

COUNTY GOVERNMENT OF BUSIA
DEPARTMENT OF WATER, IRRIGATION, ENVIRONMENT, NATURAL RESOURCES, CLIMATE CHANGE & ENERGY
REHABILITATION OF ALEMA COMMUNITY WATER PROJECT AND DEVELOPMENT OF DAKHIRO COMMUNITY WATER PROJECT-
NANGINA AND AGENGA NANGUBA WARD

BILL NO. 1

PRELIMINARY AND GENERAL ITEMS

ITEM No.	DESCRIPTION AND SPECIFICATIONS	UNIT	QTY	RATE (KSH)	AMOUNT (KSH)
1.1	Contractual Requirements				
1.1.1	Allow a provisional sum of Kshs 50,000 for performance security in accordance with the conditions of contract	sum	1	50,000.00	50,000.00
1.1.2	Allow a provisional sum of Kshs 50,000 for provision of insurance of works and contractor's equipment and insurance against accidents to workmen in accordance with the conditions of contract.	sum	1	50,000.00	50,000.00
1.2	SPECIFIED REQUIREMENTS				
1.2.1	Contractor's mobilization and demobilization: mobilizing staff and equipment to site, setting camp, provision of facilities to run the camp and maintaining the camp throughout the construction period and demobilizing after the completion of the works. Include for temporary access of land required by contractor	sum	1		
1.2.2	Provide, erect and maintain a sign post. The location to be determined on site by the Engineer	No	3		
1.2.3	Allow a provisonal sum Kshs 100,000 for Engineering survey and provision of As Built Drawings	sum	1	100,000.00	100,000.00
1.2.4	Allow a Prime cost sum for supervision and site meetings.	sum	1	350,000.00	350,000.00
1.2.5	Allow a percentage adjustment for contractors cost and overhead for items (1.2.3 & 1.2.4) above	%	450,000.00	10%	45,000.00
SUB-TOTAL CARRIED TO COLLECTION SHEET					

BILL NO. 2**PROPOSED REHABILITATION OF ALEMA COMMUNITY WATER PROJECT**

ITEM No.	DESCRIPTION AND SPECIFICATIONS	UNIT	QTY	RATE (KSH)	AMOUNT (KSH)
2.1	ELECTRO-MECHANICAL WORKS				
2.1.1	Supply, install and test a stainless steel submersible pumping unit with a discharge of 17m ³ /h against a TDH of 220m. The recommended motor is 15kw.	No.	1		
2.1.2	Supply, install and test 260W Monocrystalline Solar modules.	No.	15		
2.1.3	Supply, install and operate an approved 3 Phase hybrid inverter. Technical literature has to be provided as generated by the inverters manufacturer software.	No.	1		
2.1.4	Supply and install standard PVC flat submersible drop cable - 4core 6mm ²	m	75		
2.1.5	Supply and install standard londex dual core cable	m	75		
2.1.6	Supply and install electrical AC thermoset XLPE power Cu cables-4core armoured 6mm ²	M	10		
2.1.7	Supply and install electrical AC power Cu cables-4core armoured 1.5mm ²	M	10		
2.1.8	Supplying and laying of 6mm ² 1core flexi copper conductor DC cable	m	100		
2.1.9	Supply and install Conduits, cable trays, trunking, and all other materials required for complete installation works	LS	1		
2.1.10	Supply and install PV protect	No.	1		
2.1.11	Supply and install a PV Disconnect Switch	No.	1		
2.1.12	Supply and install PV combiner box	No.	1		
2.1.13	Supply and Installation of Lightning Protection System to include 16mm ² copper tape, Copper plate, earth pits and lightning arrestors as directed by the Engineer	Lot	1		
2.1.14	Supply and Installation of Earthing System to include 10mm ² copper earth cable, earth rods and earth pits	Lot	1		
2.1.15	Provide materials and fabricate solar mounting structure for the extra 10no, 260w solar modules. Rate to include for the spray painting of the existing solar mount structure (95no. 260w 3m high structure).	No.	1		
2.2	OFFICE BLOCK REHABILITATION				
2.2.1	Allow a provisional sum of Kshs 200,000 for the repair of the office block as directed by the Engineer.	Sum	1	200,000.00	200,000.00
2.3	FENCING				
2.3.1	Supply and install Chainlink of dimension 3mm x 2100mm	roll	2		
2.4	SECURITY LIGHTS				
2.4.1	Supply, install and test 300 w solar powered security flood lights as directed by the Site Engineer	No.	2		

2.5	PIPELINE WORKS				
	DISTRIBUTION LINES				
	EXCAVATION				
	To include for all trimmings to level, bedding material, compacting, disposal of surplus materials and backfilling with approved soil and reinstatement.				
2.5.1	Excavation in normal soil to a depth n.e 0.75m	CM	720		
2.5.2	Ditto in hard rock	CM	135		
	PIPEWORK				
	Supply, transport to site, store ready for installation including jointing materials, Fittings bolts, gaskets as applicale. Lay and joint the pipeline, include for pressure testing as specified				
2.5.3	OD 75mm PN 12.5 HDPE pipe.	m	400		
2.5.4	OD 50mm PN 12.5 HDPE pipe.	m	2000		
2.6	VALVE CHAMBER				
2.6.1	Provide all materials and rehabilitate the existing borehole chamber and 1 no. valve chamber.	No.	2		
2.7	MARKER POSTS				
2.7.1	Supply and install reinforced precast marker posts 100mm x 100mm x 800mm painted blue and inscribed with ' MAJI', ' WO' and ' AV' in white colour as instructed by the Site Engineer.	No.	10		
2.8	REHABILITATION OF A PIT LATRINE				
2.8.1	Supply and install standard metalic doors as directed by the Engineer	No	2		
2.8.2	3 coats of approved emulsion gloss paint to all walls	m2	10		
SUB-TOTAL CARRIED TO COLLECTION SHEET					

BILL No. 3
PROPOSED DEVELOPMENT OF DAKHIRO COMMUNITY WATER PROJECT

ITEM No.	DESCRIPTION AND SPECIFICATIONS	UNIT	QTY	RATE (KSH)	AMOUNT (KSH)
3.1	BUNANDI TANKS TO DAKHIRO B TANK				
	EXCAVATION				
	To include for all trimmings to level, bedding material, compacting, disposal of surplus materials and backfilling with approved soil and reinstatement.				
3.1.1	Excavation in soft rock to a depth n.e 0.75m	CM	412.5		
3.1.2	Mass concrete C10/40 (1:3:6) along the GI Pipes sections as directed by the Project Engineer.	CM	1.8		
	PIPEWORK				
	Supply, transport to site, store ready for installation including jointing materials, Fittings bolts, gaskets as applicale. Lay and joint the pipeline, include for pressure testing as specified				
3.1.3	DN 40mm GI Pipes	m	400		
3.1.4	OD 50mm PN 10 HDPE pipe.	m	1650		
3.2	VALVE CHAMBER				
3.2.1	Excavate for, provide all materials and using dressed stones, construct complete inspection valve chambers at the pipe junctions. Internal dimensions 800 x 800 x 1000 mm. Rates to include for, concrete lockable inspection covers,as detailed in the drawings.	No.	3		
	1 No. washout valve				
3.2.2	Allow for all fittings and connections in valve chamber as directed by the Site Engineer as approved by the Site Engineer. Rates to include DN 50mm sluice valve, OD 50mm HDPE washout pipe	No.	1		
	Valve and Fittings				
3.2.3	Supply and install DN 40mm Gate valve and all fittings	No.	2		
3.3	DISTRIBUTION LINES WITHIN DAKHIRO				
	EXCAVATION				
	To include for all trimmings to level, bedding material, compacting, disposal of surplus materials and backfilling with approved soil and reinstatement.				
3.3.1	Excavation in soft rock to a depth n.e 0.75m	CM	375		
3.3.2	Mass concrete C10/40 (1:3:6) along the GI Pipes sections as directed by the Project Engineer.	CM	4.5		
	PIPEWORK				
	Supply, transport to site, store ready for installation including jointing materials, Fittings bolts, gaskets as applicale. Lay and joint the pipeline, include for pressure testing as specified				
3.3.3	DN 32mm GI Pipes	m	100		
3.3.4	OD 40mm PN 10 HDPE pipe.	m	1500		
3.4	VALVE CHAMBER				
3.4.1	Excavate for, provide all materials and using dressed stones, construct complete inspection valve chambers at the pipe junctions. Internal dimensions 800 x 800 x 1000 mm. Rates to include for, concrete lockable inspection covers,as detailed in the drawings.	No.	3		

	1 No. washout valve				
3.4.2	Allow for all fittings and connections in valve chamber as directed by the Site Engineer as approved by the Site Engineer. Rates to include DN 50mm sluice valve, OD 63mm HDPE washout pipe	No.	1		
	Valve and Fittings				
3.4.4	Supply and install DN 32mm Gate valve and all fittings	No.	2		
	3.5 REHABILITATION OF WATER KIOSKS				
3.5.1	Allow a provisional sum of Kshs 100,000 for the rehabilitation of existing 2no. water kiosks and connection of water to the kiosks	Sum	1	100,000.00	100,000.00
	3.6 REHABILITATION OF DAKHIRO B' MASONRY TANK				
3.6.1	18mm plaster in motor 1:3. Rate to include hacking and water proof cement for the 30CM masonry tank.	SM	104		
SUB-TOTAL CARRIED TO COLLECTION SHEET					

BILL NO.4:**PROPOSED REHABILITATION OF ONANA WATER SUPPLY**

ITEM No.	DESCRIPTION AND SPECIFICATIONS	UNIT	QTY	RATE (KSH)	AMOUNT (KSH)
4.1	Supply and Installation of Materials				
4.1.1	Supply, install and test an approved horizontal high-pressure centrifugal multistage pump coupled with a 3 phase induction motor mounted on a common baseplate for Onana water supply. Q=25m3/hr, H=180m	No.	1		
4.1.2	Supply, install and test an approved submersible pump end complete with a motor for Namdiri spring sump. Q = 20m3/hr, H=60m	No.	1		
4.1.3	Supply, install and operate an approved 22kW Standard Star Delta Control panel.	No.	1		
4.1.4	Supply, install and operate an approved standard 7.5kw Direct Online Starter	No.	1		
4.1.5	Supply and install electrical AC thermoset XLPE power cables-4core armoured 16mm2 for the Mains power supply within the Power house.	M	30		
4.1.6	Supply and install AC MCCB 63A	No.	2		
4.1.7	Supply and install 63A Fuseswitch box and fuse carriers.	No.	1		
4.2	Mechanical Works				
4.2.1	Provide materials and construct Plinth for 1no. Pumping unit.	Lot	1		
4.2.2	Allow a provisional sum of Kshs 100,000 for the fabrication of the suction and delivery pipes within the pump house	Lot	1		
4.2.3	Supply and install a DN 100mm PN16 flanged end Sluice valve	No.	2		
4.2.4	Supply and install a DN 100mm PN16 flanged Non-Return valve	No.	2		
4.2.5	Supply and install approved pneumatic pressure gauge 25Bars	No.	1		
4.3	Pumphouse Rehabilitation				
4.3.1	Allow a provisional sum of Kshs 200,000 for the rehabilitation of the pumphouse and valve chambers as directed by the Project Engineer.	sum	1	200,000.00	200,000.00
4.4	Production Meter				
4.4.1	Supply, install and test a DN 100mm mechanical production meter.	No.	1		
4.5	Water Bowser Repair				
4.5.1	Allow a provisional sum of Kshs 700,000 for the repair of 1no. Water Bowser	sum	1	700,000.00	700,000.00
SUB -TOTAL CARRIED TO COLLECTION					

GRAND SUMMARY SHEET		
BILL NO.	DESCRIPTION	AMOUNT (KSHS)
	GRAND SUMMARY SHEET	
BILL NO. 1	PRELIMINARY AND GENERAL ITEMS	
BILL NO. 2	PROPOSED REHABILITATION OF ALEMA COMMUNITY WATER PROJECT	
BILL No. 3	PROPOSED DEVELOPMENT OF DAKHIRO COMMUNITY WATER PROJECT	
BILL NO.4:	PROPOSED REHABILITATION OF ONANA WATER SUPPLY	
	Sub-Total	
	Add 5% contingency	
	TOTAL ESTIMATES	
	Grand Total Carried Forward to Form of Tender	