# **QUALIFICATION REQUIREMENT - CHECK LIST**

To be filled by bidder.

ITEM	Checklist
Bid Form	
Bid Security	
MIRA Tax clearance	
MNPHI Contractors Registration Certificate	
Business Registration Certificate at Economic Ministry	
GST Registration	
Priced BOQ	
Work schedule	
Site Organization chart	
Resource Allocation Plan	
Experience – Part 1 List of Similar Projects completed over last five years	
Experience – Part 2 List of Ongoing MWSC Projects	
Signed	
In the capacity of	
Dully authorized to sign bids for and on behalf of	
(Company Name	& Stamp)
Date:	



# Male' Water & Sewerage Company Pvt. Ltd.

Republic of Maldives

**Bidding Document** 

For

# CONSTRUCTION OF LABEL ROOM & WORKSHOP AT HULHUMALE' BOTTLING FACTORY – 2<sup>ND</sup> RETENDER

# **TENDER AND CONTRACT DOCUMENT**

Document No. MWSC/HM/2024/02

September 2024

# **Table of Contents**

Part 1.	<u>Tender</u>	03
	Section I Instruction to Bidders	
	Section II Tendering Forms	
	<ul><li>(a) Bid Form /Letter of Tender</li><li>(b) Form of Bid Security</li><li>(c) Form for Resource allocation plan</li><li>(d) Form for Experience</li></ul>	
Part 2.	Employers Requirements	27
	Section III Scope of Works	
	Section IV Technical Specifications	
	Section V Drawings	
	Section VI Bill of Quantities	
	Section VII Additional Information	
Part 3.	Contract	63
	Section VIII General Conditions	
	Section IX Appendix	
	Section X Contract Forms	
	(a) Letter of Award	
	(b) Contract Agreement	
	(c) Performance Security	
	(d) Advance Payment	
	(e) Format to Request for Extension of Time	

PART 1. TENDER

**Section I** Instruction to Bidder

### **INSTRUCTIONS TO BIDDERS**

### 1. Introduction

Male' Water & Sewerage Company Pvt. Ltd., is desirous in employing a contractor *Construction of Label Room & Workshop at Hulhumale' Bottling Factory*, as described in the appended specifications and invites Bids from eligible Bidders for this work.

# 2. Qualification of Bidders

The bid document shall comprise the following information in the given format and order, which MWSC shall use to determine whether the Bidder possesses relevant experience, technical capacity to undertake the project works and to complete successfully in accordance to the bid. Any bid not accompanied the following in the given **format and order** shall be rejected by the Employer as non-responsive.

- (a) Bid form. Must be filled stamped and signed. Amount stated in the bid document should be exclusive of GST and should tally with the amount stated in the BOQ.
- (b) Bid Security
- (c) MIRA tax clearance (within 06 months). Must be clear.
- (d) MNPHI Contractors Registration Certificate
  - To be eligible the bidder shall have a valid minimum registered qualification of GC01 or GC02 grade 07 at National Contractors Registration of Ministry of National Planning and Infrastructure. Bidder shall submit National Contractor registration certificate with a minimum qualification of GC01/GC02 grade 07.
- (e) Business Registration Certificate at Economic Ministry
- (f) GST Registration
- (g) Priced BOQ. Must be filled and complete. BOQ should not be altered. Bidder's rates should not be more than two decimals.
- (h) Work schedule. Should tally with the duration stated in Bid form
- (i) Site Organization chart
- (j) List of Key Personnel's proposed for the project in the given format "Staff Proposed for Execution of Works" under Section-II Tendering forms.
  - Bidders shall have the following key minimum key personnel's.
    - Project Manager with minimum Diploma qualification. Qualification certificates must be submitted.
    - Site supervisor with Diploma in building technology related program having oneyear experience or Site Supervisor having field experience of minimum 2 years
- (k) List of Machineries and Equipment proposed for the project in the given format "Machineries and Equipment Proposed for Execution of the Works" under Section-II Tendering forms.
- (I) Experience Part 1 list of Similar Projects completed over last five years in the given format "Form of Experience" under Section-II Tendering forms.
- (m) Experience Part 2 list of Ongoing MWSC Projects in the given format "Form of Experience" under Section-II Tendering forms. (Applicable for bidders with ongoing contract commitments with MWSC)

### 3. Cost of Bid Preparation

The bidder shall bear all costs associated with the preparation and submission of his bid, and the provision of sample materials and the Employer will in no case be responsible or liable for those costs.

### 4. One Bid per Bidder

Each bidder shall submit only one bid by itself or as a partner in a joint venture. A Bidder who submits or participates in more than one bid will be disqualified.

### 5. Site Visits

Bidders are advised to examine the site of the works and obtain all information that may be necessary for preparing bid proposals.

### 6. Bid Sum

The Bidder shall fill in on the appropriate Bills of Quantities the rates and prices for all items of the Works described.

Notwithstanding any other requirement of the Bid Documents Bidders are advised that they shall be wholly responsible for and shall include in their rates all the costs associated with carrying out the Works as described in the Specification, BOQ and Drawings.

### 7. Addenda to the Bid Document.

Before the deadline for submission of bids, Employer may modify the Bid Documents by issuing addenda.

The addenda shall be communicated in writing to all Bidders and shall become a part of the Bid Documents.

### 8. Clarification of Bid Documents

A prospective bidder requiring any clarification of the Bid Documents may notify the Employer in writing to the postal mailing address shown under "Submission of Bids" in the following, or by fax. The Employer will respond in writing to any request for clarification received earlier than four days prior to the deadline for submission of bids. Copies of the Employer's response will be forwarded to all bidders, including a description of the enquiry but without identifying its source.

### 9. Obvious Works

The Bidder shall include rate for 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

### 10. Discrepancies

All Bidders are deemed to have read the Specifications and BOQ carefully in conjunction with all the Contract Drawings. Any discrepancies between these documents are to be brought to the attention of the Employer and clarified prior to the closing of the Tender.

Should any such discrepancies be discovered at a later date, the decision of the Employer is final and any claim for extra costs by the Contractor as a result of such discrepancies will NOT be entertained. The Contractor shall, at all times, exercise due care and professional scrutiny to ensure that there are no discrepancies and/or divergence between Contract Drawings and specifications prior to execution of any portion of the works on site. The Contractor shall immediately give the Employer a written notice specifying any such discrepancies or divergence upon discovery and the Employer shall issue instructions in regard thereto. The Contractor should exercise due diligence in this matter as a failure and/or negligence in complying with the above stated requirements may result in extra costs. Any extra costs incurred in respect therefore shall be borne solely by the Contractor.

### 11. Pre-Bid Meeting

The Bidder or its official authorized representative is invited to attend a pre-bid meeting, which will be held at the Employer's office at the time stated in the Appendix.

#### 12. Bid Submission

### 12.1 Place

Bids shall be submitted to the address stated in the Appendix

### 12.2 Time

Bids shall be submitted on or before the deadline for bid submission stated in the Appendix

### 12.3 Addressing and Marking

Bids shall be submitted in a sealed envelope addressed and marked as stated in the Appendix.

### 12.4 Documents

All the pages submitted with the bid shall be bounded together. Loose pages will not be accepted.

### 13. Late Bids

Late Bids will not be accepted.

### 14. Modification or Withdrawal of Bids

The Bidder may modify or withdraw his bid by giving notice in writing before the deadline prescribed for submission of bids.

The Bidder's modification or withdrawal notice shall be prepared, sealed, marked, and submitted in the same fashion as described above for bids and additionally marked 'MODIFICATION" OR "WITHDRAWAL" as appropriate.

No bid may be modified after the deadline for submission of bids.

Withdrawal of a bid between the deadline for submission of bids and the expiration of the period of bid validity may result in the forfeiture of the bid bond.

### 15. Bid Opening

Bids will be opened immediately after the deadline for Bid submission stated in the Appendix

### 16. Correction of Errors Criterion

Bids determined to be substantially responsive will be checked by the Employer for any arithmetic errors. Errors will be corrected by the Employer as follows:

- a. If total price increases due to correction of above mistakes, the correction shall be rejected within the bid price in consultation with Bidder. If the Bidder does not agree for such adjustment, the bid shall be rejected.
- b. The amount stated in the Bid will be adjusted by the Employer in accordance with the above procedure for the correction of errors and, with the concurrence of the Bidder, shall be considered as binding upon the Bidder. If the Bidder does not accept the corrected amount, the Bid will be rejected.

### 17. Bid Currency

The prices quoted by the Bidder shall be in currency stated in the Appendix.

### 18. Period of Bid Validity

Bids shall remain valid, from the date of Bid opening, for the period stated in the appendix or any other date that is the subject of a Bid amendment. A Bid for a shorter duration shall be rejected as a non-responsive Bid.

### 19. Bid Security

The Bidder shall furnish, as part of his bid, a bid security in the amount of MVR 10,000. The bid security shall be guarantee from a bank located in Male' or a foreign bank which is acceptable to the Employer. The bid security shall be valid for 30 days beyond the validity of the bid.

The bank guarantee submitted as bid security shall be in accordance with the sample form of bid security form provided with this bid document. Other formats may be permitted, subject to the prior approval of the Employer.

Any bid not accompanied by an acceptable bid security shall be rejected by the Employer as non-responsive.

The bid securities of unsuccessful bidders will be returned as promptly as possible,

after the expiration of the period of bid validity. The bid security of the successful bidder will be returned when the bidder has signed the agreement and furnished the required performance security.

### The bid security may be forfeited

- a) If the bidder withdraws its bid during the period of Bid validity; or
- b) If the bidder does not accept the correction of its bid price;
- c) In case of a successful bidder, if it fails within the specific time limit to
  - i. Sign the agreement, or
  - ii. Furnish the required performance security, or
  - iii. Furnish the required domestic preference security.

### 20. Award Criteria

Subject to Clause 21 of the Instructions to Bidders, the Employer will award the Contract to the Bidder whose Bid has been determined to be substantially responsive to the bidding documents and most favorable, provided that the bidder has the capability and resources to carry out the contract effectively as determined by the Employer.

### 21. Employer's Right to Accept or Reject.

Employer reserves the right to accept or reject any bid, to accept part/ package wise and to cancel the bidding process and reject all bids, at any time prior to the award of Contract, without thereby incurring any liability to the affected bidder or bidders or any obligation to inform the affected bidder or bidders attributable to the Employer.

### 22. Notification of Award.

The Bidder whose Bid has been accepted will be notified of the award by the Employer, in writing confirmed by registered letter, prior to expiration of the Bid Validity period.

The notification of award shall be binding and shall constitute the formation of the contract.

Upon the furnishing of the Performance Security, acceptable to Employer, by the successful bidder, the Employer promptly will notify the other bidders that their bids have been unsuccessful.

### 23. Performance Security

The Performance Security shall be in the amount stated in the **Appendix.** The Performance Security shall be valid until a date 28 days from the date of Taking Over.

From the date of the notification of award, within **the period stated in the Appendix**, the successful bidder shall furnish the Performance Security in the form of a Performance Bank Guarantee. The Performance Bank Guarantee shall be in accordance with the **Sample Form of Performance Bank Guarantee** (Reference) appended to with this bid document. Other formats may be permitted, at the discretion of and prior approval of the Employer.

Failure of the successful bidder to comply with the requirement to submit a Performance Guarantee constitutes sufficient grounds for annulment of the award and forfeiture of any bid security, in which event the Employer may make the award to the next best evaluated bidder or call for new bids.

### 24. Advance Payment and Security

The Employer shall make an Advance Payment for mobilization when Contractor submits an advanced payment guarantee in the format annexed to the Contract or another format approved by the Employer. The advance payment shall be repaid through percentage deductions in interim payments. The total advance payment and the applicable percentage deductions for repayment from interim payment shall be as stated in the Appendix.

The Contractor shall ensure that the Advance Payment Guarantee is valid and enforceable until the advance payment has been repaid, although its amount maybe progressively reduced by the amount repaid by the Contractor as indicated in the interim payments. If the terms of the Guarantee specify its expiry date, and the advance payment has not been repaid by the date 28 days prior to the expiry date, the Contractor shall extend the validity of the guarantee until the advance payment has been repaid.

The Employer shall be entitled to make a claim under the Advance Payment Guarantee for the amounts that the Employer is entitled to under the Contract in the following circumstances.

- (a) The Contractor fails to perform its obligations under the Contract
- (b) Any circumstances arise under which the Contract is terminable under the terms of this Contract
- (c) The Contract is terminated for any reason whatsoever

The Employer shall also be entitled to make a reasonable determination whether it is appropriate to make a claim under any other circumstances other than that provided above.

### 25. Evaluation and Comparison of Bids

Only responsive bids determined under this ITB Clause 2 will be evaluated and compared. In evaluating the bids, the Employer will determine for each bid, the evaluated bid price by adjusting the bid price as stated in this ITB clause 16.

The Employer reserves the right to accept or reject any variation, deviation, or alternative offer. Variation, deviations, and alternative offers and other factors which are in excess of the requirements of the bidding documents or otherwise

result in unsolicited benefits for the Employer will not be taken into account in bid evaluation.

The submitted responsive bids will be evaluated under the following criteria.

### a. Price:

Marks will be given for the amount stated on bid form in comparison with MWSC engineer estimate price. (Lowest price (Among submitted bids or Engineer estimate) / proposed price)  $\times$  70

### b. Duration:

Marks will be given for the duration stated on bid form in comparison with MWSC engineer estimate duration. Duration for the project shall not be more than 75 Days. A Bid for a higher duration shall be rejected as a non-responsive Bid and any bid with an unrealistic duration will be disqualified.

(Lowest delivery period (Among submitted bids or Engineer estimate) / proposed delivery period) x 30

### c. Resources:

Resource allocation plan of bidder will be assessed based on the minimum requirement stipulated in the bid document and bidders resource allocation proposal to determine bidder's resource capability in undertaking the project.

Summary of evaluation criteria with weights

Part - A

#	Criteria	Weighting %
1	Price	70%
2	Duration	30%

Part - B

#	Criteria	Capability
3	Resource	Pass/Fail

**Section II Tendering Forms** 

# **Section II - Sample Tendering Forms**

FORM (1)	BID FORM / LETTER OF TENDER/PROPOSAL
FORM (2)	FORMAT FOR BID SECURITY
FORM (3)	RESOURCE ALLOCATION PLAN
FORM (4)	FORMAT FOR EXPERIENCE

FORM	/I (1) BID FOR FORM / LETTER OF ገ	TENDER/ PROPOSAL

# **BID FORM**

Description of works:	CONSTRUCTIO FACTORY	N OF LABE	L ROOM & W	ORKSHOP A	T HULHUMALE' BOTTLING
Bid to:	Male' Water a	and Sewera	age Company	Pvt. Ltd	
Address:	Ameenee Mag Machchagolhi Male' 20 – 03' Republic of M				
Having examined the conditi the execution of above name said work in conformity with of quantities figures)	ed works, I/we In the said cond for t	the under itions of Co the	signed, offer ontract, tech sum	to construction to construction to construct to construct the construction the construction to construct the construction to construct the construction to construct the construction t	ct and maintain the whole cations, drawings and bill Rf:(in
conditions.	words ) or oth	ner sums r	may be asce	rtained in a	accordance with the said
We undertake, if our Bid is signing the contract, in according the works comprise in the	dance with sul	o clause 5.2	L of the gene	ral conditio	
We agree to abide by this Bid it shall remain binding upon We understand that you are	us and may be	e accepted	at any time	before the	expiration of that period.
Unless and until a formal agracceptance thereof, shall con				_	er with our written
Yours Faithfully,					
Signed					
In the capacity of					
Dully authorized to sign bids	for and on beh	nalf of			
				(Com	pany Name & Stamp)
Date:					
Name & Address of Signator	у				
Name:					
Address:					
Tel No:			Fa	x No:	

FORM (2) FORMAT FOR BID SECURITY

# **BID SECURITY (BANK GUARANTEE)**

WHEREAS,	_ [name of b	idder] (hereinafter c	alled "the Tenderer") has
submitted his bid dated		date] for the	
CONSTRUCTION OF LABEL ROOM & WOR "the Tender").	KSHOP AT HULI	HUMALE' BOTTLING FA	CTORY (hereinafter called
KNOW ALL PEOPLE by these present of [name of country] hav "the Bank") are bound unto MALE' WA Employer") in the sum of, Employer the Bank binds itself, its succession.	TER & SEWERfor wh	AGE COMPANY PVT. I ich payment well and	LTD (hereinafter called "the d truly to be made to the
SEALED with the Common Seal of the sa	id Bank this _	day of	2024
THE CONDITIONS of this obligation are:			
1. If the Tenderer withdraws the Tend	er during the p	period of validity specif	fied in the Form of Tender;
or  2. If the Tenderer having been notified period of validity fails or refuses to a lostructions to Tenderers, if require	execute the M		
we undertake to pay to MWSC up to the MWSC having to substantiate its deman claimed is due to the occurrence of one or conditions.	nd, provided th	at in his demand MWS	SC will note that the amount
This Guarantee will remain in force up to of Tenders as such deadline is stated in t of which extension(s) to the Bank is he reach the Bank not later than the above	the Tender Doc ereby waived.	uments or as it may be	e extended by MWSC, notice
DATESIGNATURE OF	THE BANK		
WITNESS SEAL			
[signature, name, and address]			

FORM (3) RESOURCE ALLOCATION PLAN

### PART A – STAFF PROPOSED FOR EXECUTION OF THE WORKS

### 1.1. HEAD OFFICE

Proposed Designation	Name	Duration (Should align with project schedule submitted)	From (Date)	To (Date)	Qualification	Minimum Requirement
Project Manager						1 Project Manager with minimum Diploma qualification. Qualification certificates must be submitted. Must meet requirement.
Others (specify)						
Others (specify)						
Others (specify)						
Others (specify)						
Others (specify)						
Others (specify)						

NOTE: A summary of the work experience including qualification certificates for each key staff shall be attached at the back of PART A – STAFF PROPOSED FOR EXECUTION OF THE WORKS, 1.1 HEAD OFFICE

### 1.2. SITE

Proposed Designation	Name	Quantity	Duration (Should align with project schedule submitted)	From (Date)	To (Date)	Qualification	Minimum Requirement
Site Supervisor							1 Site Supervisor with Diploma qualification in construction industry related program
Laborers		(Specify Qty)					

NOTE: A summary of the work experience including qualification certificates for each key staff shall be attached at the back of PART A – STAFF PROPOSED FOR EXECUTION OF THE WORKS, 1.2 SITE

# PART B – MACHINERIES AND EQUIPMENTS PROPOSED FOR EXECUTION OF THE WORKS

### 1.1. SITE

Description	Quantity	Duration (Should align with project schedule submitted)	From (Date)	To (Date)	Ownership (Owned/leased)	Capacity/Condition/size	Minimum Requirement
Welding Machine	(Specify						One set
	Qty)						
	(Specify						
	Qty)						
	(Specify						
	Qty)						
	(Specify						
	Qty)						
	(Specify						
	Qty)						
	(Specify						
	Qty)						
	(Specify						
	Qty)						
	(Specify						
	Qty)						
	(Specify						
	Qty)						

# 1.1. SITE (CONTINUED)

Description	Quantity	Duration (Should align with project schedule submitted)	From (Date)	To (Date)	Ownership (Owned/leased)	Capacity/Condition/size	Minimum Requirement

FORM (4) FORMAT FOR EXPERIENCE

### **FORM OF EXPERIENCE**

Part- 1. List of similar projects of value equal and above MVR 1,000,000.00 completed over the last five years. Marks will be given for valid projects meeting the criteria

Project Name	Employer	Client Contact (Name & Mobile number)	Type of work	Contract Value	Completed Year
1.					
2.					
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					

Note: Please attach Completion Certificate based on above listed project in chronological order at the back of Section FORM OF EXPERIENCE – PART 1 (LIST OF SIMILAR PROJECTS COMPLETED OVER LAST FIVE YEARS). (Technical evaluation marks for experience would be given based on the submitted valid completion Certificates).

Part- 2. List of Ongoing MWSC projects.

Project Name	Client Contact (Name & Mobile number)	Type of work	Contract Value	Value of Work Still to be Completed	Schedule Completion Date
1.					
2.					
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					

Note: Please attach Award letters based on above listed projects in chronological order at the back of Section FORM OF EXPERIENCE – PART 2 (LIST OF ONGOING MWSC PROJECTS).

P	AR٦	Г2.	<b>EMPL</b>	.OYER <sup>4</sup>	'S REO	UIREMENT
---	-----	-----	-------------	--------------------	--------	----------

Section III – Scope of Works

# **Scope of Works**

### 1. Location of Work:

The site for the works proposed under this contract is in the Island of K. Hulhumale, Maldives (MWSC Bottling Factory).

### 2. Description of works.

The scope of works for the project includes construction Label Room & Workshop at MWSC, Hulhumale', Bottling Factory.

- Site Inspection before tender submission.
- Scope of works includes mobilization, site clearance and demobilization.
- Demolition & site Clearance works as per the drawings.
- Fabricate & installation temporary dust prevention system inside factory.
- Constructions of Label Room & Workshop as per the drawings.
- Metal & Carpentry works at Label Room & Workshop.
- Finishing works at Label Room & Workshop
- Electrical works at Label Room & Workshop.
- Plumbing works Workshop.
- Site clearance

### NOTE:

- 1. Test locations should be confirmed by the Contractor based on the actual site condition and planned locations for the structure.
- 2. The contractor is responsible for any damages to the existing building property during construction. The contractor shall indemnify the respective party against all losses or claims.
- 3. Contractor shall supply the 'as-built' drawing within 15 days after completion date.
- 4. All test should be carried out according to geotechnical standards, ASTM or other applicable standards accepted by MWSC. All the testing equipment should be calibrated and arranged by contractor. Perform quality checks on collected data and laboratory testing procedures.
- 5. Maintain records of all field and laboratory data, including photographs, borehole logs, and test results.
- 6. Water and electricity are to be arranged by the contractor.
- 7. All the items on the bills are for supplying and construction unless otherwise specified.

- 8. All measurements to be checked at site before detail design.
- The geotechnical report and foundation design must be reviewed and approved by a qualified geotechnical engineer. Provide the final report and design to the client and relevant authorities.
- 10. Comply with relevant geotechnical testing standards, ASTM or other applicable standards. Follow the project-specific requirements and objectives.

**Section IV. Technical Specifications** 

### **TECHNICAL SPECIFICATIONS**

### 1. PRELIMINARIES

### **GENERAL AND PRELIMINARIES**

The Conditions of Contract, Bill of Quantities and the Drawings shall be read in conjunction with the Specifications and matters referred to, shown or described in the former are not necessarily repeated in the latter.

Notwithstanding the subdivision of the Specifications into various headings, every part is to be deemed supplementary to every other part and the various parts are to be read with each other, so far as it may be practicable to do so, or when the context so permits.

### 1.2 STANDARDS, MATERIALS, GOODS AND WORKMANSHIP

Materials, goods and workmanship shall be of the best quality of their respective kinds and, as far as applicable, shall comply in every respect with the requirements of the quoted Standards, Codes of Practice and Specifications or any other National Standard approved by the Employers. Preambles and descriptions of materials, goods and workmanship given in any one section of the specifications shall apply throughout the whole of these specifications unless otherwise described. The substitution of materials, goods, workmanship and the like from that specified shall only be permitted with the written approval of the Employer.

The Contractor shall submit for the approval of the Employer 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 the Works. This list shall include reference to the specifications Clause or Article to which the materials and goods apply.

All materials used in the Works shall be new and of the appropriate quality all to the Employer's approval.

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 Employer shall order the removal of any materials, which he has not approved.

No orders for materials and goods shall be placed until approval has been obtained for the materials and goods from the Employers.

The Contractor shall note that it is his responsibility to include in his price for the cost of the materials and products as specified and no adjustment will be allowed should the alternatives be rejected by the Employer.

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.

### 1.3 DRAWINGS AND SPECIFICATIONS

Drawings, BOQ 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 BOQ or Specifications, the same shall be referred to the Employer before proceeding with the Works, and the Employer decision on such discrepancies, errors, ambiguities or omissions shall be final.

In addition to the Drawings, BOQ and Specifications attached hereto, the Employer will during the progress of the Works furnish additional Drawings, Specifications, and instructions as may be necessary, in the opinion of the Employer 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.

### 1.4 SAMPLES

The Contractor shall furnish for approval with reasonable promptness, all samples as directed by the Employer. The Employer shall check and approve such samples with reasonable promptness only for conformance with the design concept of the Works and for compliance with the information given in Contract Documents. The work shall be in accordance with the approved samples.

### 1.5 ORDERING MATERIALS

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.

### 1.6 MANUFACTURER'S INSTRUCTIONS

All items or materials shall be assembled, mixed, fixed, applied, or otherwise incorporated in the Works in accordance with the printed instructions of the manufacturer of the items or materials unless specifically instructed otherwise by the Employer.

### 1.7 TRANSPORTATION TO THE SITE

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.

### 1.8 SCAFFOLDING

The Contractor at his own expense shall provide, erect, maintain, dismantle, and clear away at completion proper and adequate scaffolding for the proper execution and completion of works.

### 1.9 CUTTING AND PATCHING

The Contractor shall be responsible for all cutting and patching and making good required for all trades for all work and his prices will be deemed to include for all such cutting and patching and making good.

### 1.10 DEMOLITIONS

Demolition includes the complete demolition including grubbing up of foundations and the proper termination of all services as required by the Drawings including the removal and disposal of all demolished materials. The demolition work shall be executed in a systematic manner.

Demolition operations and the removal of debris shall be carried out to ensure minimum interference with roads, streets, footpaths and other adjacent occupied or used facilities The Contractor at his own expense shall repair damage caused to adjacent facilities by demolition operations. The Contractor shall arrange and pay for the disconnecting, removing and capping of utility services, notify the affected utility agency in advance and obtain written approval before commencing work

### 1.11 STORAGE AND PROTECTION

Tall materials shall be stored in protected areas on site and shall be fully protected against effects of weather. All delicate materials shall be carefully handled and stored under cover in a manner to prevent deformation and damage to the material and to shop finishes, and to prevent rusting and the accumulation of mud, dirt or other foreign matter on the metal work.

All such damage and accumulation shall be corrected prior to erection. The Contractor shall cover up and protect the Works from the weather and from damage by his own or other workmen performing subsequent operations. He shall provide all necessary dustsheets, barriers and guard rails and clear away same at completion.

### 1.12 CONTRACTOR'S SITE AREA

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.

The Contractor shall take all steps necessary as directed by the Employer to minimise or eliminate dust, noise or any other nuisance, which may occur. Plant emitting dust, smoke, excessive noise or other nuisance shall not be permitted.

### 1.13 DEFECTIVE WORK

Any defective work materials and also deviations from the working details in respect of setting out, correct lines and levels, verticality, sizes, thicknesses of members and/or any other dimensional variation of any kind whatsoever, shall be removed and reconstructed or otherwise

rectified without undue delay to the approval of the Employer and the Contractor shall be responsible for all additional costs incurred.

### 1.14 SITE CLEANING

The Contractor shall clean up the site and dispose all unwanted materials from the site every day and on completion of works to the satisfaction of the Employer. Any costs incurred by the Employer due to the Contractors failure to clean the site or remove equipment and machinery when required, will entitle the Employer to deduct the such costs from retention payments.

### 1.15 SAFETY OF ADJOINING EXISTING STRUCTURES

The Contractor shall take all necessary precautions during the excavation for the Works particularly those excavation which are adjoining existing buildings, Curb Stones, pavements and shall protect such structures 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 also he shall properly support all foundations, trenches, walls, floors, etc affecting the safety of the adjoining existing buildings

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. 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.

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

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. The Contractor shall keep the Employer informed as to 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 under this Clause

The Contractor shall save harmless and indemnify the Employer in respect of all claims, demands, proceedings, damages, costs, charges and expenses whatsoever arising out of or in relation to any such matters in so far as the Contractor is responsible under this Clause

### 1.16 OBVIOUS WORKS

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, Specifications or the Bills of Quantities.

### 1.17 WATER FOR THE WORKS

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, adapt and maintain temporary work as necessary and remove and make good at completion.

### 1.18 ELECTRICITY FOR THE WORKS

The Contractor shall make all necessary arrangements and provide all artificial lighting and power for the proper execution and security of the Works and its 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.

### 1.19 LEVELS AND REFERENCE POINTS

The Contractor shall satisfy himself that the existing ground levels as indicated in Contract are correct. Should there be any dispute regarding any levels, Contractor shall submit to the Employer a schedule of the levels considered to be in error, together with the values he believes to be correct. The ground relevant to the disputed levels shall not be disturbed until the Engineer's decision as to the correct levels is given.

The Contractor shall supply to the Engineer details of the value and location of the temporary benchmarks and reference points he proposes to use.

### 1.20 INTERFERENCE WITH ACCESS TO PROPERTIES AND APPARATUS

Before interfering with access to any property, the Contractor shall make adequate alternative arrangements for the occupiers.

The Contractor shall not obstruct access to any apparatus or utilities of any service or utility.

### 1.21 CONTRACTOR'S SITE AREA

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.

The Contractor shall take all steps necessary as directed by the Employer to minimise or eliminate dust, noise or any other nuisance, which may occur. Plant emitting dust, smoke, excessive noise or other nuisance shall not be permitted.

#### 1.22 SAFETY

The Contractor shall comply with industrial normal safety practices for working in or around the site

Contractor's workers should be provided with safety equipment in compliance with the acceptable industrial safety.

When working at Site the contractors should comply with Occupational Health and Safety (OH & S) standards to meet ISO45001:2008. OH & S refers to the conditions and factors that affect or could affect the health and safety of employees or other workers (including temporary workers and contractor's personnel), visitors, or any other person in the workplace. This includes

- a. Wearing of Proper Site clothing.
- b. Wearing of hard hats, gloves at working site.
- c. Wearing Safety Shoes at working sites.
- d. Maintaining a "First aid Kit" to attend to minor injuries that may occur during Site works.
- e. Providing Safety Sign boards near areas where a danger or public related health issue may occur.
- f. Providing Proper Barricading and Warning lights when an area such as an "excavated area is left open".
- g. Wearing of Safety Mask/Gas Protection Mask when working with Hazardous chemicals.
- h. And any other related safety precautions as per the site condition that may affect the health and safety of the workers or people involved in the workplace.

## 1.23 ENVIORENMENTAL PROTECTION

The Contractor shall take all necessary precautionary measures to ensure carrying out the works in accordance to acceptable environment norms.

### 1.24 SECURITY

The Contractor shall ensure that the site is secure during the period of work and shall be liable for any loss or damage sustained as a result of their failure to comply with this condition.

The Contractor shall provide and maintain, night lights, road sign boards, warning tapes etc.

Where the works are in close proximity to buildings, walls or other existing structures, the contractor shall take adequate measures to prevent any damage to such structures. In addition, before commencing work the Contractor shall submit details in writing to the Engineer's Representative of his proposed method of carrying out these measures and shall not commence operations until these are approved in writing.

### 1.25 PROTECTION

The Contractor shall cover up and protect the Works from the weather and from damage by his own or other workmen performing subsequent operations. He shall provide all necessary dustsheets, barriers and guard rails and clear away same at completion.

The Contractor shall take all reasonable and proper steps for the protection of all places on or about the Works, which may be dangerous to his workmen or any other persons or to traffic. The Contractor shall provide and maintain warning signs, red warning lamps and barricades as necessary in all such places.

### 1.26 SITE HOARDING

The Contractor shall provide a site hoarding at the boundary of the Site as required by the Local Authority bylaws and to the entire satisfaction of the Local Authority and the Consultant. The Site hoarding shall be maintained during the progress of the Works and shall be dismantled and cleared away upon completion.

The Contractor shall be responsible for ensuring the security of the Site, for protecting the same from trespass and providing all necessary watching and lighting in connection therewith.

#### 1.27 EXISTING SITE SERVICES

The Contractor shall follow up and obtain all the required information relating to any existing site services, telephone, electrical, water, drainage and the like on the site before commencing excavation. The Contractor shall be responsible for the protection of all existing services within the site and shall make good at his expense any damage to existing services resulting from his carrying out of the Works to the satisfaction of the Consultant and relevant authority. The Contractor shall be responsible for giving notice to the relevant authority where temporary or permanent re-routing or diverting of existing services is found to be necessary and shall complete same at his own expense to the Employer and respective Authorities' approval.

Where diversions of services as aforementioned are not required in connection with the permanent Works, the Contractor shall uphold, maintain and keep same in working order in existing locations.

### 1.28 SITE PROGRESS MEETINGS

During the course of the Works, Site progress meetings shall be held at fortnightly intervals for the purpose of co-ordinating the Contractor's works and to ensure that full compliance is maintained. Minutes of such Site meetings will be recorded, copies will be distributed to all persons concerned and full effect shall be given to all instructions contained therein.

The Contractor shall submit all reports as instructed by the Employer in connection with Site progress meetings and the day-to-day management of the Works.

## 1.29 SETTING OUT

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 building work commences.

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.

### 1.30 SIGN BOARD

The Contractor shall provide and maintain a sign board for the Site consisting of a timber framed block board panel.

## 1.31 CONSTRUCTION SCHEDULE AND EXECUTION PLAN

The Contractor shall prepare and submit to the Engineer for approval a construction schedule and an execution plan of how he plans to carry out the works including any temporary facilities, stock yards, etc., before the start of the work.

# 1.32 PERMANENT DRAINAGE, WATER AND ELECTRICITY CONNECTIONS

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.

#### 1.33 DISPOSITION OF EXISTING UTILITIES

Before commencing any construction work, the Contractor shall obtain from the various utilities Departments, Companies or Employer the location of any existing utilities on the Site. Active utility lines damaged during the course of construction operations shall be repaired or replaced as determined by the Consultant at the Contractor's expense. Immediately an active utility line is damaged the Contractor shall notify the Employer and the utility owners by telephone and in writing.

Inactive or abandoned utilities encountered during construction operations shall be removed, plugged or capped. The location of such utility shall be noted reported in writing to the Employer.

#### 2. GROUND WORKS

### 2.1 NATURE OF SOIL

The Contractor is to visit the Site and ascertain for himself the condition of the surface of the ground and the type of substrata likely to be encountered in the excavation of the proposed development.

## 2.2 ORIGINAL LEVELS

A survey of the existing site shall be made and the results to be submitted to the Employer before commencement of the work.

## 2.3 EXCAVATION

The Contractor shall perform all excavation as required for all work under this Contract as indicated on the Drawings. Excavation shall be carried out in all materials and by whatever means are necessary accurately to the lines and levels shown on the Drawings, or as ordered by the Consultant.

No blasting of any kind will be permitted. Except where indicated on the drawings to remain undisturbed, the Contractor shall remove all topsoil, plants, roots, vegetation, rubbish, rocks, etc. from areas lying within limits of structures and from areas to receive fill, embankment, surfacing, road construction, concrete or other construction.

Footings and foundations shall rest on firm undisturbed soil free from loose materials.

### 2.4 FINISH OF EXCAVATION AND INSPECTION

The Employer shall inspect all the excavations before commencement of further work and the Contractor shall notify the Employer when excavations are ready for inspection.

### 2.5 DEWATERING

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 form 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. 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. Dewatering shall be carried out with liaising to relevant local government authority and as per the government regulations.

## 2.6 SHEETING AND SHORING

Excavation for trenches shall be sheeted, braced and shored as necessary to prevent caving or sliding.

### 1. CONCRETE WORKS

### **3.1 CONCRETE**

#### **3.1.1 CEMENT**

Cement shall, unless otherwise stated, be Ordinary Portland Cement of an approved brand and shall comply with the requirements and shall satisfy the tests contained in BS12.

Cement shall be of recent manufacture and shall be used within a period of 6 months of manufacture.

### 3.1.2 NORMAL WEIGHT AGGREGATE

Fine aggregate for use in the production of concrete shall be of river sand and shall conform to the requirements of BS 882. Its grading shall be to Zones 1, 2 or 3 as defined in BS 882 and shall have not more than 10% retained on the 5 mm sieve.

Coarse aggregate for use in the production of concrete shall be composed of crushed gravel or stone. It shall conform to the requirements of BS 812 and shall have not more than 10% passing the 5 mm sieve.

Sources of aggregate shall be to the approval of the Consultant and samples of aggregate from the proposed sources shall be submitted to the Consultant at least 28 days before intended use. No new sources of aggregate will be permitted without prior approval of the Consultant.

The aggregates shall be free from salt and other organic impurities and shall contain not more than 0.03% by weight of chlorides nor 0.4 % by weight of sulphates.

Any aggregates which fail to meet these requirements shall be rejected and removed from the site, following which the Contractor's sources of supply shall be re-examined for suitability.

### **3.1.3 WATER**

Water used for mixing and curing concrete or washing aggregate shall not contain vegetable matter, acid, sulphates, chlorides or other salts in such quantities as to cause efflorescence on the face of the concrete nor to effect adversely the setting time or strength of the concrete nor to instigate electrochemical corrosion of the reinforcement. Potable water containing not more than 10 parts per million dissolved solids shall be used for all reinforced concrete work.

### 3.1.4 MIX PROPORTIONS

The Contractor, having knowledge of the source and type of cement, aggregates, plant and method of placing he intends to use for the aggregate/cement ratios and water/cement ratios which he considers will achieve the strength requirements specified and will produce a workability which will enable the concrete to be properly compacted to its full depth and finished to the dimensions and within the tolerances shown on the Drawings, shall be responsible for designing his concrete mixes within the following limitations. The aggregate/cement ratios and the water/cement ratio shall not exceed the upper limits specified below. Furthermore, the quantity of cement per cubic metre of concrete shall in no case be less than the minimum specified:

Normal	Characteristic		Maximum	Maximum	Kg of ce	ement	per
weight	compressive strength		aggregate	free wate	er cubic n	netre	of
concrete	of cubes at 7/28 days		size (mm)	cement ratio	compacted	d concr	ete
grades							
	7 days	28 days			Max	Min	•
25	20	25	20	0.47	550	350	

As soon as possible after commencement of the Contract, the Contractor shall prepare such trial mixes as required to satisfy the Consultant that the specified concrete strengths will be obtained using the materials and mix proportions in accordance with the above clauses. The proportion of cement shall be increased, if necessary, to obtain the strengths required.

From each trial mix, six preliminary Test Cubes shall be made and tested two at 7 days and four at 28 days, the test at 7 days being intended to give an early indication of possible variation from the required strength. If the difference between the highest and lowest results from any one trial mix is more than 15 per cent of the average of the strength test results, the test is to be discarded and a further trial mix made, unless all test results so obtained are above the required strength.

#### 3.1.5 BATCHING AND MIXING OF CONCRETE

All concrete shall be batched by weight and mixed mechanically. Hand mixing shall be allowed if written permission has been given by the Employer.

## Mixing Concrete:

Mixing shall be done in a mechanical mixer. The mixer drum shall be free of hardened mortar adhering to its inner surface. Before mixing commences the drum shall be primed by washing with rich cement grout. A measured quantity of dry coarse aggregate shall be first placed in the hopper. This shall be followed with the measured quantity of sand and then cement. The skip shall be raised, and the dry material slipped into the drum.

The dry materials shall be mixed for at least four turns of the drum after which the correct quantity of water shall be added gradually while the drum is in motion, to ensure even distribution of the materials.

The total quantity of water for mixing shall be introduced before 25% of the mixing time has elapsed and shall be resulted to achieve the specified water cement ratio. The complete contents of the mixer shall be emptied before recharging. When the mixer is closed down for the day or for any period exceeding 20 minutes, the drum shall be flushed clean.

Concrete mixture shall be constantly controlled to obtain required workability and mix strength. Mixing time for each batch shall be not less than 3 minutes.

### 3.1.6 PLACING

Concrete shall be conveyed from the mixer to its final position in any suitable manner, provided there is no segregation, loss of ingredients or contamination. It shall be placed in its final position before initial setting takes place and within 20 minutes of the addition of the water to the mixer. However, when agitating equipment is used to convey concrete such as in ready-mixed concrete, the elapsed time between the addition of the water and placing may be increased to 45 minutes.

All vibrations, compaction and finishing operations shall be completed within 15 minutes from the time of placing the concrete in it final position.

## **3.1.7 TESTING**

The frequency of testing shall be as noted in the clauses of this section. The Works Test Cubes shall be made at least once for each individual part of the structure.

At least six cubes shall be made at one time. Three of the six cubes are to be tested at 7 days. The remaining three cubes are to be tested at 28 days, and their average strength must not fall

below the minimum strength specified and the lowest test result shall not be more than 20% below the average of the four cubes.

When the result of the 7-day test is unsatisfactory, The Contractor may elect to remove and replace the defective concrete without waiting for the 28-days test. If the result of the 28-days test is unsatisfactory, all concreting shall be stopped at the Contractor's expense and shall not proceed further without written permission from the Employer.

### **3.1.8 CURING**

Freshly placed concrete shall be protected from rain, dust, chemical attack and the harmful effects of heat, wind, flowing water, vibrations and shocks. This protection shall continue until the concrete is sufficiently set such that it can no longer be damaged by these factors which shall not be less than 24 hours after the time of placing.

Concrete shall be cured for at least 7 days or longer if instructed.

Timber formwork covering the concrete shall be moistened with water at frequent intervals to keep it from drying during the curing period. Metal formwork exposed to the sun must be shaded from its direct rays, painted white or otherwise protected during the curing period.

### 3.1.9 FORMWORK

The Contractor shall supply, design, erect, strike and remove the formwork and be entirely responsible for its stability and safety so that it will carry the wet concrete and all incidental loadings and preserve it from damage and distortion during its placing, vibration, ramming, setting and curing. It shall be so constructed as to leave the finished concrete to the dimensions shown on the Drawings and of a material capable of providing the surface finish specified. In any event, the maximum permissible deflection under all loads shall not exceed 2mm or 1/600 of the free span, whichever is less.

Formwork shall be constructed so as to prevent the loss of any liquid from the wet concrete and to be removable without shock to the partially set concrete. When the concrete is to be vibrated, all wedges must be nailed so as to prevent slipping or distortion.

Wherever required and prior to placing of the reinforcement the internal surfaces of all formworks shall be treated with an approved mould oil.

The Contractor is entirely responsibility for the safe removal of formwork and all other temporary works.

## 3.2 REINFORCEMENT

Reinforcement shall be high yield deformed bars or mild steel complying with B.S. 4449 or welded wire fabric complying with B.S. 4483, except that the characteristic strength for mild steel reinforcement shall be 250N/mm<sup>2</sup> and for high yield steel shall be 415 N/mm<sup>2</sup>.

Reinforcing bars are to be stored clear off the ground and shall be truly straight. Suitable covering shall be provided to protect against windblown sulphates, chlorides and other deleterious matter.

All steel is to be totally free from dirt, paint, loose rust or scale and is to be thoroughly brushed and cleaned after positioning and immediately prior to concreting.

Lengthening of bars by welding and re-bending of incorrectly bent bars will not be permitted.

Unless otherwise stated splices in reinforcing bars shall be formed by lapping. Such laps in bars in any member shall be staggered. Except as otherwise indicated on the Drawings, the minimum overlap of lapped splices shall be 40 bar diameters or 300mm, whichever is greater.

The steel is to be fixed in position exactly as indicated and the bars are to be securely wired together with 1.6 or 1.4mm soft iron wire or approved spring steel slips wherever necessary to prevent any displacement during concreting. Spacers, chairs and the like, temporary or permanent, are to be used as required to ensure that the steel has the exact amount of cover indicated. No permanent spacers may show on a surface where a fair faced concrete finish or brushed aggregate finish is required.

Unless otherwise indicated, the minimum cover to the reinforcing bars and to binding wire shall be as follows:

POSITION	COVER mm
Main bars in columns	40-45
Main bars in floor slabs and soffits of roof slabs	30
Main bars in top of roof slabs	30-35
Bars in top ground slabs	30-35
Bars at faces in contact with soils	50-55
Clear cover in beams	35-40

The Contractor is to ensure that no steel is displaced from its position during the placement of concrete.

All reinforcement to be sprayed with water two hours before concreting commences.

### 3.3 MORTAR

### 3.3.1 Description

Mortar for bedding kerbs, channels, cover frames etc shall be 1:3 cement: sand mortar. Mortar for grouted stone pitching shall have 5% by weight of hydrated lime added to it. Mortar for use with blockwork shall be 1:4 cement: sand mortar.

### 3.3.2 Materials

Cement shall be Portland cement to BS12 and sand shall be a natural sand or crushed natural stone or a combination of both as specified in BS 1200.

## **3.3.3 Mixing**

Mortar shall be mixed thoroughly either by hand or mechanically until its colour and consistency are uniform. The constituent materials shall be accurately gauged, allowance being made for bulking of sand. Mortar shall be made in small quantities only as and when required. Mortar which has begun to set or which has been mixed for a period of more than one hour shall be discarded.

#### 4. MASONRY AND RENDERING

#### **4.1 MATERIALS**

#### **4.1.1 Cement**

Ordinary Portland Cement shall be used as described under concrete work. White or coloured cement shall comply with the physical requirements of B.S 12.

#### 4.1.2 Water

Water shall be as described under Concrete Works.

#### 4.1.3 Sand

Sand for block manufacturing may be local white coral sand free from salts, debris & organic matters. Sand for plastering shall be river fine sand, free from silt, quality to be approved by the Employer.

For use in plastering, sand is to comply with the requirements of BS1198 Table 1. Sand for masonry mortar shall be coarse sand.

#### 4.1.4 Blocks

Blocks shall be solid blocks manufactured with cement and sand with no defects. Local white sand may be used for the fabrication of cement blocks. The average compressive strength for the gross area of hollow blocks shall be not less than 25 kg/cm<sup>2</sup> and the minimum block shall be 20 kg/cm<sup>2</sup>.

## **4.2 MORTAR**

Mortar shall consist 1 part cement to 4 parts of sand by volume. For work not in contact with earth or sand, one part lime may be added to the mix. Mortar for pointing facing concrete blocks shall be prepared using white cement. When blockwork is constructed below ground level sulphate resisting cement shall be used.

Mixing shall be carried out by means of an approved mechanical mixer. The mortar shall be mixed dry until a uniform mix is obtained. Sufficient water shall then be added and the mixing continued until a homogenous mix is obtained. Excess water shall not be used in the mix.

All mortar shall be used before the initial set has taken place and on no account shall mortar which has commenced to set be remixed with water or new batches and used.

### **4.3 WORKMANSHIP**

Generally, in accordance with BS 8000.

Blockwork shall be set out and built to the respective dimensions, thicknesses and heights shown on the Drawings and/ or as instructed in writing by the Employer

Blocks shall be laid in true and regular courses on a full bed of mortar of 10 mm average thickness, exclusive of any key in the jointing surfaces of the blocks. Sufficient mortar shall be

used in bedding and jointing to ensure that all keys are solidly filled. Where blocks abut against concrete each third course shall be tied thereto by means of approved galvanised steel ties.

All horizontal joints shall be properly level. The Vertical joints shall be properly lined and quoins, jambs and other angles plumbed as the work proceeds.

All walls shall be plumbed vertical.

## 4.4 PROTECTION OF FINISHED BLOCKWORK

The Contractor shall ensure that the finished blockwork walling is not damaged by subsequent operations.

The Contractor is to protect newly or partially built walling against it being dried out too rapidly by the sun's heat or from any other adverse climatic effects and is to follow the Employer's instructions in this matter.

## 4.5 LINTELS

Prefabricated lintels shall comply with the requirements of B.S 5977, Part 2. All lintels shall be bedded on cement and sand mortar and the Contractor shall allow for a minimum bearing at each end of 150 mm.

#### 4.6 PREPARATION OF SURFACES FOR PLASTERING

Surfaces to receive plastering, beds and the like are to be dry brushed to remove all loose particles, dust, laitance, efflorescence and the like, any projecting fins on concrete surfaces shall be hacked off. All traces of mould oil shall be removed from concrete surfaces by scrubbing with water containing detergents and rinsing with fresh water.

# 4.7 PLASTERING

Internal plastering is to comply with BS 5492.

The plaster for use masonry wall is to be composed of 1 part cement, and 4 parts of sand, and is to be applied the finished stated thickness.

Plaster or render is to be mixed in clean buckets and gauge boxes. All tools are to be kept clean and fresh plaster or render is not to be contaminated with set plaster or render.

The working time permissible after the addition of water to the plaster or render mix is to be 30 minutes. Mixed plaster or render that has exceeded this limit is to be removed from the site and not re-tempered and used in the works.

The Contractor is to ensure that before plastering or rendering commences the junctions between differing base materials are reinforced with a strip of galvanised expanding metal lath secured at both edges. All angle beads and the like shall also have been fixed.

All Plastering shall be executed in a neat workmanlike manner and made good to wood frames, skirting, pipes, fittings and the like.

Plasterwork is to be finished with a smooth, trowelled face, free from blemishes and fit to receive decoration. Render is to be finished with a wood float.

#### 5. ROOFING AND WATERPROOFING

#### 5.1 ROOFING

Roofing sheets, flashings, ridge capping and gutters shall be Zinka alumina natural colour roofing sheet unless otherwise specified. All other material to be used in the roofing work shall be good quality and approved type, if nonstandard type to be it is subject to Employer approval.

Workmanship shall be to the highest standards and codes of practice.

The Contractor is to be solely responsible for providing a roof that is completely watertight and corrosion resistant and able to withstand expansion extremes likely to be encountered with temperature fluctuations. The Contractor is to ensure that the completed roof will be able to withstand normal pedestrian traffic at occasional intervals without sustaining damage of any description.

#### 6. METALWORK

### **6.1 GENERAL**

## 6.1.1 Material

Shape of steel shall be precise and straight and free of injurious scratches and rust. All steel sections shall be of strength class 43 A.

Dimensions of steel section and tolerance of dimension shall confirm to standard dimensions of steel regulated in ASTM or BS standard.

# **6.2 FABRICATION**

Section of each material shall be cut perpendicular to axis unless otherwise specified in the drawing or by the Consultant.

Cut section shall be free of any noticeable defect.

Deformation caused by cutting shall be corrected.

Those directed in the drawing shall be chiseled finish and completely attached.

Material shall be checked for bend, distortion, warp, etc. before fabrication.

### 6.3 QUALITY OF WORK

Metal work shall be fabricated carefully and accurately to ensure compliance with design and performance requirements, using types and grades of metal as specified for the purpose. The finished work must be free from distortion and cracks. Proprietary products shall be used to the recommendations of the manufactures.

Steelwork shall be fabricated and erected by competent, experienced persons and shall generally conform to B.S. 449: Part 2 - "Specification for the use off structural steel in buildings."

### 6.4 SHOP ASSEMBLY

The components parts shall be assembled in such manner that they are neither twisted nor otherwise damaged and shall be so prepared that the specified cambers if any are provided.

All tubular members shall be sealed so as to prevent the access of moisture to the inside of the members.

### 6.5 BOLTING

Bolts shall be of sufficient length to have at least one complete thread projecting beyond the outer face of the nut when tightened up. Washers shall be provided in all cases.

Shape of bolts, nuts and washers shall be in accordance with the requirement of BS4190 and BS 3692.

Quality of bolt shall be SC 34 A

Spacing of bolt holes shall be as directed in the following table.

Diameter of Bolt	Standard pitch	Minimum Pitch	End Distance	Edge Distance
12	50	50	30	25
16	50	40	40	30

Minimum pitch and end distance for light weight steel shall be more than 3 times and 2.5 times a bolt diameter respectively.

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.

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.

Rolled edge around a hole shall be removed.

Position of a bolt hole shall be precise so that the center of all holes aligns.

Nuts shall be protected against loosening by concrete covering, double nuts or other proper means.

Shear bolt shall be provided with washers to keep the nut outside of grip.

### 6.6 WELDING

### 6.6.1 General

48

Arc welding rod shall conform to materials to be welded, and position.

Steel shall normally be welded by the metal arc process conforming to B.S. 5135. Other methods shall be subject to the approval of the Employer.

Welding of stainless steel, aluminium alloys, copper alloys, bronze etc. and brazing shall conform to the appropriate British Standard where specified, approval and testing of welders and welding procedures shall be as B.S. 4870, B.S 4871 and B.S. 4872. Surfaces to be welded shall be dry.

When rain is falling or during periods of high wind, necessary precautions shall be taken to protect outdoor welding areas.

Welding shall be so carried out as to ensure that:

- 1. Welds will be of good clean metal deposited by a procedure, which will ensure uniformity and continuity of work.
- 2. The surfaces of the weld will have an even contour and regular finish and will indicate proper fusion with the parent metal.

Welder shall have an authorize qualification in Maldives and approved by the Consultant.

# 6.6.2 Welding Machine

Arc welding machine shall be alternate or direct current type which provides sufficient and adequate current.

The field arc welding machine shall be provided with remote control for easy control of current.

## 6.6.3 Preparation

Welding shall be done as much down wards as possible using a jig such as rotary frame.

Welding rod shall be always kept in a dry area and if necessary dried by drying equipment.

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.

#### 6.6.4 Fabrication.

Welding edge shall be smoothed by automatic gas cutting or other proper finishes.

## 6.6.5 Built-up

Jig shall be used to keep mutual position of materials in assembly.

49

Temporary bolt hole for assembly shall be bored with approval of the Consultant

Proper amount of construction, predistortion or restrain shall be added to welding parts to attain precise finish dimensions and shape.

Welding materials shall be properly met in fillet welds.

#### 6.6.6 Tack

Short bead shall be avoided for tack welding. The minimum length of tack welding shall be as follows. Plate thickness under 3.2mm Bead length over 30mm, from 3.2 to 25mm-40mm.

The end of joint, corner angle, beginning and ending point of final welding shall be avoided for tack welding.

## 6.6.7 Work

Type of welding rod, rod diameter, current, voltage and welding speed shall be selected in accordance with type of welding work.

Order of welding and movement of rod shall be determined so as that there shall be no deformation after welds.

Welding shall be carefully done in concealment in raining and strong wind.

### 6.6.8 Finishes

Surface of welds shall be as smooth as possible, and size and length of welds shall not be less than designed dimensions.

Reinforcement of weld shall not exceed 0.1s + 1mm (s: Designated size) in filled welds.

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.

Crater at the end of bead shall be carefully heaped up and slag, sputter, etc. shall be completely removed after welds.

# **6.6.9 Safety**

Safe scaffoldings shall be provided for the field welds work.

Welding facilities shall be such that there shall be no electric leakage of electric shock. There also shall be sufficient protection for fire.

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.

## 6.6.10 Inspection

Welding parts shall be inspected before, during after welding in accordance with work schedule.**6.6.11 Correction** 

Welding parts having injurious defects shall be removed and re-welded.

When deposited metals gets cracked, at least 50mm from the edge of crack shall be cut off and re-welded.

When base metals gets cracked, it shall be replaced

Under cut parts shall be corrected by attaching deposited metal.

Injurious deformation left on welding materials shall be corrected or reinforced.

## 6.6.12 Transportation

While transporting materials, care shall be taken for preventing from defect.

# 6.6.13 Erection and Field Painting

Material shall be stored on flat surface in order not to get distortion, twist or other defects. Correction shall be made to those distortion or twisted before erection.

Connection of materials by bolts, etc. shall be made after distortion on plumb is thoroughly corrected.

Temporary bracing or other reinforcement shall be placed to resist wind pressure or other loads erection.

Care shall be taken on all facilities so that there is no accident.

### 7. ALUMINUM DOOR AND WINDOWS

#### 7.1 General

All windows and doors are to be constructed by approved specialist suppliers of light, medium or heavy section to suit location, local building regulations, and particular requirements noted on the drawing as to weight and profile.

All frames should be made to fit the actual openings with a 5mm clearance all round. Discrepancies in overall width or height exceeding 5mm will not be allowed and the frames will be rejected in such cases. Any small discrepancies shall have the gaps suitably backed and then filled with gun-applied water repellent mastic sealant.

All nuts, bolts, washers and screws used for assembly and fixing shall be of adequate strength for their purpose within the design and shall be stainless steel grade 18/8.

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 or ASTM C920.

All spliced joints between mullions will be sealed with an approved silicone product, compatible with other sealants and packings used.

All ironmongery shall have the same finish as the frames and shall be approved by the Consultant.

# 7.2 Side hung windows, doors and ventilators

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.

The bottom sections for hinged doors must be capable of being adjusted vertically if necessary. The gap between the bottom section and the floor should be covered with a pair of special splay-type sections.

The shutters of the windows and doors should be assembled with concealed corners of high rigidity. Hinges should be concealed within the sections.

Hinges shall be anodised aluminium 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.

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.

# 7.3 Workmanship

Take site dimensions and submit Drawings as detailed elsewhere in these documents, showing elevations, plans and full-size sections, proposed methods of fixing, proposed methods of forming joints, any proposals for fabricating large components in more than one piece.

Mechanical joints shall be tight with no visible gaps. Where screw heads will be visible after component is fixed or raised screw heads would interfere with any moving part of component, use countersunk machine screws unless specified otherwise. Mechanical joints of components which will be located externally shall be bedded in bedding compound, including all mating surfaces, cleats and other fixings.

#### 8. PAINTING

### 8.1 GENERAL

The painting materials shall be obtained from an approved manufacturer and shall be supplied ready mixed in the manufacturer's sealed and branded containers.

Each container shall bear the maker's brand name, identification of contents and directions for its proper use. All material must be thoroughly stirred before use.

All painting work must be carried out according to paint manufacturer's instructions unless otherwise directed by the consultant.

Appropriate primers and under coats shall be used on all surfaces to be painted.

All sealers, primers, undercoats and thinners shall be the products recommended by the manufacturers of paint used for the finishing coat.

The paint type shall be Nippon or similar brand and the Consultant shall approve the colour before placing the order.

### **8.2 PAINT SPECIFICATION**

For interior apply Acrylic or similar alkali resisting primer sealer, apply putty grind by sanding to level uneven surfaces, finish with two coats of matt finish with acrylic copolymer emulsion paints.

For exterior apply Acrylic or similar waterproofing quality primer sealer, apply texture coat, and apply two coats of finish as per manufacturer's specifications. The exterior shall have textured paints finished appearance as granite finish.

Marine grade timber varnish for all timber doors, cupboard doors and other exposed timber members.

For surfaces below ground, apply bituminous paint.

### **8.3 MATERIALS**

## 8.3.1 Priming Paints

Priming paints shall be the primer recommended by the manufacturer of the finishing paint or:

- ♦ For woodwork -lead-based or priming paint to comply with B.S 2521 and 2523.
- For steel work-red oxide priming paint to comply with B.S 2524.
- For galvanized, zinc or aluminium work- grey zinc chromate priming paint.
- For concrete, block work, plaster, plasterboard and the like- alkali priming paint.

### 8.3.2 Undercoating

Undercoating shall be:

♦ Zinc oxide based undercoating paint.

- ♦ White lead based undercoating paint in accordance with B.S 2525-7. Colours shall approximately match the finishing paint.
- Synthetic alkyd-based undercoating in accordance with the recommendations of the paint manufacturer.

## 8.3.3 Finishing Paints

Finishing paints shall be as otherwise specified.

## **8.4 WORKMANSHIP**

#### 8.4.1 General

The Contractor shall carry out all tests necessary for determining the colours and shades of the finishes and the appropriate methods of application. Sample panels shall be completed in accordance with Consultant's instructions.

All work shall be performed in accordance with the manufacturer's written instructions.

Before application of any paint or finish all surfaces shall be cleaned, dried and prepared as specified hereinafter, all to the Consultant's approval, no work shall commence until this approval is given in writing to the Contractor.

No exterior or exposed painting shall be carried out under adverse weather conditions such as rain, extreme humidity, dust storms, high temperature of surface etc.

All coating shall be well applied, leaving no sags, laps, brushes or other defects. Each coat must thoroughly dry before next coat is applied. All work must be carefully cut into a true line and left smooth and clean.

# 8.4.2 Painting to Concrete, Block or Plaster

Concrete, blockwork and plaster surfaces to be painted or decorated shall have all cracks cut out and made good to the satisfaction of the Consultant.

Plasterboard surfaces shall have taped joints and the surface puttied to the satisfaction of the Consultant. The surfaces shall be completely dry and shall be brushed free of impurities immediately prior to the commencement of the painting work.

Efflorescence shall be completely removed by rubbing down with dry coarse cloths followed by wiping down with damp cloths and allowed to dry. All surfaces shall be rubbed down with fine glass paper and brushed free of dust before applying any form of decoration.

Concrete blockwork and plastered surfaces which are to receive paint shall be given one thin coat of oil putty and allowed to dry for at least two days. The surfaces shall then be rubbed down with fine glass paper and given a second thin coat of oil putty and when completely set shall be rubbed down again with fine glass paper before applying the painting system.

Emulsion paint shall be applied by brush or roller and shall consist of primer and two full coats of paint.

Oil paint shall be applied by brush or roller and shall consist of a priming coat, two undercoats and one finishing coat of paint.

## 8.4.3 Painting to Metalwork

Steelwork delivered to the 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.

Steelwork delivered to Site primed shall be cleaned of impurities and damage to the priming paint and made good with priming paint.

Galvanized metalwork 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.

Metal which is 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.

### 9. ELECTRICAL WORKS

#### 9.1 General

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 Male', Republic of Maldives.

All materials to be used in the Works shall be of standard make and shall bear the certification marks of local authorities. All materials shall be approved by the Consultant before use in the Works.

Earthing shall invariably be done in the presence of the Consultant or his representative. All the conduits shall be continuously earthed. Check nuts shall be provided at the point where the conduct enter the I.C. box and junction box.

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 have to be obtained and see that they are passed by him.

The Contractor shall be responsible for all necessary permits, approvals, fees. deposits etc., required to complete the Electrical works in accordance with the Contract.

Ceiling fans shall be KDK brand and switches and sockets etc shall be ABB brand.

## 9.1.1 Scope of work

The work consists of furnishing all tools, plants, labour, materials and equipment and performing the internal electrical Works comprising of.

- a) Light and power wiring
- b) Fans and fixtures
- c) Wires and Cables

- d) Distribution Fuse gear
- e) Earthing System

#### 9.1.2 Standards

The latest relevant British Specifications, and I.E. recommendations shall be applicable and be followed for the equipment specified herein.

## 9.1.3 Specifications

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 Maldives Electricity Bureau. 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. 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, levelling material, insulation, tape, solder, etc. and all such required for complete installation as intended by the Specifications.

## 9.1.4 Shop Drawings

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 carries out, well in advance of the actual execution of work, by the Contractor to the satisfaction of the Consultant. For this purpose, the Contractor shall prepare and submit shop drawings and obtain prior approval from the Consultant before commencement of the work.

No work should be carried out without the availability of approved shops drawings. These shop drawings shall clearly depict the load balancing chart of each Distribution Board. 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.

# 9.1.5 Guarantee

The Contractor shall furnish written guarantee in triplicate of the manufacturer for successful performance of each equipment. Such guarantee shall be for replacement, which may be found defective in material or workmanship. The guarantee shall cover a minimum period of 12 months effective from the date of completion certificate.

# 9.1.6 Test Reports

The Contractor shall be responsible for the submitting the test reports/certificates and get the installation inspected passed by the State Electric Company.

## 9.2 Conduit and Conduit Accessories

The main wiring for the building will be taken inside the slabs through a conduit system. Before concreting the slab, the Contractor should produce a detailed conduit layout drawing and obtain approval from the Consultant. A system of access for power and communication lines below the carpet flow should be provided.

## 9.2.1 Conduit Pipe

The conduit for the wiring go flights, socket outlets and other systems shall be made of PVC confirming to BS 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 Wires, Cables and Cords	

### 9.2.2 Wires & Cords

The wires and 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.

- (a) For light or fan point wiring with 1.5 mm square or as specified in the BOQ.
- (b) For light circuit wiring with 2.5 mm square or as specified in the BOQ.
- (c) For power plug 15A wiring with 4mm square or as specified in the BOQ.

### 9.2.3 Installation Instructions

All wiring shall be continuous between terminations and use of connectors or joints is not be allowed. Spur and tee connections are strictly prohibited.

Manufacturers recommended lubricant shall be allowed to facilitate pulling of wires. Use of any kind of oil and soap is prohibited.

## 9.3 Wiring Accessories

## 9.3.1 Switches

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 or four gang with integral built in moulded plastic face plate.

Weatherproof switches shall conform to B.S. standard.

### 9.3.2 Switch Socket Outlet Units

Switch & socket units shall be single, pole, 3 pin rated 5A. 15A or 20A, 25OV, 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.

## 9.4 Light Fixtures

## 9.4.1 General

The description of light fixtures is given in the Bills of Quantities, and stated on the Drawings, and all relevant material are described in this Section. The determination of quality is based on certified photometric data covering the coefficient of utilisation, light distribution curves, construction material, shape, finish, operation, etc.

The Contractor shall submit samples of each, and every lighting fixture specified for approval of the Consultant.

Outdoor lights shall be weatherproof and is subject to the approval of the Consultant.

## 9.4.2 Fluorescent Light Fixture

All the light fixtures shall have lamps and electronic ballast's of the wattage specified. The fluorescent lamp shall be either ft - 18 watts or 4 - 35 watts and the colour shall generally be cool daylight in the order of preference or as mentioned specifically. The fluorescent lamps shall be Philips to BSS 1853 or equivalent 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.

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 ')6 watts ballast. The ballast shall be noiseless in operation without any whistling sound. the manufacture shall be called upon to guarantee a trouble-free life of 3 years, effective from the date of completion certificate.

The starters shall have radio-interference suppressers.

The internal wiring of the light fixtures shall be carried out at manufacturers factory with heat resistance wires of size not less than 1.5 mm square.

The louvers of light fixtures shall be made of anodized aluminium and/or moulded plastic. The diffusers shall be made of acrylic perspex.

All the lighting fixtures shall be suitable for local climatic conditions.

contractor to design and submit the single line diagram of the L.T. switch board

## 9.4.3 Earthing

The switchboard shall be effectively earth by means of a copper strip of 25mm x 3mm (1" x 1/8") cross -section bolted to connections near the bottom of the switchboard.

### 9.4.4 Accessories

Designations labels, lifting lug, 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.

# 9.5 Testing

## 9.5.1 Tests

The following tests shall be conducted on each completed switchboard

#### Type Tests

(a) Temperature rise test

- (b) Mechanical endurance test
- (c) Making/Breaking Capacity test

## **Routing Test**

(a) 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.

## 9.5.2 Installation Instruction

The Switchboard shall be fixed firmly on the floor in perfect line, plumb and level position. All incoming and outgoing cable connections shall be made from the bottom including Earth connections.

#### 9.6 Distribution Board

The distribution boards shall be either free standing, cubical type or wall mounting type suitable for recessed mounting Each distribution board (d.b.) shall be tropical in design, fully dust and vermin proof and liquid repellent.

Section V Drawings

**Section VI Bill of Quantities** 

**Section VII Additional Information** 

PART 3. CONTRACT

**Section VIII – General Conditions** 

### **General Conditions**

## 1. General Provisions

#### 1.1 Definitions

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

- 1.1.1 **"Contract"** means the Contract Agreement, these Conditions, the Specification and the Drawings and Schedules and the further documents if any, which are listed in the Contract Agreement
- 1.1.2 "Technical Specification" or "Specification" means the document entitled specifications, as included in the Contract, and any additions or modifications to the specification in accordance with the Contract. Such document specifies the works and employer's requirements in respect of design to be carried out by the Contractor if any.
- 1.1.3 **"Drawings"** means the Employer provided drawings of the Works as included in the Contract and any additional and modified drawings issued by the Employer in accordance with this Contract.
- 1.1.4 "Employer" means Male' Water & Sewerage Company Pvt. Ltd or MWSC.
- 1.1.5 **"Contractor"** means the person named in Appendix as Contractor and the legal successors in title to this person, but not (except with the consent of the Employer) any assignee.
- 1.1.6 "Party" means the Employer or the Contractor as the context requires
- 1.1.7 "Commencement Date" means the date notified under Sub Clause 5.1
- 1.1.8 "Day" means a calendar day.
- 1.1.9 "Time for Completion" means the time for completing the Works as stated in the Bid Form (or as extended under Sub-Clause 5.3), calculated from the Commencement Date.
- 1.1.10 "Cost" means all expenditure properly incurred (or to be incurred) by the Contractor, whether on or off the Site, including overheads and similar charges, but does not include profit
- 1.1.11 **"Site"** means the place where the Works are to be executed and such other specific areas as may be specified in the Contract as forming part of the Site.
- 1.1.12 "Country" means the country in which the Site is located
- 1.1.13 "Contractor's Equipment" means all apparatus, machinery, vehicles, facilities and other things required for the execution of the Works but does not include Materials or Plant.
- 1.1.14 "Employer's Liabilities" means those matters listed in Sub-Clause 4.1

- 1.1.15 **"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
- 1.1.16 "Materials" means things of all kinds (other than Plant) intended to form or forming part of the permanent work.
- 1.1.17 **"Site"** means the places provided by the Employer where the Works are to be executed, and any other places specified in the Contract as forming part of the Site.
- 1.1.18 "Variation" means a change to the Works which is instructed by the Employer under Sub-Clause 8.1.
- 1.1.19 **"Works"** means all the work and design (if any) to be performed by the Contractor including temporary work and any Variation
- 1.1.20 **"Performance Certificate"** means the certificate issued by the Employer to the Contractor stating that his obligations have been completed, which the Employer shall issue within 28 days after the expiry of the Defects Liability Period.
- 1.1.21 "Defects Liability Period" means the period for notifying defects in the Works as specified in the Appendix
- 1.1.22 **"Taking Over Certificate"** means a certificate issued in accordance with Clause 6 [Employer's Taking Over]

# 1.2 Interpretations

Words importing persons or parties shall include firms and organizations. Words importing singular or one gender shall include plural or the other gender where the context requires.

## 1.3 Law

This Contract is governed by the laws of Maldives.

## 1.4 Limitation of Liability

The Contractor recognizes the absence of contractual entitlement to pursue damages or reparation beyond the specified scope in this document. The scope pertains exclusively to instances allowing the Contractor to seek an extension of the completion date.

The Contractor concedes the Employer's absolute authority to dismiss any fiscal demands, encompassing miscellaneous charges like idle fees. The Contractor's sole recourse resides in contract termination as outlined in the document's General Conditions.

# 2. The Employer

#### 2.1 Provision of Site

The Employer shall provide the Site and right of access thereto at the times stated the Appendix.

# 2.2 Applying for Permits

The Employer shall, if requested by the Contractor, assist him in applying for permits or approvals which are required for the Works.

# 2.3 Employers Instructions

The Contractor shall comply with all instructions given by the Employer in respect of the Works including the suspension of all or part of the Works.

### 3. The Contractor

# 3.1 General Obligations

The Contractor shall execute and complete the Works properly in accordance with the Contract and the Employers instructions and shall remedy any defects in the Works to the satisfaction of the Employer.

## 3.2 Performance Security

The Contractor shall obtain at his cost, a Performance Security for proper performance in the amount and format stated in the Appendix. The Contractor shall deliver the Performance Security to the Employer no later than 5 days after receiving the Letter of Award and shall be in the format approved by the Employer.

The Contractor shall ensure that the Performance Security is valid and enforceable until the Contractor has executed and successfully completed the works. If the terms of the Performance Security specify its expiry date, and the Contractor has not become entitled to receive a Taking Over Certificate by the date 30 days prior to the expiry date, the Contractor shall extend the validity of the Performance Security until the Works have been successfully completed.

The Employer shall release the Performance Security to the Contractor within 28 days from the date of the Taking Over Certificate.

The Employer shall be entitled to make a claim under the Performance Security for the amounts that the Employer is entitled to under the Contract in the following circumstances. The Employer shall also be entitled to make a reasonable determination whether it is appropriate to make a claim under any other circumstances other than that provided below.

- (a) Failure by the Contractor to extend the validity of the Performance Security as required
- (b) Failure by the Contractor to pay the Employer an amount due under this Contract
- (c) Failure by the Contractor to remedy a default in accordance with this Contract

(d) Circumstances which entitle the Employer to termination under this Contract

# 3.3 Contractors Representatives

The Contractor shall appoint a Contractors Representative and inform the Employer prior to the Commencement Date, the contact details and the particulars of the person authorised to receive instructions on behalf of the Contractor.

### 3.4 Staff List

Following the signing of the Contract Agreement, the Contractor shall immediately submit a list of Contractor's staff who will be working at the Site.

## 3.5 Site Log Book

Contractor shall maintain site logbook and enter all required information with respect to project activities.

## 3.6 Progress Reports

Progress of works shall be monitored daily and reported to the Employer writing in an approved format by the Employer.

## 3.7 Recording Information

The Contractor shall keep daily and necessary records and regularly provide copies of such records to the Employer. Such records shall contain information on.

- (a) Daily usage of daily resource (labor/material),
- (b) Start and finish of each item for each compound
- (c) Problems faced or encountered
- (d) Progress
- (e) work program for following day,
- (f) staff and key personnel involved,
- (g) usage of labor force and other resources including Machineries or equipment, weather condition and
- (h) other relevant information requested by the Employer.

## 3.8 Contractors Site Area

Throughout the period of the Contract, the Contractor shall maintain the area of his operation within the limits of the Site in clean, tidy and safe conditions 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.

The Contractor shall take all steps necessary as directed by the Employer to minimize or eliminate dust, noise or any other nuisance which may occur. Plant emitting dust, smoke, excessive noise or other nuisance shall not be permitted on Site.

The Contractor shall satisfy himself as to the means of access to the site and other relative items affecting it for both himself, his Sub-Contractors and Suppliers.

#### 3.9 Environmental Protections

The Contractor shall take all necessary precautionary measures to ensure that the Works

are executed in accordance with acceptable environment regulations and norms.

## 3.10 Materials, Contractors Equipment and Labour

The Contractor, at his own expenses, shall provide all transport, supervision, labour, all materials and Contractor's Equipment (including levelling instrument) required for the proper execution and completion of the Works. Contractor shall make all arrangements and provide all water and electricity for the proper execution of the works.

## 3.11 Protection against damage

Contractor shall take all safety measures and all precautions to prevent any damages to Employer's installation, equipment or any other utility or features. The Contractor shall execute the Works without affecting adjoining structures and shall take all necessary precautions.

The Contractor shall indemnify the Employer or the respective party against all losses or claims in respect of injury to any person or loss of or damage to property arise out of or in consequence of the execution and completion of the Works and the remedying of defects therein.

# 3.12 Confidentiality

The Contractor shall ensure complete confidentiality of information on the activities of Employer. No information whatsoever should be provided to any third party on the installations of or any other activity of the Employer.

### 3.13 Permits for the Works

The Contractor shall procure all necessary permits for the works from the relevant authorities and copies of such permits shall be submitted immediately to the Employer.

### 3.14 Defective Works

Any defective work, material and also deviations from working details specified in the drawings and specifications shall be removed and reconstructed or otherwise rectified without undue delay to the approval of the Employer and the Contractor shall be responsible for all additional costs incurred for these works.

## 3.15 Defects Liability Period

Contractor shall be obligated to make good any defects due to inappropriate workmanship within the period stipulated as 'Defects Liability Period' in Section IX, Appendix of this document. The Contractor should attend to the defect rectification within a week of notice.

Upon a notice of defect being issued, the Contractor shall respond to the notice within 5 working days along with a work completion plan in writing. The work completion plan shall be subject to approval of the Employer, who shall consider whether the proposed timeline for rectification is reasonable.

Failure to respond with a work completion plan shall constitute a failure to rectify the defect and shall entitle the Employer the right to have a third party correct the defect by deducting any retention payments owed to the Contractor.

# 3.16 Subcontracting

The Contractor shall not subcontract the whole of the Works. The Contractor shall not subcontract any part of the Works without the consent of the Employer.

# 4. Employers Liabilities

# 4.1 Employer Liabilities

In this Contract, Employer's Liabilities mean and are limited to:

- a) a suspension under Sub-Clause 2.3 unless it is attributable to the Contractor's failure,
- b) physical obstructions caused by the Employer other than climatic conditions, encountered on the Site during the performance of the Works, which obstructions or conditions were not reasonably foreseeable by an experienced contractor and which the Contractor immediately notified to the Employer in writing,
- c) any delay or disruption caused by Employer's request for Variation,

# 5. Time for Completion

## 5.1 Execution of the Works

The Employer shall give the Contractor not less than 7 days' notice of the Commencement Date. Unless otherwise agreed between the Parties, Commencement Date shall be within 90 days after signing the Contract.

The Contractor shall commence the Works on the Commencement Date and shall proceed expeditiously and without delay and shall complete the Works within the Time for Completion. The duration will be counted in calendar days with, and work shall be executed daily from 8.00AM to 6.00PM.

### 5.2 Programme

Within the time stated in the Appendix, the Contractor shall submit to the Employer for approval a detailed time programme for execution of the Works, in accordance and in reflection of the resource plan submitted with the bid. The Programme shall be in format included in this Contract and shall be strictly complied with. The Contractor shall also submit a revised programme whenever the previous programme is inconsistent with actual profess or with the Contractors obligations

# 5.3 Extension of Time

Subject to Sub-Clause 8.3, the Contractor shall be entitled to an extension of Time for Completion if he is or will be delayed by any of the Employer's liabilities. In the event that the request for an Extension of Time does not fall within the scope of the Employer's Liabilities, the Employer may, after considering for exceptional circumstances, at its discretion, approve the Extension of Time request.

The Contractor may claim for an Extension of Time within 14 days from an event having

occurred that may entitle the Contractor to an Extension of Time.

On receipt of Request for Extension of Time from the Contractor in the format annexed to this Contract, the Employer shall consider all supporting details provided by the Contractor and shall extend the Time for Completion, if the Contractor is entitled to it, within 21 days from the date of receipt of the Request for Extension.

# 5.4 Material Approval

The Contractor shall submit to the Employer a request for approval on the materials required to execute the Works. The Contractor shall ensure that the materials to be approved conform and adhere to the standards of technical specifications specified in the bid document.

The Employer shall approve or reject the request within 5 working days.

In the event of failure by the Employer to approve or reject the request, the Contractor shall be entitled to apply for an extension of time, subject to Sub-clause 8.3 and Sub-clause 5.3 of this Contract.

## 5.5 Shop Drawings

The Contractor shall submit shop drawings for Employer's approval as the Works progresses or upon request by the Employer. The Employer may instruct the Contractor to revise the shop drawings if not satisfactory, and upon such instruction, the Contractor shall submit revised shop drawings to the Employer within 5 working days.

For the purposes of the clause, shop drawings shall include but not be limited to drawings, diagrams, layouts, schematics, descriptive literature, illustrations, schedules, performance and test data, and similar materials furnished by the Contractor to explain in detail specific portions of the work required by the Contract.

## 5.6 Late Completion

If the Contractor fails comply with the Time for Completion, the Contractor shall pay delay damages to the Employer for this default. Damages shall for delay shall be calculated with the following formula:

0.5XCP/CT

Where,

CP - Balance after deducting the completed value from total price of contract

CT- Agreed duration for completion mentioned in the contract (days)

Employer shall without prejudice to its other remedies under the Contract, deduct a sum using the above formula as delay damage up to a maximum of an amount as stated in the Appendix. When the maximum amount is reached, without any definite indication that completion will take place in a reasonable time as determined by Employer, then

Employer may terminate the contract without further notice to Contractor.

## 5.7 Suspension of Work

The Employer may at any time instruct the Contractor to suspend progress of all or part of the Works. During such suspension, the Contractor shall protect, store and secure such works against any deteriorations, loss or damage.

## 6. Employer's Taking Over

# 6.1 Notification of Completion

The Contractor shall notify the Employer in writing when he considers that the Works are complete.

# 6.2 Taking Over Notice

The Works shall be taken over by the Employer when (i) the works have been completed in accordance with the Contract and when (ii) the Taking Over Certificate for the Works has been issued.

The Contractor may request the Employer for a Taking Over certificate when, no earlier than 07 days before, in the Contractors opinion, the Works will be complete and ready for taking over.

Employer shall issue the Taking Over Certificate to the Contractor when he considers that the Contractor has completed the Works. Alternatively, the Employer may notify the Contractor that the Works, although not fully complete, are ready for taking over, stating the date accordingly. The Taking Over Certificate shall state the date of the commencement of the Defects Liability Period pursuant to Sub-Clause 3.15 of the Contract.

The Employer shall take over the Works upon Taking Over and the Contractor shall promptly complete any outstanding work and clear the Site.

The Employer reserves the right to deduct costs incurred due to the Contractors failure to properly demobilize and clear the Site, from retainages withheld in accordance with Sub-Clause 9.4

# 7. Remedying Defects

### 7.1 Remedying Defects

The Employer may at any time prior to the expiry of the period stated In the Appendix, notify the Contractor of any defects or outstanding work. The Contractor shall remedy at no cost to the Employer any defects due to the Contractor's design, materials, quality or workmanship not being in accordance with the Contract.

The cost of remedying defects attributable to any other cause shall be valued as a Variation. Failure to remedy any defects or complete outstanding work within a

reasonable time of the Employer's notice shall entitle the Employer to carry out all necessary work at the Contractor's cost.

#### 8. Variations and Claims

#### 8.1 Right to Vary

Employer may at any time, by a written order given to the Contractor for making changes to scope of the Works to be performed by the Contractor.

No further variations shall be undertaken without written instruction from Employer. Any claims by the Contractor for Contract Price adjustment pursuant to a variation order shall be notified to Employer prior to execution of the variation order.

#### 8.2 Valuations of Variations

Variations shall be valued as follows:

- a. At a lump sum price agreed between the Parties, or
- b. Where appropriate, at rates in the Contract, or
- c. In the absence of appropriate rates, the rates in the Contract shall be used as the basis for valuation, or failing which
- d. At appropriate new rates, as may be agreed or which the Employer considers appropriate

# 8.3 Early Warning

A Party shall notify the other as soon as he is aware of any circumstance which may delay or disrupt the Works, or which may give rise to a claim for additional payment. The Contractor shall take all reasonable steps to minimize these effects.

The Contractor's entitlement to extension to the Time for Completion or additional payment shall be limited to the time and payment which would have been due if he had given prompt notice and had taken all reasonable steps.

#### 8.4 Variation and Claim

Should there be any Variation requested, the Contractor shall submit to the Employer an itemized make-up of the value Variations and claims within 2 days of the instruction. The Employer assess the claim and where he considers reasonable agree on the value. In the event that the Parties fail to agree on the value of Variations, the Employer shall have the right to determine the value.

#### 9. Contract Price and Payment

#### 9.1 The Contract Price

The Contract Price shall be determined by the Price Structure of the Contract as defined in the Appendix.

9.1.1 If the Appendix states that the Contract is a measure and pay contract, the Contract Price shall be determined by measuring and valuing the Works to the net actual

quantity of the permanent Works, and in accordance with the BOQ and other Schedules. Any quantities which may be set out in the BOQ may be estimated quantities and are not to be taken as the actual and correct quantities of the Works which the Contractor is required to execute.

9.1.2 If the Appendix states that the Contract is a lump-sum contract, the Contract Price shall be the Lump Sum Accepted Contract Amount that is specified in the Appendix, subject to adjustments brought in accordance with the Contract, including such adjustments for negative or positive variations.

#### 9.2 Payment Terms

Payment will be made on submission of statements to the Employer by the Contractor showing the amounts to which he considers himself entitled, in completion of each stages/item according to BOQ or after completion of works and cleaning of site in accordance with the contract and to the satisfaction of the Employer.

The terms and conditions of this Contract shall supersede any conflicting provision contained in any invoice by the Contractor and/or any prior agreements relating to the subject matter herein. For the avoidance of doubt, any additional term contained in any invoice shall not be acceptable unless agreed by both Parties in writing.

#### 9.3 Advance Payment

The Employer shall make an Advance Payment for mobilization when Contractor submits an advanced payment guarantee in the format annexed to this Contract or another format approved by the Employer. The advance payment shall be repaid through percentage deductions in interim payments. The total advance payment and the applicable percentage deductions for repayment from interim payments shall be as stated in the Appendix.

The Contractor shall ensure that the Advance Payment Guarantee is valid and enforceable until the advance payment has been repaid, although its amount maybe progressively reduced by the amount repaid by the Contractor as indicated in the interim payments. If the terms of the Guarantee specify its expiry date, and the advance payment has not been repaid by the date 28 days prior to the expiry date, the Contractor shall extend the validity of the guarantee until the advance payment has been repaid.

### 9.4 Retentions and other deductions

Retentions at the rate stated in the Appendix and any other amount for which the Employer has specified his reasons for disagreement shall be deducted from each payment.

### 9.5 Payment of Retentions

The retention shall be paid by the Employer to the Contractor within 30 days after the expiry of the period stated in the Appendix, and upon the Contractor submitting the invoice in the Appendix, or the remedying of notified defects or the completion of outstanding work, all as referred to in Sub- Clause 7.1, whichever is the later.

Costs incurred by the Employer to make good any defects or complete any outstanding works not rectified or completed by the Contractor, having been notified, shall be deducted from the retention money.

The Employer reserves the right to withhold any retention amounts in the event that the Contractor has not completed any Works. For the purposes of this clause, Works shall include the submission of As-Built Drawings.

# 9.6 Payment period

The Employer shall pay to the Contractor within the time period stated in the Appendix.

#### 9.7 Currency

Payment shall be in the currency stated in the Appendix.

#### 9.8 Set-off

Employer reserves the right of set-off against amounts payable to Contractor under this Contract and / or any other agreement or transaction between the Parties, the amount of any claim or refunds Employer may have against Contractor.

#### 10 Default

# 10.1 Default by Contractor

If the Contractor abandons the Works, refuses or fails to comply with a valid instruction of the Employer or fails to proceed expeditiously and without delay, or is, despite a written complaint, in breach of the Contract, the Employer may give notice referring to this Sub-Clause and stating the default.

If the Contractor has not taken all practicable steps to remedy the default within 7 days after the Contractor's receipt of the Employer's notice, the Employer may by a second notice terminate the Contract in whole or in part. The Contractor shall then demobilize from the Site leaving behind Materials and any Contractor's Equipment which the Employer instructs in the second notice is to be used until the completion of the Works.

# 10.2 Default by Employer

If the Employer fails to pay in accordance with the Contract, or is, despite a written complaint, in breach of Default by Employer the Contract, the Contractor may give notice referring to this Sub-Clause and stating the default. If the default is not remedied within 25 days after the Employer's receipt of this notice, the Contractor may suspend the execution of all or parts of the Works.

If the default is not remedied within 15 days after the Employer's receipt of the Contractor's notice, the Contractor may by a second notice terminate the Contract.

# 10.3 Payment upon Termination

After termination, the Contractor shall be entitled to payment of the unpaid balance of the value of the Works executed, adjusted by the following:

- a. any sums to which the Contractor is entitled under Sub-Clause 8.4,
- b. any sums to which the Employer is entitled

The net balance due shall be paid or repaid within 30 days of the notice of termination.

#### 10.4 Termination for Convenience

The Employer may terminate this Contract for its convenience at any time upon providing 15 (Fifteen) days written notice to the Contractor. In such case, the Contractor shall be entitled to receive as full compensation for all services performed hereunder, payment for all works performed prior to the date of termination, together with all retainages withheld in accordance with Sub-Clause 9.4.

Payment of such compensation is the sole and exclusive remedy of the Contractor for termination of this Contract by the Employer and the Contractor shall not be entitled to, and hereby waives, claims for lost profits and all other damages and expenses.

#### 11 Risk and Responsibility

#### 11.1 Contractor's Care of the Works

The Contractor shall take full responsibility for the care of the Works from the Commencement Date until the date of the Employer's notice under Sub-Clause 6.2. Responsibility shall then pass to the Employer

If any loss or damage happens to the Works during the above period, the Contractor shall rectify such loss or damage so that the Works conform to the Contract.

Unless the loss or damage happens as a result of an Employer's Liability, the Contractor shall indemnify the Employer, the Employer's contractors, agents and employees against all loss or damage happening to the Works and against all claims or expense arising out of the Works caused by a breach of the Contract, by negligence or by other default of the Contractor, his agents or employees.

# 11.2 Force Majeure

If a Party is or will be prevented from performing any of its obligations by Force Majeure, the Party affected shall notify the other Party immediately. If necessary, the Contractor shall suspend the execution of the Works and, to the extent agreed with the Employer, demobilize the Contractor's Equipment.

If the event continues for a period of 84 days, either Party may then give notice of termination, which shall take effect 28 days after the giving of the notice.

After termination, the Contractor shall be entitled to payment of the unpaid balance of the value of the Works executed and of the Materials and Plant reasonably delivered to the Site, adjusted by the following:

- b. Any sums to which the Contractor is entitled under Sub-Clause 10.3,
- c. The cost of demobilization,
- d. Any sums to which the Employer is entitled.

The net balance due shall be paid or repaid within 28 days of the notice of termination.

### 12 Resolution of Disputes

The Employer and the contractor shall make every effort to resolve amicably by direct informal negotiations any disagreement or dispute arising between them under or in connection with the contract. If after thirty (30) days from the commencement of such informal negotiations, the Parties are unable to resolve amicably a dispute, either Party may refer the dispute to the courts of Maldives.

#### 13 Notices

Any notice or communication permitted or required by this Agreement shall be deemed effective when personally delivered or deposited, or posted, mailed, emailed or facsimiled properly addressed to the appropriate party at the address set forth or at such address as either party may specify in writing. In case either party hereto changes their address, the party concerned shall give such notice to the other party 2 (two) weeks' time before effecting the change. A notice shall be effective on the next working day after the receipt of notice or on the notice's effective date, whichever is later.

#### For MWSC:

Male' Water & Sewerage Company Pvt. Ltd. Fen Building, 5/F, Ameenee Magu, Machangolhi, Male' 20375, Republic of Maldives

Tel: +960 332 3209 Fax: +960 332 4306

E-Mail: mail@mwsc.com.mv

**For Contractor:** 

**Section IX Appendix** 

APPENDIX			
ITEM SUB-CLAUSE		DATA	
Documents forming the Contract	1.1.1 of General Conditions		
<ul> <li>(a) The Agreement</li> <li>(b) Instructions to Bidders</li> <li>(c) General Conditions</li> <li>(d) Specification</li> <li>(e) Bill of Quantities</li> <li>(f) Drawings</li> <li>(g) Contractor's Design</li> <li>(h) Qualification</li></ul>	<ul><li>1.1.2 of General Conditions</li><li>1.1.3 of General Conditions</li><li>2 of Instruction to Bidders</li><li>5.2 of General Conditions</li></ul>		
2. Pre-Bid Meeting	11 of Instruction to Bidders		
Date Time Venue		26 <sup>th</sup> September 2024 11:30 AM MWSC CS Building, 6 <sup>th</sup> Floor	
3. Clarification	8.0 of Instruction to Bidders	mohamed.haneeu@mwsc.com.mv	
		ismail.hassan@mwsc.com.mv	
4. Addressing	12.3 of Instruction to Bidders	The Managing Director Male Water & Sewerage Company Pvt. Ltd Ameenee Magu, Machchangolhi, Male' 20-03	
5. Marking	12.3 of Instruction to Bidders	"Bid for Construction of Label Room & Workshop at Hulhumale' Bottling Factory"	
		"Do not open until 11:30 AM on 01st October 2024"	
6. Deadline for Bid Submission	12.2 of Instructions to Bidders		
Date Time Venue		01 <sup>st</sup> October 2024 11:30 AM MWSC CS Building, 6 <sup>th</sup> Floor	
7. Period of Bid Validity	18 of Instructions to Bidders	90 Calendar Days / Not Applicable	

8. Commencement Date/ Period	1.1.7 of General Conditions	Date notified by the Employer in accordance with Sub-Clause 5.1 within 90 Days after signing the contract
9. Time for Completion	1.1.9 of General Conditions	xxx calendar days from the Commencement Date
10. Bid Security	19 of Instructions to Bidders	MVR 10,000.00
11. Performance Security	23 of Instructions to Bidders & 3.2 of General Conditions	
Amount		10% of Contract Price
Format		Performance Bank Guarantee in the format annexed
Period for submission of Performance Security		Within 5 working days from the Letter of Award
12. Advance Payment	24 of Instructions to Bidders & 9.3 of General Conditions	
Amount		Up to 10% of Contract Price against Bank Guarantee
Format		Advance Payment Guarantee in the format annexed
Repayment amortization rate of Advance Payment		25%
13. Provision of Site		
Site Handover	5.2 of General Conditions	Within 3 days of Commencement Date
Time for Submission of Programme		Within 3 days of Commencement Date
Form of Programme		Microsoft Project or similar

14. Amount payable due to	5.4 of General Conditions	0.5XCP/CT
failure to complete		(CP-Balance after deducting the completed value from total price of each contract.
		CT-Agreed duration for completion mentioned in the contract)
		to a maximum of 10% of the contract amount.
15. Defects Liability Period	7.1 of General Conditions	365 days calculated from the date of Taking Over
16. Price Structure	9.1 of General Conditions	Lump Sum
17.Payment Terms	9.2 of General Conditions	As per Schedule
18. Percentage of Retention	9.4 & 9.5 of General Conditions	5% of each payment
19. Retention Period	9.5 of General Conditions	Expiry of Defects Liability Period
21. Payment Period	9.6 of General Conditions	30 Calendar Days
22.Curreny of Payment	9.7 of General Conditions	Maldivian Ruffiya

**Section XI Contract Forms** 

# **Table of Contract Forms**

LETTER OF AWARD
FORM OF AGREEMENT
PERFORMANCE BANK GURANTEE FORMAT
ADVANCE PAYMENT GUARANTEE FORMAT
FORMAT TO REQUEST FOR EXTESNSION OF TIME

# **Letter of Award**

(date)
To:
(Name & Address of the Contractor)
Dear Sir
This is to notify that Your Bid Dated for" CONSTRUCTION OF LABEL ROOM & WORKSHOP AT HULHUMALE' BOTTLING FACTORY" for the Contract Sum of Rufiyaa (amount in Figures) (amount in
words), as corrected and modified in accordance with the Instructions to Bidders is hereby accepted by Male' Water & sewerage Company Pvt. Ltd.
You are hereby instructed to proceed with the commencement of said project in accordance with the bid proposal subject to the terms and conditions of the contract.
Yours faithfully,
(Signature, Name and Title of signatory authorized to sign on behalf of the Employer)

# CONTRACT AGREEMENT CONSTRUCTION OF LABEL ROOM & WORKSHOP AT HULHUMALE' BOTTLING FACTORY (Contract No. MWSC/P/M/2023/8)

	s agreement made on thebetween Male' Water & Sewerage Company Pv I.(hereinafter called "the Employer") of the one part and
(he	reinafter called " the Contractor") of the other part
AT I	ereas the Employer desires that the Works known as "CONSTRUCTION OF LABEL ROOM & WORKSHO HULHUMALE' BOTTLING FACTORY" should be executed by the Contractor, and has accepted a posal by the Contractor for the execution and completion of these Works and the remedying of any ects 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.
	(a) the Letter of Award
	(b) the Contractor's Bid Form, Qualification Information, and Tender Forms
	(c) the General Conditions
	(d) the Appendix
	(e) the Scope of Works
	(f) the Technical Specifications
	(g) The Drawings
	(h) The completed Schedules
	(i) Additional Information
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.
85	

EMPLOYER  Male' Water & Sewerage	<u>CONTRACTOR</u>
Company Pvt Ltd.	
Signature:  Name:  Title:  Date:	Signature:  Name:  Title:  Date:
<u>Witness</u>	<u>Witness</u>
Signature:  Name:  Title:  Date:	Signature:  Name:  Title:  Date:

5. IN WITNESS whereof the parties hereto have caused this Agreement to be executed in accordance

with the laws of the Republic of Maldives on the day, month and year indicated above.

# PERFORMANCE BANK GUARANTEE

[The issuing bank or financial institution, as requested by the successful Contractor, shall fill in this form in accordance with the instructions indicated]

To: Male' Water & Sewerage Company Pvt. Ltd of Ameenee Magu, Machchangolhi, Male', Republic of Maldives (hereinafter called "the Employer")		
We have been informed that [name of the Contractor], (hereinafter called "the Contractor") has entered into Contract No [reference number of the Contract] dated [insert day and month], [insert year], with you, for the execution of [name of contract] (hereinafter called "the Contract").		
Furthermore, we understand that, according to the Contract, the Contractor shall furnish you with a Bank Guarantee by a recognized bank for the sum specified therein as security for compliance with the Contractor's obligations in accordance with the Contract.		
At the request of the Contractor, we have agreed to provide the Contractor such a Bank Guarantee and we hereby affirm that we are the Guarantor and responsible to you, on behalf of the Contractor, up to a total of [amount of guarantee] [in words], such sum being payable in Maldivian Rufiyaa and we undertake to pay you, upon your first written demand and without cavil or argument, any sum or sums within the limits of [amount of guarantee] as aforesaid without your needing to prove or to show grounds or reasons for your demand for the sum specified therein.		
At the request of the Contractor, we		
This Guarantee shall expire, no later than the day of , <sup>1</sup> and any demand for payment under it must be received by us at this office on or before that date. The Guarantor agrees to a one-time extension of this guarantee for a period not to exceed[six months][one year], in response to the Employer's request for such extension before the expiry of the guarantee.		
Signature and seal of the guarantor Name of Bank Address Date		
Date: [insert date (as day, month, and year)] Title of the Contract: [Insert general title of the contract]		
<sup>1</sup> Insert the date twenty-eight days after the expected Taking Over Date.		

[Issuer's letterhead]

**Beneficiary:** 

Male' Water and Sewerage Company Pvt Ltd

**ADVANCE PAYMENT BANK GUARANTEE** 

We have been informed that ....... [name of the Contractor] (hereinafter called "the Contractor") has

entered into Contract No...... [reference number of the Contract], dated [insert day and month], [insert

year] with you, for the execution of ....... [name of contract] (hereinafter called "the Contract").

Furthermore, we understand that, according to the Contract, an advance payment in the sum ....... [name

of the currency and amount in figures] 1 (..... [amount in words]) is to be made against an advance

payment guarantee.

Further to the foregoing, we [name of financial] hereby irrevocably undertake to pay to you, the

Beneficiary, any sum or sums not exceeding in total an aggregate amount of [amount in words] ([amount

in figures])1 (the "Guarantee") upon receipt by us of your first demand in writing, stating that the

Contractor is under obligation under the Contract to return the amounts of the Guarantee. Such

statement shall be conclusive evidence of your entitlement to payment in the amount demanded, up to

the amount of this Guarantee.

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 total of the Guarantee has been reimbursed or on the ....

day of .........2, whichever is earlier.

We further agree that no change or addition to or other modification of the terms of the Contract or of any of the

Contract documents which may be made between the Beneficiary and the Contractor shall in any way release

us from any liability under this Guarantee, and we hereby waive notice of any such change, addition, or

modification.

. . . . . . . . . . . . [Seal of Bank and Signature(s)] . . . . . . . . . . . . .

<sup>1</sup> The Guarantor shall insert an amount representing the amount of the advanced payment and denominated in the currency/ies of the advanced payment as specified in the Contract

<sup>2</sup> Insert the expected expiration date of the Time for Completion.

88

# FORMAT TO REQUEST FOR EXTENSION OF TIME

# **Request for Extension of Time**

To be filled in by the Contractor to claim an extension of the of the date for completion of the Contract. Supporting documents must be attached to each requested extension of time.

PART ONE

Particulars of the Contr	ract			
CONTRACTOR				
CONTRACT REFERENCE				
CONTRACT TITLE				
ORIGINAL COMMENCEMENT DATE				
ORIGINAL DURATION FO	OR COMPLETION			
DATE OF COMPLETION	AS PER CONTRACT			
PART TWO				
Time Extension Claim				
We hereby request an extension of time, pursuant to Clause [Insert Clause Ref] of the Contract described below for a total of consecutive calendar days.				
Event of Delay	Details		Date of occurrence	Days claimed
New Completion Date:				
Remarks:				
Signature of Contractor		Date:		

PART THREE			
Employer's Response to Extension of Time Claim			
	o yet a neaponae to Extension of time claim		
	filled in by the Employer and returned to the Contract	or within 10 business days of receiving the extension	
of tim	ne claim form.		
	The Client agrees with the extension of time cla	im	
	The elient agrees with the extension of time da	1111	
	The Client rejects the extension of time claim		
	The Client partially rejects the extension of time claim		
Rema	arks:		
Signature of Employer:		Date:	