
| **GCC 3.1** | The language of the contract is **English**  The law that applies to the Contract is the law of **Republic of Maldives** |
| **GCC 8.1** | The Contractor shall comply with all relevant (a) labor laws and regulations applicable to the Contractors personnel, including staff, consultants, contractors, and agents; and (b) workplace health and safety laws. |
| **GCC 11.1** | The Project Manager **may not** delegate any of his duties and responsibilities. |
| **GCC 14.1** | Schedule of other contractors: **Not Applicable.** |
| **GCC 19.1** | The minimum insurance amounts and deductibles shall be:  (a) for loss or damage to the Works, Plant and Materials: Total Contract Value in MVR  (b) for loss or damage to Equipment: MVR 1,000,000.00  (c) for loss or damage to property (except the Works, Plant, Materials, and Equipment) in connection with Contract MVR 1,000,000.00  (d) for personal injury or death:   * + - 1. of the Contractor’s employees: MVR 1,000,000.00       2. of other people: MVR 1,000,000.00 |
| **GCC 22** | **Add GCC 22.2**  The Contractor shall adequately record the condition of roads, agricultural land and other infrastructure prior to the start of transporting materials, goods and equipment, and construction. |
| **GCC 23.1** | The following shall be designed by the Contractor: **Refer to ER and Drawings in Section 6** |
| **GCC 24** | **Add GCC 24.2**   1. The Contractor shall comply with all applicable national, provincial, and local environmental laws and regulations. 2. The Contractor is responsible for providing site workers with safe and healthy working conditions and establish an operating system to prevent accidents, injuries, and disease. This includes the establishment of preventive and emergency preparedness and response measures to avoid, and where avoidance is not possible, to minimize, adverse impacts and risks of the construction site work to the health and safety of local communities.    * + 1. Within 28 days from the date of the Letter of Acceptance, the Contractor shall submit a detailed Site Specific Environmental Management Plan (SEMP) including Site Specific Health and Safety Management Plan (SHSMP) for the Project Manager’s no objection showing how it intends to comply with environmental, health and safety laws and regulations and other specific requirements prescribed in the Contract, addressing all the monitoring and mitigation measures set forth in the Initial Environmental Examination (“IEE”) and the Environmental Management Plan (“EMP”) of the project as well as related Supplementary Information attached in Section 6- Employer’s Requirements. Work shall not commence on the Site until the no objection of SEMP has been obtained from the Project Manager. Such confirmation of no objection by the Project Manager shall not relieve the Contractor of any of his obligations or responsibilities under the Contract.        2. the Contractor is required to provide all personnel on site including Employer’s Personnel and visitors with personal protective equipment, including protection for feet (safety boots), head, eyes, ears (safety helmets) and hands, etc., in accordance with the Contractor’s SEMP. The Contractor should ensure that his Subcontractors comply with the SHSMP and provide all such necessary equipment to their personnel.        3. The Contractor shall (a) establish an operational system for managing environmental, health and safety impacts, (b) comply with the approved SHSMP and the measures relevant to the Contractor set forth in the respective IEE and the EMP, and any corrective or preventative actions set out in safeguards monitoring reports that the Employer will prepare from time to time to monitor the implementation of the project EMP through the SHSMP, (c) allocate the budget required to ensure that such measures, requirements and actions are carried out, (d) submit semi-annual reports on the compliance of such measures to the Project Manager and the Employer.        4. Where unanticipated health and safety hazards, or environmental risks or impacts become apparent during the Contract, the Contractor is required to update the SHSMP to outline the potential impacts to site works and associated mitigation measures for the Project Manager’s approval.        5. In the event of a significant injury involving medical treatment or hospitalization and fatal accident the Contractor shall notify the Project Manager immediately by verbal communication and submit a formal report as soon as practicable after its occurrence. For all accidents, whether fatal or not, the Contractor shall also notify the appropriate local authorities in accordance with the Laws of the Country.   **Add Sub-Clause 24.3**  The Contractor shall comply with the Employer’s applicable labor law and regulations and incorporate applicable workplace occupational safety norms.  The Contractor shall disseminate or engage appropriate service providers to disseminate, information on the risks of sexually transmitted diseases, including HIV/AIDS, to its employees and to members of the local communities surrounding the project area, particularly women. |
| **GCC 26.1** | The Site Possession Date(s) shall be: **14 days from the signing of the contract** |
| **GCC 29.1** | Appointing Authority for the Adjudicator: **The parties shall appoint a Dispute Adjudication Board of three members within 28 days after the notification of a dispute by either party.** |
| **GCC 30.3** | The Adjudicator shall be paid by the hour at the rate of: **TBD**  The reimbursable expenses are: **TBD** |
| **GCC 30.4** | Institution whose arbitration procedures shall be used:  Arbitration shall be conducted in accordance with the laws of the Employer's country. |
| **B. STAFF AND LABOR** | |
| **GCC 32.1** | **Replace paragraph 32.1 with the following:**  The Contractor shall not employ any child to perform any work, including in a manner that is economically exploitative, or is likely to be hazardous, or to interfere with, the child’s education, or to be harmful to the child’s health or physical, mental, spiritual, moral, or social development. Where national laws have provisions for employment of minors, the Contractor shall follow those laws applicable to the Contractor. Children below the age of 18 years shall not be employed in dangerous work. “Child” means a child below the statutory minimum age of **18** specified under the laws of the Republic of Maldives. |
| **GCC 34.2** | The following sentence shall apply:  **Respectful Work Environment**  The Contractor shall ensure that its employees and Subcontractors observe the highest ethical standards and refrain from any form of bullying, discrimination, misconduct and harassment, including sexual harassment and shall, at all times, behave in a manner that creates an environment free of unethical behavior, bullying, misconduct and harassment, including sexual harassment. The Contractor shall take appropriate action against any employees or Subcontractors, including suspension or termination of employment or sub-contract, if any form of unethical or inappropriate behavior is identified.  The Contractor shall conduct training programs for its employees and Subcontractors to raise awareness on and prevent any form of bullying, discrimination, misconduct and harassment including sexual harassment, and to promote a respectful work environment. The Contractor shall keep an up to date record of its employees and Subcontractors who have attended and completed such training programs and provide such records to the Employer or the Engineer at their first written request. |

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| **C. TIME CONTROL** | |
| **GCC 35.1** | The Contractor shall submit for approval a Program for the Works within **28 DAYS** from the date of the Letter of Acceptance. |
| **GCC 35.3** | The period between Program updates is **30 DAYS.**  The amount to be withheld for late submission of an updated Program is **10% of monthly progress bill.** |
| **GCC 40** | **Add Sub-Clause 40.3**  The Contractor shall provide the Employer with a written notice of any unanticipated environmental or resettlement risks or impacts that arise during construction, implementation or operation of the Project that were not considered in the respective IEE or the EMP. |
| **D. QUALITY CONTROL** | |
| **GCC 43.1** | The Defects Liability Period is: **365 days** |
| **E. COST CONTROL** | |
| **GCC 53.1** | The currency of the Employer’s country is: **Maldivian Rufiyaa (MVR)** |
| **GCC 54.1** | The Contract **IS NOT**subject to price adjustment in accordance with GCC Clause 54, and the following information regarding coefficients **does not** apply. |
| **GCC 55.1** | The proportion of payments retained is: **5%** |
| **GCC 56.1** | The liquidated damages for the whole of the Works are **0.05%**of the Contract Price per day, in the currencies and proportions in which the Contract Price is payable.  The maximum amount of liquidated damages for the whole of the Works is **10%** of the final Contract Price. |
| **GCC 57.1** | Not Applicable |
| **GCC 58.1** | The Advance Payment shall be **15%** and shall be paid to the Contractor if the Advance is Claimed within 45 days. |
| **GCC 58.3** | Repayment of the Advance Payments shall be: 1**5%** from each payment certificate*.* |
| **GCC 59.1** | The Performance Security amount is **10% of the Contract Price.**  *If the institution issuing the performance security is located outside the country of the Employer, it shall be counter-guaranteed or encashable by a bank in the Employer’s country.* |
| **G. FINISHING THE CONTRACT** | |
| **GCC 69** | **Add Sub-Clause 69.2**  The Contractor shall fully reinstate pathways, other local infrastructure, and agricultural land to at least their pre-project condition upon the completion of the construction. |
| **GCC 72.1** | The date by which operating and maintenance manuals are required is **during taking over date.**  The date by which “as built” drawings are required is **within one month after taking over date.** |
| **GCC 72.2** | The amount to be withheld for failing to produce “as built” drawings and/or operating and maintenance manuals by the date required in GCC 72.1 is **Not Applicable** |
| **GCC 73.2 (h)** | The maximum number of days is: 60 days. |
| **GCC 75.1** | The percentage to apply to the value of the work not completed, representing the Employer’s additional cost for completing the Works, **is 10%.** |
| **GCC 80** | The Contractor shall provide the Employer with quarterly reports of its activities, including each of its obligations under Sub-Clauses 22, 24, 31, 32, 33, 34, 40.3, 69.2, 80. |

Section 9: Contract Forms

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Notice of Intention for Award of Contract

[*on letterhead paper of the Employer*]

[*date of notification*]

To: [*name of the Bidder*]

Attention: [*insert name of the Bidder’s authorized representative*]

Address: [*insert address of the Bidder’s authorized representative*]

Telephone/Fax numbers: [*insert telephone/fax numbers of the Bidder’s authorized representative*]

E-mail Address: [*insert e-mail address of the Bidder’s authorized representative*]

This is to notify you of our intention to award the contract [*insert name of the contract and identification number, as given in the Bid Data Sheet*]. You have [*insert number of days as specified in ITB 40.1 of the BDS*] days from the date of this notification to (i) request for a debriefing in relation to the evaluation of your Bid; and/or (ii) submit a bidding-related complaint in relation to the intention for award of contract, in accordance with the procedures specified in ITB 45.1.

The summary of the evaluation are as follows:

1. **List of Bidders**

|  |  |  |
| --- | --- | --- |
| Name of Bidder | Bid Price as Read Out at Opening | Evaluated Bid Price |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |

1. **Reason/s Why Your Bid Was Unsuccessful**

………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………

1. **The Successful Bidder**

|  |  |
| --- | --- |
| Name of Bidder: |  |
| Address: |  |
| Accepted Contract Amount: |  |
| Duration of Contract: |  |
| Scope of the Contract Awarded: |  |
| Amount Performance Security Required: |  |

Authorized Signature: ……………………………………………………………

Name and Title of Signatory: ……………………………………………………

Name of Agency: …………………………………………………………………

Letter of Acceptance

[*on letterhead paper of the Employer*]

[*date*]

To: [*Name and address of the contractor*]

Subject: Contract No. [*please specify*]

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 Bid Data Sheet*] for the Accepted Contract Amount of the equivalent of [*amount in words and figures and 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 and any additional security required as a result of the evaluation of your bid, using for that purpose the Performance Security Form included in Section 9 (Contract Forms) of the Bidding Document.

*[Choose one of the following statements:]*

We accept that *[insert the name of adjudicator proposed by the Bidder]*be appointed as the Adjudicator.

*[or]*

We do not accept that *[insert the name of the adjudicator proposed by the Bidder]*be appointed as the Adjudicator, and by sending a copy of this Letter of Acceptance to *[insert name of the appointing authority]*, the Appointing Authority, we are hereby requesting such Authority to appoint the Adjudicator in accordance with GCC 29.1.

Authorized Signature:

Name and Title of Signatory:

Name of Agency:

Attachment: Contract Agreement

Contract Agreement

THIS AGREEMENT made the [*date*] day of [*month*], [*year*], between [*name of the Employer*] (hereinafter “the Employer”), of the one part, and [*name of the contractor*] (hereinafter “the Contractor”), of the other part:

WHEREAS the Employer desires that the Works known as [*name of the contract*] 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. Letter of Acceptance,
    2. Letter of Bid,
    3. Addenda Nos. [*insert addenda number if any*]**[[10]](#footnote-10)**
    4. Particular Conditions of Contract,
    5. List of Eligible Countries that was specified in Section 5 of the bidding document,
    6. General Conditions of Contract,
    7. Specifications,
    8. Drawings*,*
    9. Completed Activity Schedules or Bill of Quantities,
    10. Environmental Management Plan (EMP),
    11. Gender Equality and Social Inclusion Action Plan (GESI-AP),
    12. Initial Environmental Examination (IEE),
    13. Site Specific Environmental Management Plan (SEMP)
    14. Land Acquisition and Resettlement Due Diligence Report and
    15. any other documents shall be added here.**[[11]](#footnote-11)**

3. In consideration of the payments to be made by the Employer to the Contractor as indicated 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 [name of the borrowing country] on the day, month and year indicated above.

Signed by Signed by

for and on behalf of the Employer for and on behalf the Contractor

in the presence of: in the presence of:

Witness, Name, Signature, Address, Date Witness, Name, Signature, Address, Date

Performance Security

[*Bank’s name, and address of issuing branch or office*]

**Beneficiary:** [*Name and address of the Employer*]

**Date:**

**Performance Guarantee No.:**

We have been informed that [*name of the contractor*] (hereinafter called “the Contractor”) has entered into Contract No. [*reference number of the contract*]dated [*date*] with you, for the execution of [*name of contract and brief description of works*](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 Contractor, we [*name of the bank*] hereby irrevocably undertake to pay you any sum or sums not exceeding in total an amount of [*name of the currency and amount in words*]**[[12]](#footnote-12)** [*amount in figures*] such sum being payable in the types and proportions of currencies in which the Contract Price is payable, upon receipt by us of your first demand in writing accompanied by a written statement stating that the Contractor is in breach of its obligation(s) under the Contract, without your needing to prove or to show grounds for your demand or the sum specified therein.

This guarantee shall expire, no later than the [*date*] day of [*month*], [*year*]**[[13]](#footnote-13)**, and any demand for payment under it 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 Revisions, ICC Publication No. 758, except that the supporting statement under Article 15(a) is hereby excluded. **[[14]](#footnote-14)**

*. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .*[*Signature(s) and seal of bank (where appropriate)*]

-- Note to Bidder --

*If the bank issuing performance security is located outside the Employer’s country, it shall be counter-guaranteed or encashable by a bank in the Employer’s country.*

Advance Payment Security

[*Bank’s name, and address of issuing branch or office*]

**Beneficiary:** [*Name and address of the Employer*]

**Date:**

**Advance Payment Guarantee No.:**

We have been informed that [*name of the contractor*](hereinafter called “the Contractor”) has entered into Contract No. [*reference number of the contract*]dated [*date*] with you, for the execution of [*name of contract and brief description of works*] (hereinafter called “the Contract”).

Furthermore, we understand that, according to the Conditions of the Contract, an advance payment in the sum [*name of the currency and amount in words*]**[[15]](#footnote-15)** [*amount in figures*] is to be made against an advance payment guarantee.

At the request of the Contractor, we [*name of the bank*]hereby irrevocably undertake to pay you any sum or sums not exceeding in total an amount of [*name of the currency and amount in words*]**[[16]](#footnote-16)** [*amount in figures*] upon receipt by us of your first demand in writing accompanied by a written statement stating that the Contractor is in breach of its obligation under the Contract because the Contractor:

1. used the advance payment for purposes other than the costs of mobilization and cash flow support in respect of the Works; or
2. has failed to repay the advance payment when it has become due and payable in accordance with the conditions of the Contract, specifying the amount payable by the Contractor.

It is a condition for any claim and payment under this guarantee to be made that the advance payment referred to above must have been received by the Contractor on its account number [*contractor’s account number*] at [*name and address of the bank*].

The maximum amount of this guarantee shall be progressively reduced by the amount of the advance payment repaid by the Contractor as indicated 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 eighty percent (80%) of the Contract Price has been certified for payment, or on the [*date*] dayof [*month*], [*year*]**[[17]](#footnote-17)**, whichever is earlier. Consequently, any demand for payment under this guarantee must be received by us at this office on or before that date.

This guarantee is subject to the Uniform Rules for Demand Guarantees (URDG) 2010 Revisions, ICC Publication No. 758, except that the supporting statement under Article 15(a) is hereby excluded. **[[18]](#footnote-18)**.

*. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .*  
[*Signature(s) and seal of bank (where appropriate)*]

-- Note to Bidder --

*If the bank issuing advance payment security is located outside the Employer’s country, it shall be counter-guaranteed or encashable by a bank in the Employer’s country.*

1. Whether as a Contractor, Subcontractor, Consultant, Manufacturer or Supplier, or Service Provider; or in any other capacity (different names are used depending on the particular Bidding Document). [↑](#footnote-ref-1)
2. These institutions include African Development Bank, European Bank for Reconstruction and Development (EBRD), Inter-American Development Bank (IADB), and the World Bank Group. According to paragraph 9 of the Agreement, other international financial institutions may join upon the consent of all Participating Institutions and signature of a Letter of Adherence by the international financial institution substantially in the form provided (Annex B to the Agreement). Upon adherence, such international financial institution shall become a Participating Institution for purposes of the Agreement. Bidders are advised to check [www.adb.org/integrity](http://www.adb.org/integrity) for updates. [↑](#footnote-ref-2)
3. Use one of the two options as appropriate. [↑](#footnote-ref-3)
4. If none has been paid or is to be paid, indicate “None”. [↑](#footnote-ref-4)
5. All italicized text is for use in preparing this form and shall be deleted from the final document. [↑](#footnote-ref-5)
6. Or the employer may use “Uniform Rules for Demand Guarantees (URDG) ICC Publication No. 458” as appropriate. [↑](#footnote-ref-6)
7. The sum of the two coefficients Ac and Bc should be 1 (one) in the formula for each currency. Normally, both coefficients shall be the same in the formulas for all currencies, since coefficient A, for the nonadjustable portion of the payments, is a very approximate figure (usually 0.10 ~ 0.20) to take account of fixed cost elements or other nonadjustable components. The sum of the adjustments for each currency is added to the Contract Price. [↑](#footnote-ref-7)
8. Whether as a Contractor, Subcontractor, Consultant, Manufacturer or Supplier, or Service Provider; or in any other capacity (different names are used depending on the particular Bidding Document). [↑](#footnote-ref-8)
9. The undertaking also applies during the period of performance of the contract [↑](#footnote-ref-9)
10. Information contained in the addenda and or addendum should preferably be included in the contract documents to avoid potential ambiguities during contract implementation. If however, unavoidable priority should be decided depending on the nature of information provided in the addenda/addendum. [↑](#footnote-ref-10)
11. Tables of Adjustment Data may be added if the contract provides for price adjustment (see GCC 54.1). [↑](#footnote-ref-11)
12. The guarantor shall insert an amount representing the percentage of the contract price specified in the contract and denominated either in the currency(ies) of the contract or in any freely convertible currency acceptable to the Employer. If the bank issuing the performance security is located outside the country of the employer, it shall have a correspondent financial institution located in the country of the Employer. [↑](#footnote-ref-12)
13. Insert the date 28 days after the defect liability period. 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 [6 months][1 year], in response to the Employer’s written request for such extension, such request to be presented to the Guarantor before the expiry of the guarantee.” [↑](#footnote-ref-13)
14. Or the employer may use “Uniform Rules for Demand Guarantees (URDG), ICC Publication No. 458, except that subparagraph (ii) of Sub-article 20(a) is hereby excluded” as appropriate. [↑](#footnote-ref-14)
15. The guarantor shall insert an amount representing the amount of the advance payment denominated either in the currency(ies) of the advance payment as specified in the Contract, or in any freely convertible currency acceptable to the Employer. [↑](#footnote-ref-15)
16. Footnote 1. [↑](#footnote-ref-16)
17. 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 [6 months] [1 year], in response to the Employer’s written request for such extension, such request to be presented to the Guarantor before the expiry of the guarantee.” [↑](#footnote-ref-17)
18. Or the employer may use “Uniform Rules for Demand Guarantees (URDG), ICC Publication No. 458, except that subparagraph (ii) of Sub-article 20(a) is hereby excluded” as appropriate. [↑](#footnote-ref-18)