

WSTF URBAN INVESTMENT PROGRAMME (UPC 8TH CALL)

WATER PIPELINE EXTENSION PROJECT FOR MOMBASA WATER SUPPLY SANITATION CO.LTD AT CHAMUNYU

ITEM	DESCRIPTION	UNIT	QTY	RATE (KE)	AMOUNT (KE)
1	PRELIMINARIES AND GENERAL				
1.1	CONTRACTUAL REQUIREMENTS				
1.2	Allow for provision of Insurance of Works and Contractor's Equipment in accordance with Clause of Section of the General Conditions, Bidding Document Volume.....	Item	1		
1.3	Allow for provision of Third Party Insurance (including Employer's Property) all in accordance with Clause of Section..... of the General Conditions, Bidding Document Volume.....	Item	1		
1.4	Allow for provision of Insurance against Accident to Workmen in accordance with Clause of Section ... of the General Conditions, Bidding Document Volume.....	Item	1		
2	SPECIAL REQUIREMENTS				
2.1	Contractor's Camp and Storage Yard: Allow for HIRING of the Contractor's Camp(s), Offices, Storage Yard and other facilities including mobilization, demobilization and movement of the works site on Completion. Include for all equipment, temporary measures, machines, tools, materials, facilities for workers, water and electricity supply etc. all as specified for execution of the Works, for the entire Contract Period. The Employer has no available land to offer for Contractor's Camp, storage of materials and preparation of concrete etc. Identification and procurement of suitable area of land for Contractor's Camp whether rented or purchased is the responsibility of the Contractor. Details of proposed camp / stores, location of land where the Contractor will establish his camp(s) to be submitted with the Bid.	Item	1		

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2.4	Test Running of the Scheme: Allow for Test Running all the Project Components for a period of 4 weeks upon completion and official commissioning of the Works. Test Running to be carried out in close liaison with the Water Services Provider's Staff. Contractor to allow for 'on job' training of Operation and Maintenance Staff, Tools, etc, and ensure that the operations are carried out full time on a 24 hour basis, all in accordance with- General and Particular Specifications,	Item	1		
2.5	Allow for provision of As-Built Drawings in accordance with Clause 147 - General and Particular Specifications of Bidding Document Volume II	Item	1		
3.00	Employer's Counterpart Staff Costs				
3.10	P.C. Sum of Kshs. 100,000 to cover costs of the Employer's Counterpart Staff assigned to the Project including transport, communication, allowances etc	pc	1	100,000	100,000.00
3.1.1	Add% for profit, administration, attendance upon, overheads, etc. for Item 3.10 above.	%			
4	Other Costs				
4.10	Allow a P.C. Sum of Kshs. 200,000 for Payments demanded by other Authorities for relocation of existing services (water pipelines, sewer liners power cable telcom cables etc), Road crossings, etc., including any statutory levies to relevant Authorities. Liaison with the relevant Authorities shall be the responsibility of the Contractor for the timely execution of the Works.	pc	1	200,000	200,000.00
4.1.1	Add% for profit, administration, attendance upon, overheads, etc. for Item 4.10 above.	%			
4.2	Allow a P.C. Sum of Kshs. 100,000 for Inspection and Witness Testing of Pipes, Fittings and Equipment at manufacturer's premises by the Employer, Engineer and their representatives.	pc	1	100,000	100,000.00

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4.2.1	Add% for profit, administration, attendance upon, overheads, etc. for Items 4.2. above.	%			
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ITEM No.	DESCRIPTION	UNIT	QTY	RATE (KE)	AMOUNT (KE)
4.3.1	Allow a P.C Sum of Kshs.1.00,000 for carrying out cadastral survey by licenced Surveyor, wayleave acquisition, etc., including obtaining approval of Director of Surveys or for any requisite Engineering Survey, as directed by the Engineer.	pc	1	100,000	100,000.00
4.3.2	Add% for profit, administration, attendance upon, overheads, etc. for Item 3.3.1 above.	%			
5	SPECIFIC CONDITIONS				
5.1	Allow for all specific works related to working along active pipelines and within sites of other active installations e.g storage tanks, etc. and maintaining continuity of water supply including protection of supports etc. of existing pipelines during construction activity.	Item	1		
5.3	Allow for excavation for and identification of extent/limits of existing pipelines including excavation, alignment, levels and other as-built details at pipeline interconnection points. Include for backfilling of excavated areas and production of ACAD drawings showing details of pipelines. These Works to be carried out prior to commencement of pipeline works.	Item	1		
6	ENVIRONMENTAL, SOCIAL, HEALTH AND SAFETY REQUIREMENTS				
6.1	Allow a P.C Sum of Kshs 100,000 for Quarterly Environmental Audit of the Contractor's ESMP by a registered NEMA Lead Expert.	Item	1	100,000	100,000.00
6.2	Allow a P.C Sum of Ksh 100,000 for Carrying out a Training program including stakeholder engagement and consultation for HIV/AIDS awareness, Sexually Transmitted Infections (STI), Sexually Transmitted Diseases (STD), Gender Based Violence (GBV) and Sexual Exploitation and Abuse (SEA).	Item	1	100,000	100,000.00

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6.3	Allow a P.C Sum of Ksh 1,00,000 for Training of Employer / Engineer's and Contractor's Staff on Environmental, Social, Health and Safety issues	Item	1	100,000	100,000.00
6.3.1	Add% for profit, administration, attendance upon, overheads, etc. for Items 6.1 to 6.3 above.	%			
PAGE TOTAL CARRIED FORWARD TO BILL COLLECTION SHEET					
ITEM No.	DESCRIPTION	UNIT	QTY	RATE (KE)	AMOUNT (KE)
6.4	Allow for any other costs associated with compliance with Environmental, Health and Safety Requirements as per the Particular Specifications of Bidding Document Volume II and the Environmental & Social Management Plan (ESMP) as required by Government Agencies and Prevailing Legislation. The Cost under this item to include preparation of the relevant ESHS documents (ESMP, HSMP & Code of Conduct etc.)	Item	1		
6.50	Provision, erection and maintenance of project signboards as Directed by supervising Engineer.	pc	1		

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PAGE TOTAL CARRIED FORWARD TO BILL COLLECTION SHEET					
NO.	P&G SUMMARY				AMOUNT (KE)
1	Page Total From Page 1				
2	Page Total From Page 2				
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4	Page Total From Page 4				

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Total P&G Summary Cost Carried to Bill summary Sheet					
ITEM No.	DESCRIPTION	UNIT	QTY	RATE (KE)	AMOUNT (KE)
7	<u>CLASS A: GENERAL ITEM</u>				
7.1	Testing of works				
7.1.1	Testing and Commissioning of the Pipeline including provision of all equipment, materials and works necessary for testing such as but not limited to Thrust Bloks, Anchor Blocks, Provision, Transportation and use and disposal of Water, Pipe Fittings, etc. Nominal bore n. e. 200mm	LM	5,500		
7.1.2	Disinfection of Pipeline ; Flushing with clear water, filling with water containing 0.05g/l Calcium Hypochlorite, 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.	LM	5,500		
7.2	<u>Method Related Charges</u>				
	The Pipeline will be laid along narrow urban roads with existing active services both on the surface (electricity, etc) and buried (existing community water pipelines, fiber optic cables, etc.) and with limited working space for mechanical excavation equipment.				

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7.2.1	<p>The Contractor's rates shall be deemed to include for any measures necessary to deal with these conditions, provision of access road to work site, liaison with relevant authorities and local residents, payment of any required statutory charges, etc. The Contractor will be required to submit Method Statement for execution of works under these specific conditions for approval prior to execution of the works. These include but are not limited to the following:</p> <ul style="list-style-type: none"> i. No blasting will be permitted in these areas ii. The Contractor to maintain uninterrupted continuity of water supply in existing pipelines iii. Pedestrian and vehicular Access to individual shops / plots to be maintained at all times iv. Safety hoarding, lighting, bands, warning signs, etc. to be maintained at all times. v. Keeping trenches free of excessive groundwater, seepage or water from any source <p>Cost relating to the above mentioned specific conditions</p>	Item	1.00		
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ITEM No.	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
7.2.2	Liaison, facilitation with local residents and relevant authorities and payment for access, accidental damage, temporary access to working spaces during execution of the Works, etc.	Item	1		
7.3	<u>CLASS D: DEMOLITION AND SITE CLEARANCE</u>				
7.3.1	General site clearance along the pipeline alignment	ha	0.05		
7.3.2	Tree Cutting (Provisional) Cut down trees, grub up roots and cart away to tips				
7.3.2.1	Girth: 0.5 m - 1.0 m	Nr	2		
7.3.2.2	Girth: 1.0 m - 2 m	Nr	2		

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7.3.2.3	Girth 2.0 m – 3 m	Nr	1		
	<u>Note:-</u> Girth shall be measured 1.0m above ground level				
8	<u>PIPES, FITTINGS AND VALVES</u>				
	<u>CLASS I: PIPE WORK - PIPES</u>				
8.1	<u>Supply, Transport to site and store in secure place. Include supply of jointing materials, bolts, nuts, gaske ts etc as applicable</u>				
	High Density Polyethylene Pipes (HDPE) - PN 20				
8.1.1	DN 90mm Nominal bore not in trenches	LM	600		
8.1.2	DN 63mm Nominal bore not in trenches	LM	600		
8.1.3	DN 40mm Nominal bore not in trenches	LM	200		
8.1.4	DN 32mm Nominal bore not in trenches	LM	400		
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ITEM No.	DESCRIPTION	UNIT	QTY	RATE (KE)	AMOUNT (KE)
8.2	Road Crssing				
8.2.1	<u>Ferrous Plain Ended Pipes</u>				
8.2.2	DN 200mm 12 m long Steel pipes not in trenches as road crossing sleeve to be agreed with the project engineer.	Nr	3		
8.2.3	DN 110 mm Nominal bore not in trenches	LM	400		
8.2.4	DN 90 mm Nominal bore not in trenches	LM	800		
8.2.5	DN 63 mm Nominal bore not in trenches	LM	400		
8.2.6	DN 50 mm Nominal bore not in trenches	LM	300		

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8.2.7	DN 40 mm Nominal bore not in trenches	LM	700		
8.2.8	DN 20 mm PIPE PN 20 not in trenches	LM	1060		
9	<u>Transport from Site Store, Lay and Joint Pipes in Trench, include for Excavation, Preparation of Surfaces, Disposal of Excavated Material, Shoring Sides of Excavation Trenches, Backfilling and Final Reinstatement</u>				
9.1	High Density Polyethylene Pipes (HDPE) - PN 20 with butt fusion (seamless) jointing				
9.1.1	DN 110 mm Nominal bore not in trenches	LM	400		
9.1.2	DN 90 mm Nominal bore in trenches Depth Depth not exceeding 1.5m	LM	1400		
9.1.3	DN 63mm Nominal bore in trenches Depth not exceeding 1.5m In clay soil	LM	1000		
9.1.4	DN 40mm Nominal bore in trenches Depth not exceeding 1.5m in clay soil	LM	900		
9.1.5	DN 32mm Nominal bore in trenches Depth not exceeding 1.5m in clay soil	LM	400		

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ITEM No.	DESCRIPTION	UNIT	QTY	RATE (KE)	AMOUNT (KE)
9.2	Road Crssing				
9.1.1	<u>Ferrous Plain Ended Pipes</u>				
9.1.2	DN 200mm 12 m long Steel pipes in trenches as road crossing sleave to be agreed with the project engineer.Depth not exceeding 1.5m in clay soil	Nr	3		
9.2	HDPE Couplings & Adaptors				
9.2.1	HDPE Adaptors				
9.2.1.1	DN 90mm HDPE Male Adaptor PN 20 not in trenches	Nr	3		
9.2.1.2	DN 63mm HDPE Male Adaptor PN 20 not in trenches	Nr	3		
9.2.2	HDPE Couplings				

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9.2.2.1	DN 90 mm HDPE COUPLING PN 20 not in trenches	Nr	8		
9.2.2.2	DN 63 mm HDPE COUPLING PN 20 not in trenches	Nr	6		
9.3	<u>Tees and Crosses</u>				
9.3.1	DN 90 mm HDPE Tee PN 20 not in trenches	Nr	2		
9.4	<u>Stepped Flexible Couplings</u>				
9.4.1	DN 90 X 63 mm HDPE Reducing Coupling PN20 not in trenches	Nr	3		
9.5	<u>Junction and Branches</u>				
9.5.1	DN 90 x 50mm HDPE Saddle Clamp PN20 not in trenches	Nr	2		
9.5.2	DN 90 x 63mm HDPE Saddle Clamp PN20 not in trenches	Nr	2		
9.5.3	DN 63 x 25mm HDPE Saddle Clamp PN20 not in trenches	Nr	3		
9.6	<u>All Flanged Tee</u>				
	Epoxy coated Externally and Epoxy or Cement Mortar lined Internally Ferrous Pipes and Fittings				
9.6.1	DN75 x 50 x 75 mm not in trenches PN 16	Nr	4		
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ITEM No.	DESCRIPTION	UNIT	QTY	RATE (KE)	AMOUNT (KE)
9.7	<u>One end Flanged steel pipes pieces & the other end threaded</u>				
9.7.1	DN 75 steel Pipe piece 500mm long not in trenches PN 16	Nr	16		
9.8	<u>Double end Flanged spigot pipes pieces</u>				
9.8.1	DN75 steel Pipe piece 500mm long, not in trenches PN 16	Nr	1		
9.9	<u>Straight couplings</u>				
9.9.1	DN 75 GI Socket not in trenches	Nr	16		

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9:10	Tapers				
9.10.1	All Flanged Concentric Taper				
9.10.1.1	DN100 x 75 mm not in chambers	Nr	1		
9.11	Valves and Penstocks All Flanged Gate Valves <u>Gate Valves for Washouts and line valves to be supplied complete with extension Spindle n.e. 2.0m and Tee-key.</u> <u>Air valve isolating valves to be supplied with wheel on ly. Contractor's rates to include for this</u>				
9.11.1	DN 50 Flanged isolation valve AVK or equivalent with shorter bonnet not in chambers	Nr	4		
9.11.2	DN 50 Flanged Sluice valve AVK or equivalent with shorter bonnet. not in chambers.	Nr	4		
9.11.3	DN 75 Flanged Sluice valve AVK or equivalent with shorter bonnet not in chambers.	Nr	2		
9.12	Air Valves				
9.12.1	Single Orifice Air Valve				
9.12.1.1	DN 50	Nr	4		
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ITEM No.	DESCRIPTION	UNIT	QTY	RATE (KE)	AMOUNT (KE)
9.12.2	Flanged Water Meters				
9.12.2.1	DN 75 Cold Water meter smart enabled (itron or equivalent) not in chambers	Nr	1		
9.12.3	All Flanged Strainer				
9.12.3.1	DN 75 Tee type strainer not in chambers		1		
9.12.4	Ferrous Flange Adaptor				
9.12.4.1	DN 75 mm flange adaptors not in chambers		3		

9.13	<u>All Flanged Level Invert Tee (For Washouts)</u>				
9.13.1	DN75 x 50 X 75mm not in chambers	Nr	2		
9.13.2	DN 50 x 50 X 50mm not in chambers	Nr	2		
9.14	Ferrous Saddle clamps for offtake point				
9.14.1	DN 525 X 100 Flanged saddle clamp PN 25 not in trenches	Nr	1		
9.15	HDPE Couplings & Adaptors				
9.15.1	HDPE Adaptors				
9.15.1.1	DN 90mm HDPE Male Adaptor PN 20 in trenches	Nr	3		
9.15.1.2	DN 63mm HDPE Male Adaptor PN 20 in trenches	Nr	3		
9.15.2	HDPE Couplings				
9.15.2.1	DN 90 mm HDPE COUPLING PN 20 in trenches	Nr	8		
9.15.2.2	DN 63 mm HDPE COUPLING PN 20 in trenches	Nr	6		
9.15.3	<u>Tees and Crosses</u>				
9.15.3.1	DN 90 mm HDPE Tee PN 20 in trenches	Nr	2		
PAGE TOTAL CARRIED FORWARD TO BILL COLLECTION SHEET					
ITEM No.	DESCRIPTION	UNIT	QTY	RATE (KE)	AMOUNT (KE)
9.15.4	<u>Stepped Flexible Couplings</u>				
9.15.4.1	DN 90 X 63 mm HDPE Reducing Coupling PN20 in trenches	Nr	3		
9.15.5	Junction and Branches				
9.15.5.1	DN 90 x 50mm HDPE Saddle Clamp PN20 in trenches	Nr	2		
9.15.5.2	DN 90 x 63mm HDPE Saddle Clamp PN20 in trenches	Nr	2		

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9.15.5.3	DN 63 x 25mm HDPE Saddle Clamp PN20 in trenches	Nr	3		
9.15.6	<u>All Flanged Tee</u> Epoxy coated Externally and Epoxy or Cement Mortar lined Internally Ferrous Pipes and Fittings				
9.15.6.1	DN75 x 50 x 75 mm in trenches PN 16	Nr	4		
9.15.7	<u>One end Flanged steel pipes pieces & the other end threaded</u>				
9.15.7.1	DN 75 steel Pipe piece 500mm long in trenches PN 16	Nr	16		
9.15.8	<u>Double end Flanged spigot pipes pieces</u>				
9.15.8.1	DN75 steel Pipe piece 500mm long, in trenches PN 16	Nr	1		
9.15.9	Straight couplings				
9.15.9.1	DN 75 GI Socket in trenches	Nr	16		
9.15:10	Tapers				
9.15:10.1	All Flanged Concentric Taper				
9.15.10.2	DN100 x 75 mm in chambers	Nr	1		
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ITEM No.	DESCRIPTION	UNIT	QTY	RATE (KE)	AMOUNT (KE)
	Valves and Penstocks All Flanged Gate Valves				

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10	<u>Gate Valves for Washouts and line valves to be supplied complete with extension Spindle n.e. 2.0m and Tee-key.</u> <u>Air valve isolating valves to be supplied with wheel on ly. Contractor's rates to include for this</u>				
10.1	DN 50 Flanged isolation valve AVK or equivalent with shorter bonnet in chambers	Nr	4		
10.2	DN 50 Flanged Sluice valve AVK or equivalent with shorter bonnet. in chambers.	Nr	4		
10.3	DN 75 Flanged Sluice valve AVK or equivalent with shorter bonnet. in chambers.	Nr	2		
10.4	Air Valves				
10.4.1	Single Orifice Air Valve				
10.4.2	DN 50 mm in chambers	Nr	4		
10.4.2	Flanged Water Meters				
10.4.2	DN 75 Cold Water meter smart enabled (itron or equivalent) in chambers	Nr	1		
10.4.3	Consumer Water Meters and Stop Cocks				
10.4.4	Consumer Water Meters				
11	<u>Note: All Water Meters to conform with ISO 4061-1:2005, BS 5728-7:1997 and KS OMIL R 49:2006 Specifications for Domestic Water Meters or approved equivalent.</u>				
11.1	15mm dia Consumer Plastic Water Meters, Piston Type, PSM Elser Kent or approved equivalent. The Meters to include inbuilt Meter Strainers & Non-Return Mechanism. Rate to include for Supply of Meters Liner (2Nr for each Meter). All Meters to be engraved with word "MOWASSCO" or as directed by the Engineer	Nr	500		
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ITEM No.	DESCRIPTION	UNIT	QTY	RATE (KE)	AMOUNT (KE)
11.20	Stop Cocks				
11.2.1	15mm dia Stop Cock, make Pegler or approved equivalent.	Nr	500		

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11.3	Meter Boxes				
11.3.1	Standard Plastic Meter Boxes with cover and opening key, minimum dimensions; length-265mm, width-150mm & height- 180mm.	Nr	500		
12	New Connection Fittings				
12.1	Gate Valves (Pegglar)				
12.1.1	1"	Nr	18		
12.1.2	½"	Nr	500		
12.1.3	1½"	Nr	10		
12.1.4	2"	Nr	10		
12.2	Brass Linnars				
12.2.1	½"	Pair	500		
12.3	GI Sockets				
12.3.1	1½"	Nr	20		
12.3.2	¾"	Nr	50		
12.3.3	2"	Nr	10		
12.3.4	½"	Nr	850		
12.3.5	1"	Nr	26		
12.4	GI Plug				
12.4.1	1½"	Nr	14		
12.4. .3	1"	Nr	26		
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ITEM No.	DESCRIPTION	UNIT	QTY	RATE (KE)	AMOUNT (KE)
12.4.4	2"	Nr	5		
12.4.5	½"	Nr	50		
12.5	GI Nipple				

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12.5.1	1½"	Nr	14		
12.5.2	3"	Nr	4		
12.5.3	1"	Nr	30		
12.5.4	½"	Nr	1500		
12.5.5	4"	Nr	4		
12.5.6	GI Reducing Bush				
12.5.7	¾"× ½"	Nr	1,000		
12.5.8	3" GI Barrel Nipple	Nr	4		
12.5.9	½" GI Elbow	Nr	1,000		
12.5:10	3" GI Bend	Nr	4		
12.5.11	Provide 300,000 for assorted materials such as thread seals, Boss white, Hemp thread, Garscket and bolts and nuts.	ITEM	1		
12.6	All Flanged Strainer				
12.6.1	DN 75 Tee type strainer in chambers		1		
12.6.2	Ferrous Flange Adaptor				
12.6.3	DN 75 mm flange adaptors in chambers		3		
12.7	<u>All Flanged Level Invert Tee (For Washouts)</u>				
12.7.1	DN75 x 50 X 75mm in chambers	Nr	2		
12.7.2	DN 50 x 50 X 50mm in chambers	Nr	2		
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ITEM No.	DESCRIPTION	UNIT	QTY	RATE (KE)	AMOUNT (KE)
12.8	Ferrous Saddle clamps for offtake point				
12.8.1	DN 525 X 100 Flanged saddle clamp PN 25 in trenches	Nr	1		
13	<u>CLASS K: PIPE WORK -CHAMBERS AND PIPE WORK ANCILLARIES</u>				

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	Chambers ducts, culverts, crossings, thrust, anchor blocks, reinstatement and other pipework ancillaries				
	Note:- Items for Work in this class shall include: - Excavation, preparation of surfaces, disposals of surplus excavated material, shoring sides of excavation, backfilling and removal of redundant services. - Concrete, Reinforcement, Formwork, joints and Finishes. - Tips for disposals of excavated material of debris to be identified by the Contractor in liaison with the Local Authorities.				
13.1	IN SITU MASONRY CHAMBERS				
	Provide all materials and construct Masonry walling WO Valve Chambers, internal dimensions 1200mm x 1200mm. Include for supply and fixing of				
13.1.1	removable precast concrete covers, step irons, compacted granular fill, rendering of exposed blockwork etc. Depth n.e 1.5m.	Nr	5		
13.1.2	- Ditto- but internal dimensions 1400mm x 1200mm Offtake and Meter chambers	Nr	2		
13.1.3	- Ditto- but internal dimensions 1500mm x 1200mm for AIR Valve chambers.	Nr	5		
13.2	Crossings				
13.2.1	Allow for crossing existing Hedges and reinstating these after construction of the water main is complete.	m	20		
13.2..2	-Ditto- but for existing Masonry Walls and reinstating these after construction of the water main is complete	m	20		
13.2.2.1	Ditto- but for existing Fences and reinstating these after construction of the water main is completed.	m	20		
13.2.3	Allow for crossing existing drains and reinstating these after construction of water main is completed. Include for provision of diverting the Drains and keeping them operational during construction	m	20		
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ITEM No.	DESCRIPTION	UNIT	QTY	RATE (KE)	AMOUNT (KE)
13.3	<u>Reinstatement</u>				

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13.3.1	Breaking up, Temporary and Permanent Reinstatement of MURRAM road with 300mm thick well graded stabilised gravel with 3% cement content base compacted in layers of 150mm thick using an 8-10 tonne roller to the satisfaction of the Engineer. Contractor to allow for provision of requisite diversion signage, controls and safety precaution in his rates, nominal bore not exceeding 300mm.	m	40		
13.3.2	Breaking up, Temporary and Permanent Reinstatement of CONCRETE BLOCK PAVED Roads/ Footpath including sub- base, base and sand bed layers, raised kerbs and flush kerbs all according to Engineers approval, pipe bore n.e 300mm	m	60		
13.3.3	Breaking up, Temporary and Permanent Reinstatement of MURRAM Footpath pipe bore n.e 150mm	m	20		
13.4	Other Pipework Ancillaries				
13.4.1	Supply and fix marker posts along water Main Route, Road Crossings, change of direction, Air valves, Washouts and valve chambers. All in accordance with drawings and specifications. i	Nr	38		
13.4.2	Provide all materials and construct Masonry outfall structures on mass concrete plinths at washout drain pipe outlets.	Nr	5		
14	<u>CLASS L: PIPEWORK - SUPPORTS AND PROTECTION, ANCILLARIES TO LAYING AND EXCAVATION</u>				
14.1	Extra over excavation and backfilling for excavation in Rock. Rate to include carting away and disposal. (Provisional)				
14.1.1	In Pipe Trenches and Chambers				
14.1.1.1	Excavation in trench for rock class "A"	m ³	27		
14.1.1.2	Excavation in trench for rock class "B"	m ³	100		
	<u>Note:-</u> Blasting is NOT permitted for Item L11				
PAGE TOTAL CARRIED FORWARD TO BILL COLLECTION SHEET					
ITEM No.	DESCRIPTION	UNIT	QTY	RATE (KE)	AMOUNT (KE)

14.2	Surrounds Selected Excavated Granular Fill (Provisional) Provide, place and compact selected excavated granular fill material in bed and surround to pipes as specified and where directed by the Engineer.				
14.2.1	To pipes nominal bore n.e 150mm Imported Selected Fill (Provisional) Provide, transport to site and place imported selected fill and compact in bed and surround to pipes as specified and where directed by the Engineer	m	2,600		
14.2.2	To pipes nominal bore n.e 150mm	m	2,600		
14.3	Mass Concrete Surround (Road Crossings) Provide all materials and construct concrete ogee pipe sleeve and 150mm thick class 15/20 mass concrete surround to HDPE pipe under Murram/Earth Road Crossings, diameter of pipe n.e. 200mm.				
14.3.1	Concrete Support, Thrust Blocks, Stools and Anchor Blocks Rates to include for excavation, Formwork, provision and placing of concrete, backfilling etc. Class 20/20 Mass Concrete NOTE:- The work includes pipe and fitting fixing	CM	24		
14.3.2	Volume n.e 0.1m ³ To pipes nominal bore n.e 150mm	Nr	15		
14.4	<u>CLASS X: MISCELLANEOUS WORK</u> Trenchless Road Crossings				

WSTF URBAN INVESTMENT PROGRAMME (UPC 8TH CALL)

WATER PIPELINE EXTENSION PROJECT FOR MOMBASA WATER SUPPLY SANITATION CO.LTD AT CHAMUNYU

14.4.1	Provide all equipment and materials, excavate below road surface in common material (soil/murram) using trenchless technique (e.g. pipe jacking, horizontal drilling, e.t.c.) The rate includes all preparatory works, any requisite shoring, strutting, installation of pipe and pipe casing and necessary grouting and reinstatement. pipe nominal bore n.e 200mm. all works to be executed in close liaison with relevant road authorities and rates to include facillitation of the same. The Bidder to submit Method Statement with Bid for execution of these Works.	m	36		
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PAGE TOTAL CARRIED FORWARD TO BILL COLLECTION SHEET

MAIN BILL SUMMARY PAGE

ITEM	DESCRIPTION				TOTAL
1	Page Total Carried Forward Page 6				
2	Page Total Carried Forward Page 7				
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MAIN BILL TOTAL FORWARDED TO SUMMARY PAGE					
PROJECT SUMMARY SHEET					
ITEM	DESCRIPTION				AMOUNT (KE)
T1	P&G TOTAL FORWARDED FROM PAGE 5				
T2	MAIN BILL TOTAL FORWARDED FROM PAGE 20				

WSTF URBAN INVESTMENT PROGRAMME (UPC 8TH CALL)

WATER PIPELINE EXTENSION PROJECT FOR MOMBASA WATER SUPPLY SANITATION CO.LTD AT CHAMUNYU

T3	PROJECT TOTAL (T1+T2)				
A	ADD 5% CONTIGENCY OF T3				
T4	PROJECT TOTAL INCLUSIVE OF 5% CONTIGENCY (T3+A)				
B	ADD 16% VAT OF T4				
T5	PROJECT TOTAL INCLUSIVE OF CONTIGENCY & VAT (T4 + B)				