

**BILLS OF QUANTITIES FOR CONSTRUCTION OF RETAINING WALL AND
ASSOCIATED CIVIL WORKS.**

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT (KSHS)
	BILL NO 1: EARTHWORKS				
	<u>Site Clearance</u>				
A	Clear the site of all bushes and small trees n.e 600mm girth including grabbing up roots and burn the arising debris	SM	130		
	<u>Excavation and earthworks</u>				
B	Strip the top soil to remove vegetable soil average depth 150mm deep and remove from site as directed	SM	130		
C	Excavate to reduced levels commencing from stripped level average 150 mm	SM	130		
D	Excavate foundation trenches starting from reduced level n.e 1.5m deep	CM	156		
E	Load and cart away excavated material from site as directed	CM	65		
F	Return fill and rum selected excavated material	CM	92		
	BILL NO 1: EARTHWORKS				
	TOTAL CARRIED TO SUMMARY				
	BILL NO 2: INSITU CONCRETE				
	<u>Anti-termite treatment</u>				
G	Treatment of murrum surfaces with insecticide make of gladiator to architect's approval	SM	130		
	<u>Concrete works</u>				
	<u>Mass concrete class 15 (1:4:8) to;</u>				
H	50mm thick blinding to foundation trenches	SM	130		
	<u>Vibrated Reinforced concrete class 25/20 to;</u>				
J	Strip footing	CM	46		
K	Ditto nib	CM	2		
L	RC walls thickness 150-300mm	CM	34		
	BILL NO 2: INSITU CONCRETE				
	TOTAL CARRIED TO SUMMARY				

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT (KSHS)
	BILL NO 3: CONCRETE ANCILLARIES				
	<u><i>Fair finish formwork to;</i></u>				
A	Sides/batterns of RC walls	SM	149		
B	Edges of strip foundation	SM	19		
	<u><i>Reinforcement</i></u>				
	<u><i>Bars; High Yield Steel; Worked to BS 4461 Including Bends; Hooks; Tying wire;</i></u>				
C	12mm ditto	KG	1329		
D	10mm ditto	KG	1933		
	<u><i>Sundries</i></u>				
E	25mm thick flexcell open surface joints with filler average width not exceeding 300mm	LM	42		
F	Allow for weep hole average 100mm diameter on retaining wall	NO	16		
	BILL NO 3: CONCRETE ANCILLARIES				
	TOTAL CARRIED TO SUMMARY				
	BILL NO 4: PRECAST CONCRETE AND PAINTING				
G	450x150mm av.thick precast concrete coping twice weathered and throated and bedded in c/s 1:3 mortar	LM	42		
	<u><i>Painting and decoration</i></u>				
H	Prepare and apply 3 coats emulsion paint to smooth concrete surface girth over 300mm	SM	149		
	BILL NO 4: PRECAST CONCRETE AND PAINTING				

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT (KSHS)
	<p>BILL NO 5: GABIONS</p> <p>Provide 1.0x1.0x2.0m gabion baskets manufactured from heavy-duty galvanized (zinc coated) steel wire of double twist hexagon weave, having a nominal mesh opening of 60mm x 80mm, mesh wire size min 2.5mm dia and selvedge wire min 3.2mm</p> <p>Provide rock fill to gabions. Shall be of minimum rock size of 100 mm and the maximum rock size of 250 mm. and be dense, hard, clean and durable stone as quarried or naturally occurring rounded stone to BS 5628-3:2001. as specified and approved by the Eng</p>				
A		NO	77		
B		CM	154		
	<p>BILL NO 5: GABIONS</p> <p>TOTAL CARRIED TO SUMMARY</p>				
	<p>BILL NO 6:</p> <p>GRILLE RAILING</p> <p>Galvanized mild steel grille comprising of 40x40x3mm mild steel 1500mm long standards fish tailed and embedded into VRC, 50x50 x 3mm mild S.H.S tubes framing weld 25x25x4mm S.H.S tubes horizontal and vertical round bars at 125mm centres, include finishing smooth welded joints and applying primer and three coats of gloss oil paint.</p>				
C		SM	63		
	<p>BILL NO 6: GRILLE RAILING</p> <p>TOTAL CARRIED TO SUMMARY</p>				

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT (KSHS)
	<u>SUMMARY</u>				
	BILL NO 1: EARTHWORKS				-
	BILL NO 2: INSITU CONCRETE				-
	BILL NO 3: CONCRETE ANCILLARIES				-
	BILL NO 4: PRECAST CONCRETE AND PAINTING				-
	BILL NO 5: GABIONS				-
	BILL NO 6: GRILLE RAILING				-
	TOTAL RETAINING WALL CARRIED TO GRAND SUMMARY				-

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT (KSHS)
	BILL NO 7: CABRO WORKS				
A	Excavate oversite to reduced levels	174	CM		
B	Remove from site and cartaway excavated material	174	CM		
C	Approved imported hardcore filling rolled and consolidated in layers not exceeding 300mm thick to make up levels	174	CM		
D	300mm thick hand packed hardcore ditto prepared to receive precast concrete paving blocks(ms).	630	SM		
E	50mm thick stone dust/ murrum blinding to surfaces of hardcore filling, levelled and compacted as necessary	630	SM		
	<u>Standard precast concrete units to BS 6717 finished fair on all exposed surfaces as described</u>				
F	50mm thick medium duty paving blocks jointed and key pointed in cement and sand (1:3) mortar on and including 50mm thick river sand or quarry chippings bed	630	SM		
	<u>Kerbs</u>				
G	250x125mm high precast concrete (1:2:4) kerb bedded and jointed in cement and sand (1:4) mortar on and including 450x100mm mass concrete class 15/20 foundation and haunching at the back including all necessary formwork, excavations and disposal	60	LM		
	TOTAL FOR CABRO WORKS CARRIED TO SUMMARY				-

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT (KSHS)
	BILL NO 8: SEWER LINE Length 120m				
A	<u>Excavations</u> Excavate trench for 160mm diameter pipe and bed under, not exceeding 1.50m deep from ground level average depth 1.0m	CM	72		
B	<u>Pipework</u> Provide, lay and joint 160mm diameter UPVC pipe (Class 41 Golden brown) including 100mm approved material bedding and 150mm surround to detail (50) 5310 'F'.	LM	79		
C	Ditto; Item B above, but including 150mm concrete bedding and surround to detail (50) 5310 'C'	LM	26		
	<u>Manholes</u> <i>The following in 15NO. Manholes complete with: -</i>				
	Construct rectangular manholes with concrete (1:3:6) to base and bedding (1:2:4) to cover slabs including screeding, 190mm thick solid slab concrete block walling plastered to the inside with water proofing cement, medium duty CI manhole covers and frames, malleable step irons; including excavations of pits, parts return fill and ram and part cart away, All necessary formwork				
D	Manhole size 930x650x600mm deep from invert level.	LM	15		
	TOTAL FOR SEWER LINE CARRIED TO SUMMARY				-

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT (KSHS)
	BILL NO 9: STORM DRAIN				
	<u>Excavations</u>				
A	Excavate a 1m wide trench for shallow drain depth not exceeding 1.5m deep, back fill and cart away the surplus excavated material.	CM	25		
	<u>Construction</u>				
B	Trim and compact formation to correct levels, cross-falls, and longitudinal falls	SM	21		
C	50mm thick blinding class 15 to stable ground	SM	17		
D	Prepare and cast 100mm thick vibrated reinforced concrete class 25/20mm (2:3:6) to drain	SM	34		
E	200 mm thick foundation stone walling bedded and jointed in cement sand 1:3 reinforced with hoop iron size 25*3mm in alternate courses	SM	17		
F	20mm thick render to sides of drain in cement sand 1:3 including waterproofing to detail	SM	34		
G	<u>Sawn Cypress Formwork to:</u> Sides/battering of channel drain	SM	17		
	<u>Steel grating</u>				
H	Supply and install 400mm thick steel metal grating comprising of 40 x10 mm flats to storm drain	LM	21		
	<u>STORM WATER TESTING</u>				
J	Allow for testing the whole of the foul drainage system, storm water drainage system in the presence of the Engineer/Project Manager and make good any defects, re-test as necessary and leave the whole system perfect and to the satisfaction of the Engineer/Project Manager	ITEM			
	TOTAL FOR STORM DRAIN CARRIED TO SUMMARY				-

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT (KSHS)
	<p><u>PROVISIONAL SUMS</u></p> <p>Allow a provisional sum of KShs One hundred thousand (KShs 100,000.00) only for preliminaries i.e., Site hoarding, water for works etc</p> <p>Allow a provisional sum of KShs. Three Hundred Thousand (Kshs 200,000.00) only for Contingencies to be spent in whole of in part as directed by the project Manager</p> <p>Allow a provisional sum of Kshs. Three Hundred Thousand (Kshs. 300,000.00) for Construction of Gate to be spent in whole or in part as directed by the Project Manager</p>				
TOTAL PC AND PROVISIONAL SUMS CARRIED TO GRAND SUMMARY					-

	<u>SUMMARY OF BUILDERS WORK</u>				
A	RETAINING WALL				-
B	CABRO WORKS				-
C	SEWER LINE				-
D	STORM DRAIN				-
	TOTAL CARRIED TO GRAND SUMMARY				-

GRAND SUMMARY

ITEM	DESCRIPTION	Page No.	K.SHS.
A	BUILDERS' WORK	From Page BW	-
C	PROVISIONAL SUMS & PC SUMS	From Page PS	-
D	PROJECT MANAGEMENT EXPENSES Allow a provisional sum of Kenya shillings Five hundred thousand (500,000.00) only for Project management expenses		
TOTAL (VAT INCLUSIVE) CARRIED TO FORM OF TENDER			-

Amount in words.....

Tenderer's signature and stamp.....

Address.....

Date
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Address:
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Date:
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