



# **BILL OF QUANTITIES**

**PROPOSED FRS SUBSTATION**

**HA.DHIHDHOO**

**MILITARY ENGINEERS**

MALDIVES NATIONAL DEFENCE FORCE  
MALE', REPUBLIC OF MALDIVES

DATE: 11 DECEMBER 2022

**PROJECT: PROPOSED FRS SUBSTATION**  
CLIENT: MINISTRY OF DEFENCE  
LOCATION: HA.DHIHDHOO

**TOTAL COST SUMMARY**

SECTION 01	RENOVATIONS OF EXISTING BUILDING	MVR	<input type="text" value="-"/>
SECTION 02	VEHICLE GARAGE	MVR	<input type="text" value="-"/>
	SUBTOTAL	MVR	<hr/>
	GST 8%	MVR	
<b>TOTAL COST OF PROJECT</b>		<b>MVR:</b>	<input type="text" value="-"/>

PROJECT DURATION: ..... DAYS

**MILITARY ENGINEERS**  
 MALDIVES NATIONAL DEFENCE FORCE  
 MALE', REPUBLIC OF MALDIVES

DATE: 11 DECEMBER 2022

**PROJECT: PROPOSED FRS SUBSTATION**  
 CLIENT: MINISTRY OF DEFENCE  
 LOCATION: HA.DHIHDHOO

**SUMMARY**

**SECTION 01 - RENOVATIONS OF EXISTING BUILDING**

BILL 01	SITE CLEARING & PREPARATION	MVR	-
BILL 02	CONCRETE WORKS	MVR	-
BILL 03	MASONRY WORKS	MVR	-
BILL 04	WALL FINISHES	MVR	-
BILL 05	FLOOR FINISHES	MVR	-
BILL 06	CEILING FINISHES	MVR	-
BILL 07	DOORS AND WINDOWS	MVR	-
BILL 08	ROOF FRAME AND COVER	MVR	-
BILL 09	SANITARY & WATER SUPPLY	MVR	-
BILL 10	ELECTRICAL FIXTURES AND FITTINGS	MVR	-
BILL 11	AIR CONDITIONING SYSTEM	MVR	-
BILL 12	TELECOMMUNICATION NETWORK	MVR	-
BILL 13	FIRE FIGHTING SYSTEM	MVR	-
BILL 14	FURNITURE & APPLIANCES	MVR	-
BILL 15	FLAG POST	MVR	-
BILL 16	ADDITIONS & OMISSIONS	MVR	-
<b>TOTAL COST FOR RENOVATIONS OF EXISTING BUILDING</b>		<b>MVR</b>	<b>-</b>

# MILITARY ENGINEERS

MALDIVES NATIONAL DEFENCE FORCE  
MALE', REPUBLIC OF MALDIVES

DATE: 11 DECEMBER 2022

PROJECT: PROPOSED FRS SUBSTATION

CLIENT: MINISTRY OF DEFENCE

LOCATION: HA.DHIHDHOO

## BILL OF QUANTITIES

ITEM	DESCRIPTION	QTY.	UNIT	UNIT PRICE	AMOUNT	REMARKS
	<b><u>SECTION 01 - RENOVATIONS OF EXISTING BUILDING</u></b>					
<b>BILL 01</b>	<b>SITE CLEARING &amp; PREPARATION</b>					
a.	<u>Allow for all on &amp; off site management costs including costs of foreman, assistants, temporary electricity, water supply, hoardings, hire equipment, props, sign boards, safety provisions, acquiring approvals etc;</u>	-	LS			
b.	<u>Clear site generally cutting down trees, irrespective of size, grubbing roots, stumps, waste etc.; removing, breaking down of all unwanted components in existing building inclusive of work required to meet the requirements of the drawing; dispose and carting waste materials away from site.</u>	-	LS			
c.	<u>Clean soil spread, levelled and compacted not exceeding depth described to raise general ground level</u>	-	LS			
d.	<u>Allow for clean-up of worksite upon completion of the project.</u>	-	LS			
<b>BILL 02</b>	<b>CONCRETE WORKS</b>					
	<u>Excavate for concrete foundation not exceeding the given depth, get out part deposit, return, fill in &amp; ram in making up levels where directed &amp; remainder load cart away as described. Rates shall include for foundation protection &amp; de-watering required inclusive of all incidental items;</u>					
a.	In Gate column footings & beams	-	LS			
	<u>Lean concrete M10 mixture 50mm thick spread and level as described;</u>					
b.	In Gate column footings & beams	-	LS			
	<u>Sawn formworks inclusive of all shuttering propping and slope protection as described;</u>					
c.	In Gate column footings & beams	-	LS			
d.	In masonry stiffner columns 100x100	24.00	m <sup>2</sup>			
e.	In masonry capping beam 100x150	43.50	m <sup>2</sup>			
	<u>High Tensile Steel Reinforcement Fabrication bending and fixing as described;</u>					
f.	In Gate column footings & beams	-	LS			
	In masonry capping beam 100x150					
g.	Steel Bars (2 - T10)	124.00	kg			
h.	Steel Bars (D6 @150 c/c)	15.00	kg			
i.	Allow for anchorage, bend and splice.	-	LS			

	<u>Reinforced concrete M20 mixture using portland cement and imported fine and coarse aggregates with 40% water cement ratio as described;</u>				
	j. In Gate column footings & beams	-	LS		
	k. In masonry stiffener columns 100x100	0.60	m <sup>3</sup>		
	l. In masonry capping beam 100x150	1.30	m <sup>3</sup>		
<b>BILL 03</b>	<b>MASONRY WORKS</b>				
	<u>Supply &amp; installation of CH Blocks 4"x6"x12" for internal &amp; external walls, laid per manufacturer's instruction; rates shall include for chipping, surface preparation and application of bonding admixture as described;</u>				
	b. In Boundary wall	22.50	m <sup>2</sup>		
	a. In Interior walls	235.00	m <sup>2</sup>		
<b>BILL 04</b>	<b>WALL FINISHES</b>				
	<b>Cement Plaster</b>				
	<u>Cement &amp; sand mixtures 1:5 applied in 2 coats on Masonry surface in fair face finish to receive wall finish as described; Allow for plastering on columns, beams and waterproofing admixture in exterior plastering;</u>				
	a. 25mm plaster steel trowel finished to exterior masonry surface.	45.00	m <sup>2</sup>		
	b. 20mm plaster steel trowel finished to all interior masonry surface.	470.00	m <sup>2</sup>		
	c. Wall cracks repair plaster in internal and external walls	-	LS		
	d. Allow for PVC/Nylon mesh reinforcement @ all joints between walls and concrete.	1.00	item		
	<b>Paintwork</b>				
	<u>Prepare and apply 1-coat of Alkali Resisting Primer and 2-coats of Weathershield Emulsion Paint (Sigma brand or approved equivalent) on surface as described; Allow for application of putty and sanding to fair finish;</u>				
	e. In Boundary wall	460.00	m <sup>2</sup>		
	f. In Building exterior wall	145.00	m <sup>2</sup>		
	g. In toilet walls	38.00	m <sup>2</sup>		
	<u>Prepare and apply 1 - coat of Alkali Resisting Primer and 2-coats of Emulsion Paint (Sigma brand or approved equivalent) on surface as described; Allow for application of putty and sanding to fair finish;</u>				
	h. In Interior walls	480.00	m <sup>2</sup>		
	<b>Tilework</b>				
	<u>Supply &amp; installation of approved Glazed Ceramic tiles (300 x600) jointed &amp; bedded with approved tile adhesive, 2mm grout &amp; provision of corner bead as described;</u>				
	i. In Pantry Counter- 600mm high	2.55	m <sup>2</sup>		
	j. In Toilets and drying area - 2100mm high	97.00	m <sup>2</sup>		
<b>BILL 05</b>	<b>FLOOR FINISHES</b>				
	<u>40mm thick cement and sand screed ( 1:4 ) mixture using portland cement and imported fine aggregates with 40 % water cement ratio; float finished making up levels, slopes where directed to receive floor tiles as described;</u>				
	a. In steps & kickers	4.25	m <sup>2</sup>		

	<u>Supply and installation of approved Non-skid homogeneous (600 x 600) tiles jointed and bedded with approved tile adhesive and 2mm grout as described; Rates shall include for provision of 100mm tile skirting flushed to wall plaster as described;</u>				
b.	In Toilets & drying area	26.65	m <sup>2</sup>		
c.	In Accomodation 03	16.05	m <sup>2</sup>		
d.	In Pantry	20.30	m <sup>2</sup>		
	<u>Prepare and apply 1- coat of primer and 2- coats of approved heavy duty floor paint on finished floor surface as described;</u>				
e.	In steps and landing/walkway	7.80	m <sup>2</sup>		
	<u>Apply 2-coats of water proofing compound (Masterseal 550 or an approved equivalent as per manufacture's manual) on floor area and on wall surface 600mm from FFL as described;</u>				
f.	In Toilet & dring area	54.35	m <sup>2</sup>		
g.	<u>Supply &amp; installation of approved 4" decorative wooden border to all the joining lines between wall &amp; floor, inclusive of trims, joints, putty work, sanding, fixing and all incidental items</u>	160.00	rm		
<b>BILL 06</b>	<b>CEILING FINISHES</b>				
	<u>Supply and installation of timber framed internal ceiling using 9mm thick Gypsum plaster board &amp; 2"x2" kiln-treated timber spaced at 600mm c/c b/w with provision of 600x600 service opening panels with aluminum edge trim, laid flush to ceiling where instructed; Allow for application of joint tape, putty &amp; sanding to fair finish. Allow for additional materials needed to support and level ceiling frame as described;</u>				
a.	In interior ceiling	178.65	m <sup>2</sup>		
	<u>Supply and installation of timber framed concealed ceiling using kiln-treated timber spaced at 600mm c/c b/w and 6mm thick Cement plaster board; Rate shall include all trimming, joining and fixings as required. Allow for application of joint tape, putty, sanding to fair finish and application of sealant.</u>				
b.	In toilet ceiling	26.65	m <sup>2</sup>		
	<u>Supply and installation of 4mm thick Cement plaster board inclusive of trimming, joining, fixings and repairing timber frame where required. Allow for application of joint tape, putty and sanding to fair finish.</u>				
c.	In Eave ceiling	-	LS		
	<u>Supply &amp; installation of approved 4" decorative wooden border to all the joining lines between wall &amp; ceiling, inclusive of trims, joints, putty work, sanding, fixing and all incidental items</u>				
d.	In general ceiling	160.00	rm		
	<u>Prepare and apply 1 - coat of Alkali Resisting Primer and 2-coats of Matte Emulsion Paint on surface as described;</u>				
e.	In interior ceiling	194.65	m <sup>2</sup>		

	<u>Prepare and apply 1 - coat of Alkali Resisting Primer &amp; 2-coats of Semi gloss weathershield Paint on surface as described;</u>				
f.	In Toilets and drying area	30.57	m <sup>2</sup>		
g.	In Exterior ceiling	79.45	m <sup>2</sup>		
<b>BILL 07</b>	<b>DOORS AND WINDOWS</b>				
	<u>Fabrication and installation of approved solid wooden frame and door panel in decorative or flush design with 6mm vision glass, louvre panel etc. as described. Prepare and apply 1-coat of wood primer and 2-coats of approved Enamel paint on door panel and frame. Rates shall include for timber treatment, trims, joints, putty application, sanding, waxing, polishing, screws, nails, application of PU sealant in all joints between wall and frame and SS iron mongery inclusive of 3 hinges per panel, locks, door closers as described;</u>				
	<i>2 - Panel swing open solid decorative wooden door with 6mm thick fixed glass, door lite &amp; transom lite</i> Size: 1150 x 2500h				
a.	EXD	4.00	nos		
	<i>1 - Panel swing open solid decorative wooden door with 6mm thick fixed glass, door lite &amp; transom lite</i> Size: 900 x 2500h				
b.	D1	9.00	nos		
	<u>Single panel PVC door &amp; frame w/ approved cylindrical knob lock, SS sliding latch, SS hinges &amp; SS screws. Allow for provision of door handle &amp; application of antifungal sealant between door frame &amp; wall,</u>				
	<i>1 - Panel swing PVC flush door</i> Size: 700 x 2100h				
c.	D2	6.00	nos		
	<u>Design, fabricate &amp; installation of 2 Panel sliding, Steel Gate fabricated using GI hollow section frame, 6mm thick aluminum checkered sheet panels fixed on outer side: Rate shall include wheels, guides, SS ground rail, hinges, bolts, nuts, rivet and all incidental items;</u>				
	<i>2 - Panel sliding, steel gate</i> Size: 7915 x 1800h				
d.	SG1	1.00	nos		
	<u>Fabrication, supply &amp; installation of aluminium ventilators; 1.2mm thick casement in white powder coat 60-80 microns; with 6mm approved reflective glass/aluminium louvers and insect mesh; Rates shall include trimming, joining, screws, fixings, iron mongery, weather strippings &amp; application of white antifungal PU sealant on frames, subframe &amp; wall joints;</u>				
	<i>2 - panel aluminium ventilator with aluminium louvers &amp; insect mesh</i> size : 1200 x 400h				
e.	V1	4.00	nos		

f.	<u>Repair and renovating existing 3 panel side hung wooden windows with glazing; Prepare and apply 1-coat of wood primer and 2-coats of approved Enamel paint on window panel and frame. Rates shall include for timber treatment, repairs, putty application, sanding, screws, fixings, application of PU sealant in all joints between wall and frame and SS iron mongery inclusive of hinges per panel, locks, door closers as described</u>	8.00	nos			
g.	<u>Supply and installation of curtain; single, standard pleat design, of approved fabric and design pattern inclusive of rail, pins and necessary items as described;</u> <i>Opening size : 1500 x 1200h</i> EXW	4.00	set			
h.	<u>Supply and installation of approved vertical blinds with dim-out fabric, pattern design inclusive of pelmet, rail, pins, fixings and necessary items as described;</u> <i>Opening size : 1500 x 1200h</i> EXW	2.00	set			
i.	<u>Supply and installation of white frost sticker on door &amp; window glazing, inclusive of cutting, pasting and finishing good as described,</u> <i>Opening size : 1500 x 1200h</i> EXW	3.00	set			
j.	<u>Allow for fabrication and installation of lintel and sill beams inclusive of formwork, steel, concrete etc as described</u>	-	LS			
<b>BILL 08</b>	<b>ROOF FRAME AND COVER</b>					
	<u>Supply and installation of Lysaght gutter, rainwater down pipe, fittings and brackets in accordance to manufacture's instruction, inclusive of all necessary accessories. Rates shall include for cuts, joints, screws, sealants and all incidental items;</u>					
a.	Lysaght Gutter inclusive of clips & straps spaced 600 c/c	71.00	rm			
b.	Lysaght Down spout 75mm with PVC Strainer	8.00	nos			
c.	uPVC Down pipe 75mm dia	8.00	nos			
d.	<u>Prepare &amp; apply 2-coats of approved weathershield gloss enamel paint as described;</u> In Fascia board	22.00	m <sup>2</sup>			
e.	<u>Construction and installation of soak pits (300 x 400 x600) with solid blocks 2"x4"x8", filled with gravel for downspouts of building; inclusive of connections.</u>	-	LS			
<b>BILL 09</b>	<b>SANITARY &amp; WATER SUPPLY</b>					
	<u>Supply and Installation of pipe fittings &amp; fixtures shall be executed in conformance to local regulation &amp; to adhere with the clients requirement. Inclusive of pressure &amp; leak testing of entire system.</u>					
	<i>Sanitary &amp; water supply fixtures</i>					
a.	Water closet with cistern	3.00	nos			
b.	Muslim shower, PVC	3.00	nos			
c.	Wash basin with Pedestal	3.00	nos			
d.	Countersunk wash basin	1.00	nos			
e.	SS Kitchen sink, single bowl, counter sunk, 450x600mm	1.00	nos			
f.	Wasting plug for wash basin	3.00	nos			

g.	Wasting plug for kitchen sink	1.00	nos			
h.	Basin tap, PVC	3.00	nos			
i.	Basin tap, long neck, PVC	1.00	nos			
j.	Flexible gully, PVC	4.00	nos			
k.	Wall tap, PVC	3.00	nos			
l.	1.8" PVC connection hose	7.00	nos			
m.	Hand shower valve	17.00	nos			
n.	Handshower with rail, PVC	3.00	nos			
o.	Mirror 600x750mm with corner fixing brackets	3.00	nos			
p.	Mirror 1200x600mm	3.00	nos			
q.	2" SS Floor drain 100x100mm	8.00	nos			
r.	Towel bar, PVC	8.00	nos			
s.	<u>Installation of uPVC pipes &amp; fittings for the above including connection of waste water &amp; sewer lines to main sewer network. Rates shall include for providing separate greywater &amp; blackwater waste lines, waste line ventilation pipeline, traps and cleanouts as described;</u>	-	LS			
t.	<u>Installation and connection of uPVC pipes &amp; fittings for municipal water and ground water supply inclusive necessary valves for both fresh and well water supply. Rates shall include trims, joints, fixing and incidental accessories.</u>	-	LS			
u.	<u>Supply &amp; installation of approved water pump for ground water supply from ground well to building inclusive of pump enclosure with lock, uPVC supply line, connections, valves, fittings, sealing &amp; all necessary accessories required;</u>	-	LS			
v.	<u>Construction and installation of inspection chambers, grease traps, catch basins, clean outs; internal surface treated with bituminous waterproofing compound, 50mm thick RCC cover inclusive of all pipes, fittings and connection to main sewerline as described;</u>	-	LS			
w.	<u>Supply installation and Connection of rain water down pipes from building roof to water storage tanks inclusive of fittings and necessary connections;</u>	-	LS			
<b>BILL 10</b>	<b>ELECTRICAL FIXTURES AND FITTINGS</b> <u>Supply, Installation and testing, of conduit pipe, fittings &amp; fixtures shall be executed as described in drawings and conformance to local regulation &amp; to adhere with Local Electrical Authority's requirements. Rates shall include for screws, nails, bolts, nuts, brackets, straps, rivets, plugs and all incidental accessories;</u>  <i>Electrical Fixtures and Fittings;</i>					
a.	Ceiling mount LED light, 18W, round, 6000K	36.00	nos			
b.	Ceiling mount LED light, 12W, round, 6000K	6.00	nos			
c.	Thread holder E27, normal, with LED light, 5W, 4000K	3.00	nos			
d.	Wall mount LED outdoor light, 12W, 4000K	4.00	nos			
e.	Ceiling fan 48" (ORIENT)	2.00	nos			
f.	Ceiling mount orbit fan (ORIENT)	8.00	nos			
g.	Wall mount Exhaust fan 14"	4.00	nos			
h.	Switch 2 gang	9.00	nos			
i.	Switch 3 gang	7.00	nos			
j.	Switch 4 gang	6.00	nos			
k.	Power Outlet 13A x 1gang	21.00	nos			
l.	Power Outlet 13A x 1gang, water proof cover	1.00	nos			
m.	Power Outlet 13A x 2gang	27.00	nos			

n.	Power Outlet 13A x 2gang, water proof cover	3.00	nos			
o.	Power Outlet 15A x 1gang	10.00	nos			
p.	Fan Dimmer	3.00	nos			
q.	<u>Supply and installation of Wire/conduit/boxes/ducts/trays for the above concealed above ceiling, encased in walls as described;</u>	-	LS			
	<u>Supply &amp; installation of Distribution boxes inclusive of circuit breakers, residual current devices, DIN rails, busbar links, surge protection devices, connections and all incidental items required;</u>					
r.	DB 48 circuit, wall mount type (Hager)	2.00	item			
s.	<u>Construction of below ground earthing pit with concrete cover inclusive of Copper earthing rod, strips, clamps, cables, clips, connections, earthwork, masonry, plaster, concreting, reinforcement, formwork, safety provisions etc. as described</u>	-	LS			
<b>BILL 11</b>	<b>AIR CONDITIONING SYSTEM</b>					
	<u>Supply, Installation and testing of split-type inverter, wall mount air-conditioning system as per manufacturer's instruction and roughing in of necessary pipe lines to and from indoor and outdoor units as well as connection of power and commissioning of the whole system.</u>					
a.	In Control Room (24000 BTU)	1.00	units			
b.	In Immediate Room (24000 BTU)	1.00	units			
c.	In Store Room (9000 BTU)	1.00	units			
d.	In Accommodations 01-03 (18000 BTU)	3.00	units			
<b>BILL 12</b>	<b>TELECOMMUNICATION NETWORK</b>					
	<u>Supply, Installation &amp; testing of cables, fittings &amp; fixtures outlets shall be executed in conformance to local regulation. Rates shall include for encasing conduits, cables, boxes, &amp; fixtures in walls, beams and columns, to put the system in good operation and to adhere with the owner's requirement</u>					
a.	In Telephone network	-	LS			
b.	In Public address system	-	LS			
c.	In Data network	-	LS			
d.	In TV network	-	LS			
<b>BILL 13</b>	<b>FIRE FIGHTING SYSTEM</b>					
	<u>Supply and installation of fire fighting equipment as described inclusive of all necessary connections and to suit with item below as per local fire regulation.</u>					
a.	Fire Extinguisher - Carbon Dioxide 2Kg with cabinet	1.00	units			
b.	Fire Extinguisher - Water 9L with cabinet	1.00	units			
c.	Fire Blanket	1.00	nos			
<b>BILL 14</b>	<b>FURNITURE &amp; APPLIANCES</b>					
	<u>Supply and Installation of approved items stated below:</u>					
	<i>Equipment &amp; Appliances</i>					
a.	65" Smart TV with wall mounting bracket	1.00	nos			
b.	Washing machine with spin dryer, semi-auto, top load	3.00	nos			
c.	Steam iron	3.00	nos			
d.	Water dispenser with inbuilt RO purifier & chiller	1.00	nos			
e.	Refrigerator 250L	1.00	nos			
f.	2 Burner gas stove	1.00	nos			
g.	120L foot pedal wheelie bin	2.00	nos			

	<i>Furniture &amp; furnishing</i>				
h.	Fabricated steel bunk bed, single size	6.00	nos		
i.	Wooden single bed	2.00	nos		
j.	Steel wardrobe, 2 panel with lock	8.00	nos		
k.	6" Mattress, sponge & fibre, single	14.00	nos		
l.	Bedsheet, single, fitted	14.00	nos		
m.	Pillow	14.00	nos		
n.	Pillow case	14.00	nos		
o.	Ironing table	3.00	nos		
p.	3 Seater sofa	1.00	nos		
q.	Single seater sofa	2.00	nos		
r.	Coffee table, wooden 1000x500mm	1.00	nos		
s.	TV rack	1.00	nos		
t.	Medium back chair, stackable, PVC	15.00	nos		
u.	Built-up Laminated wooden shoe cabinet 1500x300x1200	2.00	item		
v.	Builtup solid wood seater 1200x450x450mm	1.00	item		
w.	Builtup GI steel drying rack	3.00	item		
x.	Builtup GI steel storage rack	1.00	item		
y.	Builtup solid wood kitchen counter with cabinets	1.00	item		
z.	Builtup solid wood wall mount cabinet, 4 Panel	1.00	item		
aa.	Office table with 03 drawers 1200x700x750	2.00	nos		
ab.	Side table 450x1200x750mm	2.00	nos		
ac.	Control counter table 600x2400x750mm	1.00	nos		
ad.	Medium back office chair, fabric cover	8.00	nos		
ae.	Wood Dining Table set 1200x900x750 with 6 chairs	1.00	nos		
af.	Filing cabinet	1.00	nos		
<b>BILL 15</b>	<b>FLAG POST</b>				
a.	Construction and finishing works of flag rostrum inclusive of concrete, reinforcement, formwork, masonry and plaster, wall finishes, floor tiling, fabrication & installation of flagpost, badge etc as described	-	LS		
<b>BILL 16</b>	<b>ADDITIONS &amp; OMISSIONS</b>				

# MILITARY ENGINEERS

MALDIVES NATIONAL DEFENCE FORCE  
MALE', REPUBLIC OF MALDIVES

DATE: 11 DECEMBER 2022

PROJECT: PROPOSED FRS SUBSTATION  
CLIENT: MINISTRY OF DEFENCE  
LOCATION: HA.DHIHDHOO

## SUMMARY

### SECTION 02 - VEHICLE GARAGE

BILL 17 FOUNDATION & CONCRETE WORKS

MVR

BILL 18 SLAB ON FILL

MVR

BILL 19 MASONARY WORKS

MVR

BILL 20 WALL FINISHES

MVR

BILL 21 FLOOR FINISHES

MVR

BILL 22 DOORS & WINDOWS

MVR

BILL 23 ROOFING

MVR

BILL 24 SANITARY & WATER SUPPLY

MVR

BILL 25 ELECTRICAL FIXTURES & FITTINGS

MVR

BILL 26 FIREFIGHTING EQUIPMENT

MVR

BILL 27 FURNITURE & APPLIANCES

MVR

BILL 28 ADDITIONS & OMISSIONS

MVR

**TOTAL COST OF VEHICLE GARAGE**

**MVR**

# MILITARY ENGINEERS

MALDIVES NATIONAL DEFENCE FORCE  
MALE', REPUBLIC OF MALDIVES

DATE: 10 JANUARY 2022

PROJECT: PROPOSED FRS SUBSTATION

CLIENT: MINISTRY OF DEFENCE

LOCATION: HA.DHIHDHOO

## BILL OF QUANTITIES

ITEM	DESCRIPTION	QTY.	UNIT	UNIT PRICE	AMOUNT	REMARKS
	<b>SECTION 02 - VEHICLE GARAGE</b>					
BILL 17	<b>FOUNDATION &amp; CONCRETE WORKS</b>					
	<u>Excavate for concrete Strip Foundation not exceeding the given depth, get out part deposit, return, fill in and ram in making up levels where directed and remainder load and cart away as described; Rates shall include for foundation protection and de-watering required inclusive of all incidental items;</u>					
a.	In F1 footing - 600 from NGL	5.27	m <sup>3</sup>			
	<u>50mm thick lean concrete (1:3:6) spread and level as described;</u>					
b.	In F1 footing	8.10	m <sup>2</sup>			
	<u>Sawn formworks inclusive of all shuttering, propping and slope protection as described;</u>					
c.	In F1 footing	9.60	m <sup>2</sup>			
d.	In Column Stump	7.20	m <sup>2</sup>			
	<u>High Tensile Steel Reinforcement fabrication bending and fixing as described;</u>					
e.	In F1 footing Steel Bars (T10 @ 100 c/c bw)	105.56	kg			
	In Column Stump					
f.	Steel Bars ( 4 - T10)	37.04	kg			
g.	Steel Bars ( D6 @160 c/c )	48.15	kg			
h.	Allow for anchorage, bend and splice.	21.39	kg			
	<u>Reinforced concrete M20 grade using Portland cement &amp; imported fine &amp; course aggregates with 40 % water cement ratio as described; Allow for addition of waterproofing chemical and admixtures as described;</u>					
i.	In F1 footing	1.92	m <sup>3</sup>			
j.	Column Stump	0.36	m <sup>3</sup>			
k.	In stiffners & wall capping - fuel store	0.15	m <sup>3</sup>			
l.	<u>Supply &amp; installation of 4x10mm GI steel rods embedded 600mm deep into column stumps to receive base plate GI pipe columns inclusive of welding and necessary items s described</u>	-	LS			

m.	<u>Supply and installation of 100mmØ GI pipe columns not less than 2.5mm thick welded onto 9mm thick GI base plate as described;</u>	10.00	nos			
n.	<u>Prepare and apply approved bituminous damp proofing compound as per manufacture's instructions in concrete foundation below NGL;</u>	-	LS			
<b>BILL 18</b>	<b>SLAB ON FILL</b>					
	<u>Clean soil spread, level and compacted not exceeding depth described to receive concrete bed;</u>					
a.	In sub base	108.51	m <sup>2</sup>			
b.	Lay polythene sheet on compacted sub - base	108.51	m <sup>2</sup>			
	<u>Reinforced concrete M20 mixture using Portland cement &amp; imported fine &amp; coarse aggregates with 40 % water cement ratio; Allow labour for leveling &amp; floating on fresh concrete, provision of slopes, grooves and finished to the levels as described;</u>					
c.	RCC Floor Slab 100mm thick	9.65	m <sup>3</sup>			
d.	RCC Slab 75mm thick - <i>Fire hose washing area</i>	0.90	m <sup>3</sup>			
	<u>High Tensile Steel Reinforcement fabrication bending and fixing as described;</u>					
e.	In RCC Floor Slab 100mm thick Steel Bars T10 - 300 c/c bothways	506.50	kg			
f.	In RCC Slab 75mm thick - <i>Fire hose washing area</i> Steel Bars T10 - 300 c/c bothways	63.00	kg			
g.	Allow for anchorage, bend and splice.	85.50	kg			
<b>BILL 19</b>	<b>MASONRY WORKS</b>					
	<u>Supply &amp; installation of CH Blocks 4"x6"x12" for internal &amp; external walls, laid per manufacturer's instruction; rates shall include for chipping, surface preparation and application of bonding admixture as described;</u>					
a.	In Walls - <i>garage &amp; fuel store</i>	29.85	m <sup>2</sup>			
b.	In Fire hose washing area	2.85	m <sup>2</sup>			
<b>BILL 20</b>	<b>WALL FINISHES</b>					
	<b>Cement Plaster</b>					
	<u>Cement &amp; sand mixtures 1:5 applied in 2 coats on Masonary surface in fair face finish to receive wall finish as described; Allow for plastering on columns, beams and waterproofing admixture in exterior plastering;</u>					
a.	25mm plaster steel trowel finished to walls, columns & beams	59.43	m <sup>2</sup>			
b.	Allow for PVC/Nylon mesh reinforcement @ all joints between walls and concrete.	-	LS			
	<b>Wall frame &amp; cladding</b>					
c.	<u>Supply and installation of Lysaght roofing sheet wall cladding on 40x40mm square hollow section frame grid welded to steel columns as described; Rates shall include, cuts, joints, welds, cleats, screws, fixings, sealant and necessary items.</u>	148.85	m <sup>2</sup>			
	<b>Paintwork</b>					
	<u>Prepare and apply 1-coat of Alkali Resisting Primer and 2-coats of Weathershield Emulsion Paint (Sigma brand or approved equivalent) on surface as described; Allow for application of putty and sanding to fair finish;</u>					
d.	In walls	59.43	m <sup>2</sup>			

e.	<u>Prepare &amp; apply 2-coats of Enamel Paint (Sigma brand or approved equivalent) on surface as described;</u> Lysaght cladding with steel frame	148.85	m <sup>2</sup>			
<b>BILL 21</b>	<b>FLOOR FINISHES</b>					
a.	<u>40mm cement screed (1:4) mixture using Portland cement &amp; imported fine aggregates with 40 % water cement ratio, brush finished to levels as described;</u> In general flooring	96.51	m <sup>2</sup>			
b.	<u>Prepare &amp; apply 1-coat of primer &amp; 2- coats of approved floor paint on finished floor surface as described;</u>	96.51	m <sup>2</sup>			
<b>BILL 22</b>	<b>DOORS &amp; WINDOWS</b>					
a.	<u>Design, fabricate &amp; installation of 2 Panel side hung, Steel door fabricated using GI hollow section frame, 6mm thick aluminum checkered sheet and aluminum grill fixed on outer side as described:</u> <u>Rate shall include handle, lock, hinges, bolts, nuts, rivet and all incidental items;</u> <i>2 - Panel side hung steel door</i> Size: 1930 x 2500h D3	1.00	nos			
<b>BILL 23</b>	<b>ROOFING</b>					
	<b>Roof Frame</b>					
	<u>Fabrication and installation of fully welded GI Steel hollow section trusses using 50x100x2.3mm RHS top and bottom chord, 50x50x2.3mm SHS webs inclusive of plates, bolts and necessary items required for building up roof frame as described;</u>					
a.	TR1	52.85	m			
b.	TR2	39.25	m			
c.	<u>Fabrication and installation of 50x100x2.3mm GI RHS rafters spaced at 900mm c/c fully welded on top chords.</u>	122.40	rm			
d.	<u>Fabrication &amp; installation of 40x40x2.3mm GI SHS purlins spaced at 600mm c/c fully welded on rafters.</u>	195.60	rm			
e.	<u>Prepare &amp; apply 2 coats of red-oxide on all welded joints &amp; 2 coats of aluminum paint to all surface of steel works.</u>	-	LS			
	<b>Roof Cover &amp; Accessories;</b>					
	<u>Specified for Lysaght " Trim Deck" roofing sheets, fixed in accordance to manufacturer's instruction, inclusive of cuts, screws, fixings, adhesive, antifungal sealant, roofing tape and incidental items as described.</u>					
f.	Lysaght Roofing sheets, <i>Torres blue</i>	118.80	m <sup>2</sup>			
g.	Heat Insulation	118.80	m <sup>2</sup>			
h.	PVC Mesh	118.80	m <sup>2</sup>			
i.	Lysaght wall flashing @8'	3.45	m			
j.	Lysaght end flashing @8'	48.87	m			
k.	Kiln-dried timber fascia board 25x300mm	37.50	m			
l.	Lysaght Gutter inclusive of clips & straps @600 c/c, <i>Torres blue</i>	11.38	m			
m.	Lysaght End cap, <i>Torres blue</i>	4.00	nos			
	<u>Supply &amp; installation of Rainwater Down pipe inclusive of fittings, brackets and connection to soak pits;</u>					
n.	PVC Down pipe 75mm dia.	3.00	nos			
o.	Lysaght Down spout, <i>Torres blue</i>	3.00	nos			

q.	<u>Prepare and apply 1-coat of wood primer and 2-coats of approved weathershield gloss enamel finish to all surface of fascia;</u>	24.38	m <sup>2</sup>			
p.	<u>Construction &amp; installation of soak pits (300 x 400 x600) with solid blocks 2"x4"x8", filled with gravel for downspouts as described;</u>	1.00	Item			
q.	<u>Fabrication and installation of name board frame using 40x40x2.3mm. GI steel hollow section, clad with lysaght roofing sheet, inclusive of cuts, screws, fixings, adhesive, welding, grinding, application of paint and fixing of signage as described;</u>	-	LS			
<b>BILL 24</b>	<b>SANITARY &amp; WATER SUPPLY</b>					
	<u>Installation of pipe fittings &amp; fixtures shall be executed in conformance to local regulation &amp; to adhere with the clients requirement. Inclusive of pressure &amp; leak testing of entire system.</u>					
	<i>Sanitary &amp; water supply fixtures</i>					
a.	Wall tap, PVC	2.00	nos			
b.	SS Kitchen sink, single bowl, counter sunk, 450x600mm	1.00	nos			
c.	Wasting plug for sink	1.00	nos			
d.	Basin tap, long neck, PVC	1.00	nos			
e.	Flexible gully, PVC	1.00	nos			
f.	<u>Installation and connection of pipes &amp; fittings for municipal water and well water supply inclusive of necessary valves for each and all incidental items.</u>	-	LS			
g.	<u>Construction of RCC counter top 600x900mm laid on masonry support walls inclusive of concrete, formwork, reinforcement, masonry and plaster, wall finish, fixing homogenous tiles 600x600 on counter top and back splash in outdoor wash station</u>	-	LS			
<b>BILL 25</b>	<b>ELECTRICAL FIXTURES &amp; FITTINGS</b>					
	<u>Supply, Installation &amp; testing of fittings &amp; fixtures brand hager/ Legrand /equivalent shall be executed as described in drawings in conformance to local regulation &amp; to adhere with the clients requirements. Rates shall include for screws, nails, bolts, nuts, brackets, straps, rivets, plugs &amp; all incidental accesories;</u>					
	<i>Electrical Fixtures and Fittings;</i>					
a.	LED High bay light 250W, 6000K	4.00	nos			
b.	LED Flood light, IP68, 150W, 6000K	4.00	nos			
c.	Wall mount LED outdoor light, 12W, 4000K	3.00	nos			
d.	LED tube light 4ft, 40W, 6000K	2.00	nos			
e.	Switch 2 gang	1.00	nos			
f.	Switch 3 gang	1.00	nos			
g.	Switch 4 gang	2.00	nos			
h.	Power Outlet 13A x 2gang, water proof cover	2.00	nos			
i.	Power Outlet 15A x 1gang, water proof cover	1.00	nos			
j.	Isolator 20A, 3Phase, 4P	1.00	nos			
k.	<u>Supply &amp; installation of Wire/conduit/boxes/ducts/trays for the above as described;</u>	-	LS			

	<u>Supply &amp; installation of Distribution boxes inclusive of circuit breakers, residual current devices, DIN rails, busbar links, surge protection devices, connections and all incidental items required;</u>				
	I. DB 36 circuit, wall mount type (Hager)	1.00	item		
<b>BILL 26</b>	<b>FIREFIGHTING EQUIPMENT</b>				
	<u>Supply and installation of fire fighting equipment as described inclusive of all necessary connections and to suit with item below as per local fire regulation.</u>				
	a. Fire Extinguisher - Carbon Dioxide 2Kg with cabinet	1.00	units		
	b. Fire Extinguisher - Water 9L with cabinet	1.00	units		
<b>BILL 27</b>	<b>FURNITURE &amp; APPLIANCES</b>				
	<u>Supply and Installation of approved items stated below;</u>				
	<i>Equipment &amp; Appliances</i>				
	a. PVC flexible hose ½"x20m, reinforced	1.00	nos		
	b. Hose reel ½"x20m	1.00	nos		
	c. Pedestal fan, industrial	2.00	nos		
	d. Wheel barrow	2.00	nos		
	e. Aluminum Ladder 2-side, 6 steps, heavy duty	1.00	nos		
	<i>Furniture &amp; furnishing</i>				
	f. Builtup GI steel storage rack	1.00	item		
	g. Builtup GI steel suit hanger rack	1.00	item		
<b>BILL 28</b>	<b>ADDITIONS &amp; OMISSIONS</b>				