

	<b>COUNTY</b>	<b>NAKURU</b>			
	<b>CONSTITUENCY</b>	<b>NAIVASHA</b>			
	<b>SUB-COUNTY</b>	<b>NAIVASHA</b>			
	<b>WARD</b>	<b>MAEILLA</b>			
	<b>PROJECT</b>	<b>UPPER MAEILLA WATER WORKS</b>			
	<b>SUBJECT</b>	<b>Construction of water reservoir and pipework in Upper Maiella</b>			
<b>ITEM</b>	<b>DESCRIPTION</b>	<b>UNIT</b>	<b>QTY</b>	<b>RATE (Kshs)</b>	<b>AMOUNT</b>
<b>BILL NO 1:INTAKE WORKS (Intake housing and intake area clearance/desilting)</b>					
	<b>INTAKE HOUSING</b>				
<b>1.00</b>	<b>GENERAL ITEMS</b>				
1.01	Erection and maintenance of Project Signboard as directed by the Engineer.	No	1		
1.02	Testing and commissioning of the works including labelling, plaque (2No) etc as directed by the Engineer (2No tanks and Intake housing)	No	1		
	Allow PC sum for survey and design	Item	L/Sum	30,000	30,000.00
	<b>Sub-Total</b>				
1.10	<b>SETTING OUT AND EARTH WORKS</b>				
1.11	General site clearance and setting out	m <sup>2</sup>	100		
1.12	Strip topsoil average 200mm to remove vegetable soil and remove from site.	m <sup>3</sup>	30		
1.13	Excavate pit foundation to a depth n.e. 1m.	m <sup>3</sup>	27		
	<b>Sub-Total</b>				
	<b>CONCRETE WORKS</b>				
<b>1.20</b>	<b>Supply materials, transport, place and compact</b>				
1.21	Approved hardcore filling 300mm thick	m <sup>3</sup>	14		
1.22	Reinforced concrete class 20/20 in tank floor slab .	m <sup>3</sup>	6		
1.23	Reinforced concrete class 20/20 in tank roof slab .	m <sup>3</sup>	6		
1.24	Ditto and plaster internal tank surfaces with 25mm thick c/c screed.	m <sup>2</sup>	75		
1.25	Supply materials and construct 225mm masonry wall	m <sup>2</sup>	75		
	<b>Sub-Total</b>				
<b>1.30</b>	<b>FORMWORK</b>				
1.31	Supply materials and construct formwork for roof slab and collumn.	m <sup>2</sup>	40		
	<b>Sub-Total</b>				
	<b>REINFORCEMENT</b>				
<b>1.40</b>	<b>Supply, transport, cut, bend and fix</b>				

1.41	Y-10 bars in floor slab @ 200mm c/c as directed	Kg	30		
1.42	Y-12 bars in collumn @ 170mm c/c as directed	Kg	8		
1.43	Y-12 bars in roof slab @ 200mm c/c as directed	Kg	32		
1.44	Y- 16 bars to wall @ 200mm c/c as directed	kg	18		
	<b>Sub-Total</b>				
	<b>STEELWORKS</b>				
<b>1.50</b>	<b>Supply and fix</b>				
1.51	2.1m x 0.9m burglar proof door.	No	1		
	<b>Sub-Total</b>				
<b>1.60</b>	<b>HARDCORE</b>				
1.61	Supply materials, transport to site, fill and compact 300mm thick approved hardcore materials on tank foundation base.	m <sup>3</sup>	18		
	<b>COMMUNAL WATER POINT</b>				
1.62	Supply materials, transport to site, Construct CWP as per the DRG provided	No	1		
	<b>Sub-Total</b>				
	<b>Total</b>				
	<b>BILL NO 2:PIPEWORK</b>				
<b>2.00</b>	<b>PIPING MATERIALS</b>				
	<b>FROM INTAKE TO THE 1ST TANK</b>				
2.01	Supply, deliver to site, 1½" diameter PVC Class 'D'	m	1000		
2.02	Supply, deliver to site, 1½" diameter PVC Class 'D'	m	2600		
2.10	<b>PIPE LAYING</b>				
<b>2.10</b>	<b>SITE CLEARANCE &amp; EARTH WORKS</b>				
2.11	Clear the pipeline route of all shrubs and bushes and remove from site	m	3600		
2.12	Excavate pipeline trench average width 0.45m and depth 0.75m - 1m over medium ground	m	3600		
2.13	Backfill and ram excavated material in trench on pipe laying on medium ground	m	3600		
	<b>Sub-Total</b>				
<b>2.20</b>	<b>PIPELAYING &amp; FITTINGS</b>				
2.21	Lay, test and commission pipes in trench.	No	600		
	<b>Sub-Total</b>				

	<b>TOTAL</b>				
	<b>BILL No 3: CATTLE TROUGH</b>				
<b>3.00</b>	<b>SETTING OUT AND EARTH WORKS</b>				
3.01	General site clearance and setting out	m <sup>2</sup>	70		
3.02	Excavate oversite 200mm to remove vegetable soil and deposit 50m away.	m <sup>2</sup>	70		
3.03	Excavate foundation base commencing stripped level n.e. 1.0m. deep and deposit as directed.	m <sup>3</sup>	67		
	<b>Sub-Total</b>				
3.10	<b>TROUGH CONSTRUCTION</b>				
3.11	Supply, deliver, place and compact average 150mm thick approved hardcore on trough foundation to receive stone pitching/trough slab.	m <sup>3</sup>	11		
3.12	Ditto stone pitching round the trough average size 225mm and sloping outwards (1:200).	m <sup>2</sup>	70		
3.13	Supply, deliver, place and compact concrete class 20 in trough slab	m <sup>3</sup>	2		
3.14	Supply, deliver, place and construct 150mm rectangular masonry wall	m <sup>2</sup>	12		
3.15	Ditto and fix R-6 bars in wall.	Kg	5		
3.16	Supply, deliver and plaster internal trough surfaces with 25mm thick c/s screed (1:3)	m <sup>2</sup>	57		
3.17	Supply, deliver and fix weld mesh (2.4 x 1.2) mesh 75 x 50mm of gauge 8 to concrete slab	No.	4		
3.18	Excavate trench to receive supply pipe n.e 1.0m deep and backfill.	m <sup>3</sup>	1		
3.19	Supply, deliver and fix diameter 25mm G.I supply pipe and all necessary accessories	m	6		
3.20	Drill stone wall to prepare a hole to ditto and make good with c/s mortar	Item	L/Sum		
3.21	Supply and fix 25mm diameter ball valve	Item	L/Sum		
	<b>Total for Cattle Trough</b>				
	<b>Total</b>				
	<b>BILL No 4: WATER KIOSK</b>				
<b>5.00</b>	<b>WATER KIOSK CONSTRUCTION (2.5M X 2.5M-Internal measurements)</b>				
5.01	Supply materials, transport to site and construct strip foundation	m <sup>3</sup>	1		

5.02	Supply materials and construct 225mm masonry wall	m <sup>2</sup>	8		
5.03	Supply materials, transport to site, fill and compact 300mm thick approved hardcore materials on water kiosk foundation base.	m <sup>3</sup>	2		
5.04	Ditto 50 mm thick blinding layer.	m <sup>3</sup>	1		
5.05	Supply, transport, cut, bend and fix Y- 10 strip fnd	kg	23		
5.06	Supply, transport, cut, bend and fix Y- 16 collumn at corners of pumphouse	kg	75		
5.07	Supply materials, transport, place and compact concrete class 20 in collumn.	m <sup>3</sup>	1		
5.08	Supply materials, transport, place and compact concrete class 20 in floor slab.	m <sup>3</sup>	1		
5.09	Supply materials and construct 150mm masonry wall	m <sup>2</sup>	24		
5.10	Supply materials and construct formwork to roof slab.	m <sup>2</sup>	7		
5.11	Supply, transport, cut, bend and fix Y- 12 roof slab @ 150mm c/c	kg	92		
5.12	Supply material and place concrete class 20 to roof slab.	m <sup>3</sup>	1		
5.13	Ditto and plaster internal/external surfaces with 25mm thick c/c screed.	m <sup>2</sup>	46		
5.14	Supply materials and construct formwork to sides of column n.e 4m high	m <sup>2</sup>	6		
	<b>Sub-Total</b>				
<b>5.16</b>	<b>EXTRA OVER ITEMS</b>				
5.17	Supply materials fabricate and fix on walling a barglar proof door of size 2100mm x 900mm.	No	1		
5.18	Supply materials fabricate and fix on walling a barglar proof window of size 1200mm x 900mm.	No	1		
5.19	Supply materials and paint the walls with emulsion paint as directed. <b>(internal and external walls)</b>	m <sup>2</sup>	46		
5.20	Supply materials and undertake plumbing works on the water kiosk (include meter installation) as directed	item	l/sum		
5.201	<b>NB: MAKE CONNECTIONS FROM THE EXISTING PIPELINE (3No 3" gate valves, 6No 1" gate valves, 1" PVC pipes class 'D', 3No 1" GI pipes and 6No 1" bends and any fabrication required)</b>	Item	l/sum		

5.202	Supply materials to site and construct a manhole 0.6m x 0.6m x 1.0m internal measurement.	No	6		
	<b>Sub-Total</b>				
	<b>Total</b>				
	<b>TOTAL FOR 3No</b>				

5.21	<b>10m<sup>3</sup> plastic tank</b>				
5.22	Supply 5m <sup>3</sup> Roto tank, deliver to site and place it at the top of the slab and include the connections of the tank. As directed by the Engineer on site (Inlet and outlet)				
5.23	10m <sup>3</sup> plastic tank (Roto Tank)	No	1		
	<b>Sub-Total</b>				
	<b>TOTAL FOR 3No TANKS</b>				
	<b>Total for Water Kiosks FOR 3No WATER KIOSKS</b>				
	<b>BILL NO 5:50m<sup>3</sup> MASONRY STORAGE TANK</b>				
<b>6.00</b>	<b>SETTING OUT AND EARTH WORKS</b>				
6.01	General site clearance and setting out	m <sup>2</sup>	70		
6.02	Strip topsoil 200mm to remove vegetable soil and remove from site.	m <sup>2</sup>	12		
6.03	Excavate pit foundation to a depth n.e. 1m.	m <sup>3</sup>	25		
	<b>Sub-Total</b>				
	<b>CONCRETE WORKS</b>				
<b>6.00</b>	<b>Supply materials, transport, place and compact</b>				
6.10	300mm thick approved hardcore materials on tank foundation base.	m <sup>3</sup>	21		
6.11	Blinding concrete class 15/20 ,50 mm thick .	m <sup>2</sup>	2		
6.12	Reinforced concrete class 20/20 in tank floor slab.	m <sup>3</sup>	11		
6.13	Reinforced concrete class 20/20 to roof slab. Include fixing 18" x 24" steel manhole cover with frame.	m <sup>3</sup>	10		
6.14	Reinforced concrete class 20/20 in column.	m <sup>3</sup>	1		
6.15	Ditto and plaster internal and external tank surfaces with 25mm thick c/c screed.	m <sup>2</sup>	95		
6.16	Supply materials and construct 225mm circular masonry wall	m <sup>2</sup>	60		
6.17	Apply bondex as per DRG	kg	46		
	<b>Sub-Total</b>				
	<b>FORMWORK</b>				
<b>6.18</b>	<b>Supply materials and construct formwork to</b>				
6.19	Sides of column n.e 4m high	m <sup>2</sup>	8		
6.20	Roof slab include props.	m <sup>2</sup>	50		
	<b>Sub-Total</b>				

	<b>REINFORCEMENT</b>				
<b>6.30</b>	<b>Supply, transport, cut, bend and fix</b>				
6.31	Y-12 bars in floor slab @ 200mm c/c.	Kg	425		
6.32	Y-10 bars in wall.	kg	400		
6.33	Y-12 bars in roof slab @ 200mm c/c.	Kg	425		
	<b>Sub-Total</b>				
	<b>STEELWORKS</b>				
<b>6.40</b>	<b>Fabricate and fix</b>				
6.41	Internal ladder to the inside of the tank	No	1		
6.42	Internal ladder to the outside of the tank (movable)	No	1		
6.43	Supply and install 1" float valve	No	1		
	<b>Sub-Total</b>				
<b>6.50</b>	<b>Overflow</b>				
6.51	2" dia 1.0m long G.I. pipe threaded with hoppers welded	No.	1		
	<b>Sub-Total</b>				
<b>6.60</b>	<b>Outlet</b>				
6.61	2" dia 2m long G.I. pipe threaded both sides	No.	1		
6.62	2" gate valve	No	1		
6.63	2" GI bend	No.	1		
6.64	2" flange	No.	1		
6.65	2" x 1½" reducer	No.	1		
6.66	2" socket union	No.	2		
6.67	2" dia 0.5m long G.I. pipe threaded both sides	No.	2		
	<b>Sub-Total</b>				
<b>6.70</b>	<b>Washout</b>				
6.71	3" dia 2m long G.I. pipe threaded both sides	No.	1		
6.72	3" dia 0.5m long G.I. pipe threaded both sides	No.	1		
6.73	3" gate valve	No	1		
6.74	3" GI bend	No.	1		
6.75	3" flange	No.	1		
6.76	<b>Sub-Total</b>				
<b>6.77</b>	<b>Valve chamber</b>				
1.63	Supply materials to site and construct a standard manhole 1.0m x 1.0m x 1.0m internal measurement.	No	1		
	<b>Sub-Total</b>				
	<b>TOTAL</b>				
	<b>TOTAL FOR No TANK</b>				

	<b>SUMMARY PAGE</b>				<b>AMOUNT</b>
	BILL 1:INTAKE WORKS				
	BILL 2: PIPEWORK				
	BILL 3:CATTLE TROUGH				
	BILL 4: WATER KIOSK				
	BILL 5:MASONRY STORAGE TANK				
	<b>TOTAL</b>				
	Add 5% for Supervision and Monitoring				
	<b>TOTAL</b>				
	Add 16% VAT				
	<b>GRAND TOTAL</b>				