

**PROJECT: PROPOSED CONSTRUCTION OF TSC OFFICES BOMET
CIVIL WORKS**

BILL NO. 01 FOUL DRAINAGE SYSTEM

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT KSHS
	<u>FOUL DRAINAGE SYSTEM</u>				
	<u>EXCAVATIONS.</u>				
	Excavate trench for 160mm diameter uPVC pipe, backfill after laying of pipes and cart away.				
B01/1	Depth to invert n.e 1.50m.	CM	20		
B01/2	Ditto, depth n.l.t 1.5m but n.e 2.0m.	CM	25		
B01/3	Ditto, depth n.l.t 2.0m but n.e 3.0m.	CM	5		
B01/4	Ditto, depth n.l.t 3.0m but n.e 4.5m.	CM	1		
B01/5	Excavation in rock class I	CM	10		
	<u>PIPE LAYING.</u>				
B01/6	Provide lay and joint 160mm diameter uPVC pipe class 41 to B.S 4660 on compacted murrum bedding as per detailed drawing No. (50)5310.	LM	75		
B01/7	Provide, place and compact murrum in 150mm bed and haunch type E to uPVC soil pipes (measured Separately) as specified.	LM	25		
	<u>MANHOLES.</u>				
	<u>Excavation</u>				
B01/8	Excavate in pit for rectangular manhole type A as per detailed drawing No. (50)5300, return fill and ram selected approved material after construction of manholes and cart away surplus excavated material depth n.e 0.6m.	CM	2		
B01/9	Ditto, but rectangular manhole type B depth to invert t n.e 1.0m.	CM	15		
B01/10	Ditto, but rectangular manhole type C depth to invert t n.e 1.5m.	CM	10		
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ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT KSHS
	<u>MANHOLES CONT'D</u>				
B01/11	Ditto, but rectangular manhole type D depth to invert n.l.t 1.5m but n.e 2.0m.	CM	15		
B01/12	Ditto, but rectangular manhole type E depth to invert n.l.t 2.0m but n.e 5.0m.	CM	10		
B01/13	Extra over all excavation items for excavation in rock class I.	CM	10		
	<u>Construction</u>				
	<u>Concrete class P (mix 1:4:8)</u>				
B01/14	Provide all materials, mix and place 50mm thick concrete as blinding for manholes.	CM	5		
	<u>Vibrated concrete class 15 (mix 1:3:6)</u>				
B01/15	Ditto but 150mm thick base slab for manholes.	CM	10		
	<u>Vibrated reinforced concrete class 20/20 (mix 1:2:4)</u>				
B01/16	Provide all materials, mix and place 150mm thick concrete class 20 as cover for manholes.	SM	60		
	<u>Vibrated concrete class 20 (mix 1:2:4)</u>				
B01/17	Provide all materials, mix place concrete class 20 as benching for 150mm diameter pipe. Include for forming the main and branch channels as well as finishing benching to falls and building-in pipes as per detailed drawings.	CM	5		
	<u>WALLING.</u>				
B01/18	Provide, lay and joint 150mm thick approved concrete block or dressed natural stone walling to manholes types A and B details (50) 5300 and (50) 5301.	SM	10		
B01/19	Ditto but 200mm thick for types C&D details (50) 5302 & (50) 5303	SM	50		
B01/20	Provide materials for and erect 250mm thick concrete walling for manhole type E as per drawing detail 50(5304) and 50(5305) manhole cover and frame to detail 50(5317)	SM	15		
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ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT KSHS
	<u>MANHOLES CONT'D</u>				
	<u>Mild Steel Reinforcement Bars to B.S 4449.</u>				
B01/21	Provide 8mm diameter bars for cover slab to detail (50) 5309.	KG	250		
	<u>Step Iron.</u>				
B01/22	Provide and fix deep galvanized malleable iron as step iron to B.S 1247 as per detailed drawings.	NO.	50		
	<u>Rendering.</u>				
B01/23	Provide 12mm thick water proof cement and sand (mix 1:3) steel float finished rendering to walls.	SM	100		
B01/24	Ditto but to cover slab.	SM	60		
B01/25	Provide 12mm thick cement and sand (mix 1:1) water proof rendering trowelled smooth to surface of benching.	SM	60		
B01/26	Provide and fix 600 x 450mm medium duty C.I manhole cover and frame to B.S 497	NO	8		
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ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT KSHS
	<p><u>COLLECTION</u> Brought forward from CIV 1..... Brought forward from CIV 2..... Brought forward from CIV 3.....</p>				
	TOTAL CARRIED TO SUMMARY CIV 8				

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BILL NO 3: FOOTPATHS AND PAVING SLABS ROUND THE BUILDING

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT KSHS
	<u>FOOTPATHS.</u>				
B03/1	Remove vegetable soil average depth 150mm and dispose as directed by project manager	SM	80		
B03/2	Provide, lay and compact 100mm thick approved murrum base.	SM	80		
B03/3	Provide and apply persistent herbicide.	SM	80		
B03/4	Provide, lay and joint in cement mortar 600x600x50mm precast concrete paving slabs including 50mm thick sand bed.	SM	80		
B03/5	Provide, lay and joint 125x100mm precast concrete channel including 100mm thick concrete bed and haunch, mix 1:3:6, any necessary excavation, formwork and disposal of surplus material.	LM	50		
B03/6	Ditto but curved to varying radii as shown on the plan.	LM	50		
	<u>PAVING SLABS ROUND THE BUILDING</u>				
B03/7	Clear area around the building and trim surfaces above to achieve reduced levels and cart away excavated material to tips as directed. depth ne 0.2m	CM	50		
B03/8	Provide, lay and compact 100mm hardcore filling.	SM	200		
B03/9	Provide, lay and compact 50mm concrete (mix 1:4:8) blinding.	SM	200		
B03/10	Provide, lay and joint in cement sand mortar (mix 1:4) 600 X 600 X 50mm precast concrete paving slabs.Drg. (50) 5353.	SM	200		
TOTAL CARRIED TO SUMMARY CIV 8					

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BILL NO. 04 STORM WATER DRAINAGE

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT KSHS
	<u>OPEN STORM DRAIN</u>				
B04/1	Excavate trench for 450x225mm external dimension Pcc IBD not exceeding 0.7m (average depth 0.45m) and cartaway surplus material to detail (50) 5329'B'	CM	120		
B04/2	Ditto but average depth 1.0m ditto.	CM	80		
B04/3	Extra over for excavation in rock.	CM	10		
B04/4	Provide, lay and compact 100mm thick murrum bed and on sloping sides of the IBD to detail (50)5329'B'	LM	150		
B04/5	Provide, lay and joint 450x225mm external dimensions Pcc IBD to detail (50) 5326.	LM	160		
B04/6	Extra over Item J for one side slab on each side to detail (50) 5329'B'.	LM	60		
B04/7	Ditto; but two side slabs;	LM	90		
B04/8	Ditto; but three side slabs;	LM	20		
	<u>COVERED STORM DRAIN</u>				
B04/9	Excavate trench for covered storm drain average depth 0.7m and cart away as directed by the engineer	CM	30		
B04/10	Provide material and construct covered storm drain composing of 100mm concrete bed class Q 1:3:6, 300mm dia. Concrete invert block drain 190 x 140mm concrete block walls, 10mm render to detail(50) 5352 and r.c cover slab to detail (50) 5352A. Average depth 0.6m.	LM	20		
B04/11	Ditto; but steel grating cover to detail (50) 5352 B	LM	20		
	<u>STONE PITCHING</u>				
B04/12	Provide all materials and stone pitch the edge of the storm drain and other sloping surfaces as directed by the Engineer.	SM	150		
	<u>CULVERTS</u>				
B04/13	Provide, lay and joint 450mm dia. Concrete pipe as culvert including 150mm concrete 1:3:6 bed and surround to detail (50) 5310 type C including excavation and backfilling.	LM	10		
B04/14	Ditto; but 600mm dia. Concrete pipe; ditto	LM	20		
B04/15	Provide material and construct headwalls type A to detail (50) 5318 including excavation all necessary formwork and disposal of surplus material.	NO.	4		
B04/16	Rehabilitation of the existing earth drain adjacent to the main road to enable drainage	item			
	TOTAL CARRIED TO COLLECTION CIV 7				

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BILL NO. 04 STORM WATER DRAINAGE

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT KSHS
	<p><u>COLLECTION</u></p> <p>Brought forward from CIV6.....</p>				
	TOTAL CARRIED TO SUMMARY CIV 8				

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BILL NO SUMMARY

	DESCRIPTION	Total Amount
	<p><u>SUMMARY</u></p> <p>Brought forward from CIV 4.....</p> <p>Brought forward from CIV 5.....</p> <p>Brought forward from CIV 7.....</p>	
	TOTAL CARRIED TO GRAND SUMMARY	