

COUNTY GOVERNMENT OF KERICHO**PROPOSED EXPANSION OF BURETI WATER SUPPLY****CONSTRUCTION OF 37.1KM WATER PIPELINE EXTENSION AND STORAGE TANKS****KAPSUSER -KABARTEGAN -RORET**

ITEM	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
No.				Kshs	KShs.
1	Preliminaries and General conditions				
1.1	Bill Board: allow for erection and maintenance of metallic sign post	Item	L/S		50,000
1.2	Allow for project supervision	Item	L/S		1,500,000
1.3	Mobilizing and demobilizing of materials and Equipment to site	Item	L/S		500,000
1.4	Provision for wayleaves and property damage	Item	L/S		550,000
1.5	Insurance for works and contractor's equipment	Item	L/S		350,000
1.6	Insurance for contractor's Personnel	Item	L/S		450,000
1.7	Allow provisional sum for compliance NEMA	Item	L/S		200,000
1.8	Provision of the micro tunnels of 12 meters 6" complete with casing	Item	L/S		2,000,000
	Sub Total				5,600,000

	CLASS E: EARTHWORKS				
2	Common Earthworks for Pipe Laying NOTE: The cost shall include for all strutting, shuttering, stabilizing the earth faces of trenches and keeping the trenches free of water by pumping or other means and cost of used selected soil from the excavated materials in bed and surround to pipes as specified prior to the backfilling of the trench. The rate shall cover all effort to obtain the required compaction ratios and Genaral works e.g. site clearance				
2.1	Excavate trench in all materials include for joint holes, trimming sides and preparing trench bottom, backfill with part of the materials and compact. Depth of excavation not to exceed 1.5m(minimum depth 1M) and width not less than 600 mm. For pipes size:				
2.2	160mm Dia. HDPE Pipe PN 16 SDR 11	M3	4,500		
2.3	110 mm Dia. HDPE Pipe PN 16 SDR 11	M3	12,240		
2.4	90 mm Dia. HDPE Pipe PN 16 SDR 11	M3	2,250		
2.5	63 mm Dia. HDPE Pipe PN 16 SDR 11	M3	4,680		
2.6	32 mm Dia. HDPE Pipe PN 16 SDR 11	M3	6,300		
	Sub Total				
3.0	Testing of works				
3.1	Pipeline testing and commissioning of the Pipeline including provision of all equipment, materials and works necessary for testing such as but not limited to thrust blocks, anchor blocks, provision, transportation and use of water, pipe fittings, disposal of used water.	M	37,100		
3.2	Disinfection of Pipeline : flushing with clear water, filling with water containing 0.05g/l calcium hyper chlorite, left for 24 hours. This includes supply of necessary equipment, materials, chemicals and water, measurement of residual chlorine, all as specified and safe disposal of disinfecting water to Engineer's approval.	M	37,100		
	Sub Total				

4	<u>CLASS I: PIPE WORK - PIPES</u>				
4.1	Supply and install				
4.1.1	160mm Dia. HDPE Pipe PN 16 SDR 11	M	5,000		
4.1.2	110 mm Dia. HDPE Pipe PN 16 SDR 11	M	13,600		
4.1.3	90 mm Dia. HDPE Pipe PN 16 SDR 11	M	5,000		
4.1.4	63 mm Dia. HDPE Pipe PN 16 SDR 11	M	6,500		
4.1.5	32 mm Dia. HDPE Pipe PN 16 SDR 11	M	7,000		
	Sub Total				
5	TRANSPORT FROM SITE STORE, LAY PIPE IN TRENCH				
5.1	Allow for excavation, preparation of surfaces, disposal of excavated material, shoring sides of excavation and backfilling.				
5.1.1	160 mm Dia. HDPE Pipe PN 16 SDR 11	M	5,000		
5.1.2	110 mm Dia. HDPE Pipe PN 16 SDR 11	M	13,600		
5.1.3	90 mm Dia. HDPE Pipe PN 16 SDR 11	M	5,000		
5.1.4	63 mm Dia. HDPE Pipe PN 16 SDR 11	M	6,500		
5.1.5	32 mm Dia. HDPE Pipe PN 16 SDR 11	M	7,000		
	Sub Total				
6	INSTALLATION OF MECHANICAL FITTINGS (Internally and externally epoxy resin powder coated)				
	Transport to Site, Store and install Mechanical fittings				
6.1	Install fittings				
6.1.1	PN16/ SDR11 Pipe Joints				

6.1.2	160 mm straight sockets with stop rings.	Nr	420		
6.1.3	160 mm flange adaptors with stop rings.	Nr	16		
6.1.4	Tee for air valve (flanged) 160mm by 160mm by 160 mm with stop rings.	Nr	7		
6.1.5	160 mm Elbow with stop rings.	Nr	2		
6.1.6	160 mm by 110 mm reducing tee with stop rings.	Nr	2		
6.1.7	110 mm straight sockets with stop rings.	Nr	276		
6.1.8	Reducing socket 160mm by 110mm with stop rings.	Nr	1		
6.1.9	110 mm flange adaptors with stop rings.	Nr	24		
6.1.10	Tee for air valve (flanged) 110mm by 110mm by 110 mm with stop rings.	Nr	7		
6.1.11	110 mm by 90 mm reducing tee with stop rings.	Nr	3		
6.1.12	Reducing socket 110mm by 90mm with stop rings.	Nr	4		
6.1.13	Tee for air valve (flanged) 90mm by 90mm by 90 mm with stop rings.	Nr	3		
6.1.14	90 mm straight sockets with stop rings.	Nr	26		
6.1.15	90 mm flange adaptors with stop rings.	Nr	12		
6.1.16	90 mm Elbow with stop rings.	Nr	4		
6.1.17	90 mm by 63 mm reducing tee with stop rings.	Nr	4		
6.1.18	63 mm straight sockets with stop rings.	Nr	30		
6.1.19	Reducing socket 90mm by 63mm with stop rings.	Nr	4		
6.1.20	Equal Tee 63mm by 63mm by 63mm with stop rings.	Nr	8		
6.1.21	63 mm male adaptors with stop rings.	Nr	16		
6.1.22	63 mm Elbow with stop rings.	Nr	4		

6.1.23	Reducing socket 63mm by 32mm with stop rings.	Nr	10		
6.1.24	63 mm End cap with stop rings.	Nr	4		
6.1.25	Saddle Clamps 63mm by 32mm with stop rings.	Nr	20		
6.1.26	32 mm straight sockets with stop rings.	Nr	40		
6.1.27	Equal Tee 32mm by 32mm by 32mm with stop rings.	Nr	20		
6.1.28	32 mm female adaptors with stop rings.	Nr	20		
6.1.29	32 mm male adaptors with stop rings.	Nr	20		
6.1.30	32 mm End Caps with stop rings.	Nr	10		
6.2.1	PN16/ SDR11 Valve Fittings				
6.2.2	6" Resilient seated flanged gate valve, DN 160, PN16, with necessary numbers of bolts, nuts, washers,	Nr	6		
6.2.3	4" Resilient seated flanged gate valve, DN 100, PN16, with necessary numbers of bolts, nuts, washers,	Nr	12		
6.2.4	3" Resilient seated flanged gate valve, DN 80, PN16, with necessary numbers of bolts, nuts, washers, etc	Nr	5		
6.2.5	2" Pegler Gate valves (Female Threaded)	Nr	6		
6.2.6	1" Pegler Gate valves (Female Threaded)	Nr	12		
6.2.7	6" Air valves (Flanged) DN 160, PN16, with necessary numbers of bolts, nuts, washers, etc	Nr	7		
6.2.8	4" Air valves (Flanged) DN 100, PN16, with necessary numbers of bolts, nuts, washers, etc	Nr	7		
6.2.9	3" Air valves (Flanged) DN 80, PN16, with necessary numbers of bolts, nuts, washers, etc	Nr	3		
6.2.10	2" Air valves (Threaded) DN 50, PN16	Nr	3		
6.2.11	1" Air valves (Threaded)	Nr	10		
6.2.12	6" Waltman Type Bulk Water Meter (Flanged) DN 160, PN16, with necessary with necessary numbers of bolts, nuts, washers, etc	Nr	1		

6.2.13	4" Waltman Type Bulk Water Meter (Flanged) DN 100, PN16, with necessary with necessary numbers of bolts, nuts, washers, etc	Nr	1		
6.2.14	3" Waltman Type Bulk Water Meter (Flanged) DN 80, PN16, with necessary with necessary numbers of bolts, nuts, washers, etc	Nr	1		
	Sub Total				
7	CLASS J: PIPE WORK - FITTINGS AND VALVES				
7.1	Gate Valves / Sluice Valves/Bulk Meter PN 16 (SDR11/13.6 Fittings)				
7.1.1	Supply and install G.V, A.V and Bulk Meters				
7.1.2	Supply and install flanged Sluice Valve 3" using Mechanical Joint flange adaptors	Nr	2		
7.1.3	Supply and install Gate Valve 2" using Mechanical joint male adaptors	Nr	4		
7.1.4	Supply and install air valves 3" using Mechanical joint Tee for Air valve	Nr	1		
7.1.5	Supply and install threaded air valves 2" with 30mm GI nipple threaded on one side.	Nr	1		
7.1.6	Supply and install flanged bulk meter 3" using Mechanical joint flanges	Nr	1		
	Sub Total				
8	<u>CLASS K: PIPE WORK - MANHOLES AND PIPE WORK ANCILLARIES</u>				
	Manholes and other chambers, ducts, culverts, crossings, trust and anchor blocks, reinstatement and others as listed and specified in drawings.				
	<u>Note:- Items for work in this class shall include:-</u> - <u>Excavation, preparation of surfaces,</u> <u>disposal of excavated material,</u> <u>upholding sides of excavation,</u> <u>backfilling and removal of dead</u> <u>services.</u> - <u>Concrete, reinforcement, formwork,</u> <u>joint and finishes</u>				

8.1	IN SITU CHAMBERS				
	Depth not exceeding 1.5 m				
8.2	Provide all materials and construct valve chambers. Include for supply and fixing of pre-cast concrete cover. Internal dimensions 1200 x 1200 mm.	Nr	24		
	Other Pipework Ancillaries				
8.3	Supply and fix marker posts for water main route, road crossings, change of direction, etc. and at air valves, washouts, fire hydrants and valve chambers.	Nr	190		
	Sub Total				
9	Masonry Water Tank				
9.1	Construct 2 No masonry water storage tank 225m ³ fully installed with the Ball valve and outlet meter at Cheromit and Kabartegan school		LS		
9.2	Construct 1 No masonry water storage tank 150m ³ fully installed with the Ball valve and outlet meter at Tulwet		LS		
	Sub Total				
10	Water meters				
10.1	Supply 1500 No. customer water meters R200 series	No	1,500		
10.2	Supply inline master meters and install them	No	4		
	Sub Total				
	CONTINGENCIES				
	Allow 5% of Contingency				
	Sub - Totals				
	Add VAT @ 16%				
	Grand- Totals				