

BILL OF QUANTITIES FOR THE PROPOSED MIAU EARTH DAM WATER DISTRIBUTION PROJECT

Preamble: All prices are inclusive of transport, labour costs, profits and overheads . All materials supplied should have manufacturers design specifications as highlighted in bill of quantity and drawing adhering on them and shall be used in the project upon client representative approval.

ITEM NO.	DESCRIPTION	UNIT	QTY	RATE (Kshs.)	AMOUNT (KShs.)
BILL 1.0	PRELIMINARIES AND GENERAL ITEMS				
	Publicity Sign Board				
1.1	Supply and erect publicity sign board on 1.5m x 1.2m metal sheet approximately secured on a 40 mm x 3mm thick steel frame at least 2m above the ground level and leveled as directed	ls	1		
	BILL 1.0 TOTAL CARRIED TO SUMMARY				
BILL 2.0	RISING MAIN				
ITEM NO.	DESCRIPTION	UNIT	QTY	RATE (Kshs.)	AMOUNT (KShs.)
2.1	Contractor to purchase, deliver galvanised GI PIPES Class B Nominal bore 65mm, HDPE Pipes OD 110 SDR 7.4 PE 100. trench, lay, fix, test and commission the pipeline.				
2.101	65mm (2½) GI pipes Class B with sockets	m	60		
2.102	OD 110x90 mm HDPE flanged reducer	No.	1		
2.103	OD 110 mm HDPE pipes PN25 SDR 7.4 PE 100 (100 M Roll)	m	800		
2.104	Site clearing, Trench excavation (450mm wide x 600mm deep), Pipe laying and Trench back filling .	m	800		
2.105	Install reinforced concrete Slip Anchors (300x300x300mm) at the designated points as per Engineers Guidelines.	No.	2		
2.106	Install reinforced Concrete thrust blocks (300x300x300mm) at the designated points as per Engineers Guidelines.	No.	5		
2.107	Concrete Marker posts well installed and clearly labeled WL at 200 m interval along the pipeline.	Nr	5		
2.2	FITTINGS ON THE RISING MAIN				
2.201	DN110, PN25 HDPE Flanged adaptor complete with water gasket, bolts and nuts for joining with GI fittings	Nr	3		

2.202	Flanged DN65mm Flanged Water Master Meter of approved quality with all accessories fitted in the pipeline as shall be directed, and a standard lockable chamber with padlock	Nr.	1		
2.203	DN50mm Flanged double orifice antishock Air Valve	Nr	1		

2.204 Nr	3	DN110x63mm HDPE reducing tee PN 25 plain ended for line branches and Wash Out				
2.205 Nr	3	DN63mm HDPE flanged adaptor PN25 complete with water gasket, bolts and nuts for joining with GI fittings				
2.206		DN50mm resilient seated Sluice Valve PN25; Line valves Nr 3 and Wash Out				

2.3		PLASTIC STORAGE TANK - Supply, deliver materials and construct a 1m high reinforced masonry tank platform to host a 10CM plastic tank, supply and install the tank and interconnect to a water point as directed on site				
2.301		10CM double laminated tank with all assorted connection fittings .	No.	1		
2.302		1m high Reinforced masonry tank platform to hoist 10CM tank	No.	1		
2.303		Provide for the interconnections to Water tank and rising main	Item	1		
2.304		Construct a community water point specified by engineer and equipped with all necessary fittings and plumbing works and connect to the installed storage tank.	Item	1		
		BILL 3.0 SUMMARY PAGE TOTAL				
BILL 3.0		PUMP INSTALLATION AND SOLARIZATION				
ITEM NO.		DESCRIPTION	UNIT	QTY	RATE (Kshs.)	AMOUNT (KShs.)
3.1		Pump Supply,deliver and install a Solar Powered Submersible Multistage Centrifugal Pump Set of Duty Point (DS 17-27): 15 m ³ /hr at a Total Head of 256meters. The pump Impellers should be of Stainless Steel. Provide Copies of Pump Characteristic/Performance Curves (Brochures). Install as directed by the Supervising Engineers	No.	1		
3.2		Supply, deliver and install 15KW motor 3PH of approved quality Inverter	No.	1		

3.3 Supply, Deliver & Install an AC Solar Pump Control Unit 1

Module as Sunverter SV3/15 KW, 3PH. Incorporating: -

Detachable Control Interface

Settable Min/Max Frequency & open Circuit Voltage Display
of operating Parameters, including frequency, voltage, amperage,
input power & pump speed

Display of Historical Data, including Energy
generation, maximum power & operating times Protection against
over/under voltage, over current, system overload
and module over temperature

Well probe(SENOR)

Fault detection with error code display Solar Panels

- 3.40 Firmly anchored/secured high efficiency Monocrystalline W 17920 half
cell tier 1 solar panels MC4 connections and 6mm², DC cable black and red
arrayed/positioned for maximum insolation; 17,920w to give a total of
24kW on adding to the existing solar system. Solar panels should be of
equivalent technical specification of 280W as the existing ones or as
approved by the supervising engineer.

Steel Tower

Supply, deliver and erect firmly on Concrete Anchors,
Fabricated Steel Tower, use square tubes, 4" x 4" x 4mm,

- 3.50 for solar Array System, minimum height 5 meters. To be Ls 1 installed as
directed by the supervising Engineer

3.6

Fittings and Accessories

Supply, deliver , fix, test and commission the following materials:

Supply and install armored Copper underground Cable,

- 3.601 10mm² X 4 core M 25

Supply and install Submersible PVC FLAT cable, 10mm² x

- 3.602 M 90

4 core

- 3.603 Londex (Sensor Cable), Twin, Double Insulated. M 90

- 3.604 1.5mm*2 CORE underground cable M 25

- 3.605 Cable Joint (4-16MM0 ST 16 No. 2

- 3.606 Cable Ties Black Pks 1

- 3.607 Pump stand, stainless steel Ls 1

- 3.608 PVC Insulating Tape 1", Black No. 20

Supply and install DC enclosure Complete with inline

- 3.609 1100VDC Fused isolator (PV Disconnect 4string PV No. 1
Disconnect switch)

3.61	PV Protect 100 VDC 125A	No.	1	
3.611	Lightning arrester	No.	1	
3.612	Copper Earth Cable 6MM	M	20	
3.613	Copper Earth Rod, 4ft c/w Clamp	No.	1	
3.614	Supply and install , test and commision 10mm 2 PV Cable core 1000VDC Tinnd copper; insulation : XLPO ; Insulation colour : black cable management in pvc Conduit.	M	30	
3.615	Supply and install , test and commision 10mm 2 PV Cable core 1000VDC Tinnd copper; insulation : XLPO ; Insulation colour : red cable management in pvc Conduit.	M	30	
3.616	Connection fittings to existing water system			
3.617	Adaptor set 65mm (2½)	Nr.	1	
3.618	Galvanised steel Reducing socket 75x65mm	Nr.	1	
3.619	Galvanised steel Barrel -nipple 75mm	Nr.	1	
3.62	Galvanised steel Crane socket 75mm	Nr.	10	
3.621	Supply and install 75mm dia. Non-Return Valve and associated fittings of approved quality	No.	1	
3.622	DN110 HDPE PN25 fusion stub complete with flange, bolts and nuts	No.	2	
3.623	Provide for joints butt fusion to engineers approval.	Ls	1	
	STD CHAMBERS			
3.70	Supply all Materials and Construct a Standard valve chambers 1mx1mx1m complete with steel manhole cover and a padlock to house all offtake appliances.	Nr	4	
	Amount Carried to Summary Page			
BILL 4 PROVISIONAL SUM				
	Allow a provisional sum of nighty thousand kenya shillings for Contingency to be expended on exclusive direction of the project manager upon evident project need.	Item	1	
GRAND SUMMARY				
BILL 1.0	PRELIMINARIES AND GENERAL ITEMS			

BILL 2.0	RISING MAIN	
BILL 3.0	PUMP INSTALLATION AND SOLARIZATION	
BILL 4.0	PROVISIONAL SUM OF NIGHTY THOUSAND KENYA SHILLINGS	
SUBTOTAL		
	Public Procurement Capacity Building Levy order 2023 which is 0.03% of the total cost before tax (Pursuant to PPRA Circular No.1 of 2024	
	16% VAT	
	GRAND TOTAL TAKEN TO FORM OF TENDER	

SSSSSSSSSS