

1M-18861

ItemNo	Clause	Description	Unit	Rate only
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SECTION 1 - Preliminary and general

AA		PRELIMINARIES		
1	PS. AB.12	Contractor's Fixed Obligation	Month	
2	PS. AB.8	Contractors superintendance including transport and communication	Day	
3	PS.AB.9	Provision for C.L.O. as per engineers instruction (Proof of hours worked to be attached to monthly claim)	PC Sum	R 70 000.00
4	PS.AB.10	Accommodate traffic as per the Southern African Development Community Roads Traffic Manual Volume 2 and in accordance with RTI at all times. This item also includes for the provision of all signs, traffic cones, delineators and flagmen as required for	Day	

AH		OCCUPATIONAL HEALTH and SAFETY		
1	AH.14.1	Contractor's initial obligations in respect of the Occupational Health and Safety Act and Construction Regulations. Included in this item is the supply of all personal protective equipment (PPE) required to perform on works i.e. Uniform, safety shoes, safe	sum	
2	AH.14.2	Contractor's time related obligations in respect of the Occupational Health and Safety Act and Construction Regulations, including compliance with PPE (ensuring that all personnel are properly clad and equipped to perform on works at all times for the durat	month	
3	AH.14.3	Submission of Health and Safety file (to be approved by clients health and safety officer before works hand over)	sum	

SECTION 2 - Clearing and Grubbing

B		SITE CLEARANCE		
1	B.8.2	General clearance and grubbing	m2	
2	B.8.4	Removal and grubbing of large trees and stumps	no.	
3	B.8.5	Removal of existing fences	m	
4	B.8.9	Removal of brickwork	m3	
5	B.8.10	Removal of unreinforced concrete	m3	
6	B.8.11	Removal of reinforced concrete	m3	
7	PS.B.8.15.5	Removal of existing asphalt surfacing	m3	
8	PS.F.8.10	Re-instate fencing	m	

SECTION 3 - Drains and Subsoil Drainage

AB		GENERAL SPECIFICATIONS		
1	PS. AB.13	Repairs up to 16mm Ø HDPE water pipes including supply of all materials	no.	
2	PS. AB.13	Repairs from 17 to 28mm Ø HDPE water pipes including supply of all materials	no.	
3	PS. AB.13	Repairs to 50mm Ø HDPE water pipes including supply of all materials	no.	
4	PS. AB.14	Lowering up to 16mm Ø HDPE water pipes to a depth of 800mm including supply of all materials	m	
5	PS. AB.14	Lowering of 17 to 28mm Ø HDPE water pipes to a depth of 800mm including supply of all materials	m	
6	PS. AB.14	Lowering of 50mm Ø HDPE water pipes to a depth of 800mm including supply of all materials	m	

DC		EARTHWORKS FOR CONCRETE LINED CANALS		
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		Excavating soft material situated within 0-1.5m depth:		
7	DC.8.2	(a) to stockpile	m3	
8	DC.8.2	(b) to spoil	m3	
9	DC.8.2	Extra over item (a) and (b) above for excavating in hard material	m3	
		Backfilling and compacting		
10	DC.8.3	(a) Using excavated material (from stockpile)	m3	
11	DC.8.3	(b) Using imported material (including haulage)	m3	
		Subsoil Drainage		
12	PS.GM.4	Supply and construct subsoil drain as per Drawing No.:38575, including test flushing and excavation in all materials, complete.	m	
		Concrete lining for open drains		
13	PS.C.8.4	Cast insitu concrete lining (20 Mpa / 19mm) v-drains (Class 2 surface finish to cast insitu concrete v-drains)	m3	
14	C.8.2	Steel reinforcement (Welded steel mesh Ref 193)	m2	
15	C.8.3	Formwork to cast insitu concrete lining for open drains (class 2 surface finish) to side with formwork on the internal and external faces (each side measured)	m2	
16	PS.C.8.5	Expansion joints for concrete lined open v-drains	m	

		SECTION 4 - Stormwater Structures		
	GM	GRAVEL ROAD MAINTENANCE		
		CLEANING OF STORMWATER STRUCTURES		
1	PS.PH.10	Clearing and Grubbing at inlets and outlets of stormwater structures	no.	
2	PS.PH.11	Removal of silt and sand by excavation at inlet and outlet structures when required	m3	
3	PS.PH.12	Unblocking and cleaning of existing stormwater pipe crossings	m	
		CONSTRUCT TYPE 'S1' INLET STRUCTURES TO EXISTING/NEW PIPE CROSSINGS (0 UP TO 1.5M DEPTH), INCLUDING COVER, LID AND SUPPORT BEAMS (AS PER DRAWING NO. 38572)		
4	PH.8.3	450mm diameter pipes	no.	
5	PH.8.3	600mm diameter pipes	no.	
6	PH.8.3	900mm diameter pipes	no.	
7		Extra for additional inlet depth for all pipe sizes	m	
		CONSTRUCT TYPE 'S2' INLET STRUCTURES TO EXISTING/NEW PIPE CROSSINGS (0 UP TO 1.5M DEPTH), INCLUDING COVER, LID, SPLAY AND SUPPORT BEAMS (AS PER DRAWING NO. 38572)		
8	PH.8.3	450mm diameter pipes	no.	
9	PH.8.3	600mm diameter pipes	no.	
10	PH.8.3	900mm diameter pipes	no.	
11		Extra for additional inlet depth for all pipe sizes	m	
		CONSTRUCT TYPE 'D3' INLET STRUCTURES TO EXISTING/NEW PIPE CROSSINGS (0 UP TO 1.5M DEPTH) INCLUDING COVER, LID, SPLAYS AND SUPPORT BEAMS (AS PER DRAWING NO. 38572)		
12	PH.8.3	450mm diameter pipes	no.	
13	PH.8.3	600mm diameter pipes	no.	
14	PH.8.3	900mm diameter pipes	no.	
15		Extra for additional inlet depth for all pipe sizes	m	
		CONSTRUCT TYPE 'A' HEADWALL TO NEW/EXISTING PIPES		

16	PS.PH.8.10	450mm diameter pipes	no.	
17	PS.PH.8.10	600mm diameter pipes	no.	
18	PS.PH.8.10	900mm diameter pipes	no.	
		EXCAVATION FOR STORMWATER PIPE CROSSINGS		
19	DD.8.2	(a) to stockpile	m3	
20	DD.8.2	(b) to spoil	m3	
21	DD.8.2	(c) extra over for hard material	m3	
22	DD.8.2	(d) extra over for rock material	m3	
		LOWER EXISTING STORMWATER PIPES INCLUDING EXCAVATION FOR AND REMOVAL OF EXISTING PIPES, EXCAVATION FOR NEW TRENCHES AND BACKFILLING		
23	PS.PG.8.14	(a) 0 to 450 mm diameter	m	
24	PS.PG.8.14	(b) 600 mm diameter	m	
25	PS.PG.8.14	(d) 900 mm diameter	m	
		SUPPLY AND LAY NEW STORMWATER PIPES		
26	PG.8.2	(a) 450 mm diameter 100D	m	
27	PG.8.2	(b) 600 mm diameter 100D	m	
28	PG.8.2	(d) 900 mm diameter 100D	m	
29	DB.8.9	Class C bedding	m3	
30	DB.8.11	Class A bedding	m3	

SECTION 5 - Bulk Earthworks

1	DA.8.3	Excavate (insitu material) cut to fill, gravel material in compacted layer thickness of 150mm, to 93% of modified AASHTO density. inclusive of haulage	m3	
2	DA.8.3	Excavate insitu material to spoil including haulage	m3	
3	DA.8.4	Import selected fill, including haulage, gravel material in compacted layer thickness of 150mm, to 93% of modified AASHTO density.	m3	
4	DA.8.3	Extra over for hard excavation for item 1 and 2 above	m3	
5	EL.8	Supply and place dumprock (haulage included)	m3	
6	PS.EL.9	A7 Geofabric or equivalent (wrapped around dumprock)	m2	
		<u>Trimming of embankments and Finishing off cut and fill slopes, medians and interchange areas:</u>		
7	DA.8.6	(a) in cut slopes	m2	
8	DA.8.6	(b) in fill slopes	m2	

	EM	CONCRETE SURFACE TO ROADS		
1	7100	Supply and lay 30/19 concrete in 2.5x2.5 panels as instructed by Engineer. Longitudinal joints to be dowelled with Y10(deformed bars), 500mm in length @ 750mm intervals. The thickness of the slab is to be 140mm or as instructed by the engineer	m2	

SECTION 6 - Heavy Regravelling

	GM	GRAVEL ROAD MAINTENANCE		
		Heavy Re-graveling		
1	PS.GM.5	Rip, shape, process and re-compact full width of existing road surface to 90% Mod AASHTO to a minimum of 3% crossfall and the construction of earth side drains and mitre drains.	km	

2	PS.GM.10	Supply, place, process and compact 150mm selected gravel pavement layer (G7 quality) from an approved source to 93% Mod AASHTO to a minimum of 3% crossfall, including haulage.	m3	
3	PS.GM.10	Supply, place, process and compact 150mm gravel wearing course (G6 quality) from an approved source to 95% Mod AASHTO to a minimum of 3% crossfall, including haulage	m3	

SECTION 7 - Pitching, Stonework and protection against erosion

F		PROTECTION WORKS		
1	C.8.1	Construct concrete edge beams (class 30MPa/19mm)	m3	
2	F.8.4	Supply and lay grouted stone pitching	m2	
3	F.8.6	Supply and lay PVC coated gabion boxes	m3	
4	F.8.6	Supply and lay PVC coated reno mattresses	m3	
5	PS.F.8.9	Supply and lay geofabric for item 3 and 4 (A4 or equivalent)	m2	
6		Supply and Lay Loffelstein blocks- tb 500 (Including foundation)	m2	
7		Supply and Lay Loffelstein blocks- tb 300 (Including foundation)	m2	
8		Dismantle existing gabion structure and recover handstone for re-use	m3	

SECTION 8 - Roads & Sidewalks

ED		ROAD ASPHALT		
1	PS.ED.9, Part S& Part EB of standard specification	Category 'B' Full Depth Repair 150mm G2 graded crushed stone, 160mm Asphalt for greater than 5m ²	m2	
2	PS.ED.9, Part S& Part EB of standard specification	Category 'B' Full Depth Repair 150mm G2 graded crushed stone, 160mm Asphalt for less than 5m ²	m2	
3	PS.ED.9, Part S& Part EB of standard specification	Category 'C' Full Depth Repair 150mm G2 graded crushed stone, 80mm Asphalt for areas greater than 5m ²	m2	
4	PS.ED.9, Part S& Part EB of standard specification	Category 'C' Full Depth Repair 150mm G2 graded crushed stone, 80mm Asphalt for areas less than 5m ²	m2	
5	PS.ED.9, Part S& Part EB of standard specification	Category 'D' Full Depth Repair 150mm G2 graded crushed stone, 50mm Asphalt for areas greater than 5m ²	m2	
6	PS.ED.9, Part S& Part EB of standard specification	Category 'D' Full Depth Repair 150mm G2 graded crushed stone, 50mm Asphalt for areas less than 5m ²	m2	
7	PS.ED.9, Part S& Part EB of standard specification	Category 'E' Full Depth Repair 100mm G2 graded crushed stone, 25mm asphalt for areas greater than 5m ²	m2	
8	PS.ED.9, Part S& Part EB of standard specification	Category 'E' Full Depth Repair 100mm G2 graded crushed stone, 25mm asphalt for areas less than 5m ²	m2	

9	PS.ED.10 Part S& Part EB of standard specification	Replacement of Existing Asphalt Surface only at 160mm Depth for areas greater than 5m ²	m2	
10	PS.ED.10 Part S& Part EB of standard specification	Replacement of Existing Asphalt Surface only at 160mm Depth for areas less than 5m ²	m2	
11	PS.ED.10 Part S& Part EB of standard specification	Replacement of Existing Asphalt Surface only at 80mm Depth for areas greater than 5m ²	m2	
12	PS.ED.10 Part S& Part EB of standard specification	Replacement of Existing Asphalt Surface only at 80mm Depth for areas less than 5m ²	m2	
13	PS.ED.10 Part S& Part EB of standard specification	Replacement of Existing Asphalt Surface only at 50mm Depth for areas greater than 5m ²	m2	
14	PS.ED.10 Part S& Part EB of standard specification	Replacement of Existing Asphalt Surface only at 50mm Depth for areas less than 5m ²	m2	
15	PS.ED.10 Part S& Part EB of standard specification	Replacement of Existing Asphalt Surface only at 25mm Depth for areas greater than 5m ²	m2	
16	PS.ED.10 Part S& Part EB of standard specification	Replacement of Existing Asphalt Surface only at 25mm Depth for areas less than 5m ²	m2	
17		Supply, place and process G2 crusher 150mm	m2	
18	PS.ED.11	Saw cutting in asphalt where instructed by the Employer's Agent 50-100mm depth	m	
19	PS.DA.8.11	Application of weed killer	m ²	
20	PS.DA.8.3	Excavate for new kerbs and channel	m ³	
21	PS.EF.14	Supply and place figure 6 kerbs	m	
22	PS.EF.8.4	Construction of 300x100mm concrete channel (20/19)	m	
23	PS.EF.8.3	Supply and lay new mini kerbs as edge support to asphalt surfacing	m	
24	EF.5.2	Supply and lay asphalt haunches	m	

SECTION 9 - Road marking

	TB	ROAD MARKINGS		
1	PS.TB.8.4	Remove existing lane, edge and painted island lines by blasin	m2	
2	PS.TB.8.5	Setting out and premarking for lines	m	
3	PS.TB.8.1.1	Painted road lines 100mm wide (white)	m	
4	PS.TB.8.1.1	Painted road lines 100mm wide (yellow)	m	
5	PS.TB.8.1.1	Painted road lines 100mm wide (red)	m	
6	PS.TB.8.1.1	Painted road lines 150mm wide (white)	m	
7	PS.TB.8.1.1	Painted road lines 150mm wide (yellow)	m	
8	PS.TB.8.1.1	Painted road lines 150mm wide (red)	m	
9	PS.TB.8.1.1	Painted road lines 200mm wide (white)	m	
10	PS.TB.8.6	Removal of lines by black painting	m2	
11	TB.8.1.1	Transverse lines and islands	m2	
12	TB.8.1.2	Lettering and symbols (regardless of the colour)	m2	
13		Painting of speed humps	m2	

**SECTION 10 - Unblocking of stormwater
infrastructure**

	PH	MANHOLES and APPURTENANT DRAINAGE WORKS		
		CLEANING OF BLOCKED STORMWATER MANHOLES		
1	PS.SM.8.1.5	0.0M - 1.5 depth	no.	
2	PS.SM.8.1.5	>1.5m - 3m depth	no.	
3	PS.SM.8.1.5	>3m-5m depth	no.	
4	PS.SM.8.1.5	>5m-10m depth	no.	
		CLEANING OF BLOCKED PIPES		
5	PS.SM.8.1.6	0mm-450mm diameter pipe	m	
6	PS.SM.8.1.6	>450mm-600mm diameter pipe	m	
7	PS.SM.8.1.6	>600mm-900mm diameter pipe	m	
8	PS.SM.8.1.7	Cleaning of pipe culverts	m3	
9	PS.SM.8.1.8	Cleaning of box/portal culvert	m3	
10	PS.SM.8.1.9	Cleaning of lined open drains/canals	m3	
11	PS.SM.8.1.10	Cleaning of earth drains	m3	

SECTION 11 - Guardrails

	EH	STEEL GUARDRAILS & CONC. MEDIAN BARRIERS		
		SUPPLY AND ERECTION OF NEW GUARDRAILS		
1	EH.[8.1]	(a) Single guardrails	m	
2	EH.[8.1]	(b) Double guardrail	m	
3	EH.[8.1]	(c) Curved steel guardrails	m	
		Supply and erection of new concrete post		
4	E.H[5.1.2]	(a) Single head post	no.	
5	E.[5.1.2]	(b) Double head post	no.	
		Supply of end units		
15	EH.5.1.3	(1) Fishtail Type	no.	
16	EH.5.1.3	(2) Bullnose Type	no.	
17	EH.[8.6]	(3) Ramped Approached-end section(single rail)	no.	
18	EH.[8.6]	(4) Ramped approach-end section(Double rail)	no.	
20	EH.[8.7]	Supply and Install Reflective plates	no.	

SECTION 12 - SUPPLY OF MATERIALS

1	PS.GM.4	Provisional sum for acceptance testing by the Engineer	Prov. Sum	R 50 000.00
2	PS.GM.6	Supply and place 1st crush/ dump rock as pioneering layer	m3	
3	PS.GM.7	Supply only , G5 material to specific sites as required	m3	
4	PS.GM.7	Supply only, pvc coated gabion baskets	no	
5	PS.GM.7	Supply only , pvc coated reno mattresses	no	
6	PS.GM.7	Supply only, geofabric	m2	
7	PS.GM.7	Supply only, hand stone for gabions and reno mattresses.	m3	
8	PS.GM.7	Supply of G5 or better for layerworks below G2	m3	
9		Extra over to stabilise G2 or G5	m3	
10		Hualage of material, items 3 to 8 above	km	

**SECTION 13 - STORMWATER INLETS (PRECAST
PRODUCTS)**

		Supply and place 1200X1200 mm pre-cast concrete covers including lids to existing or modified stormwater inlet:		
1	PS.PH.8.16	a) Heavy duty	no.	
2	PS.PH.8.16	b) Light duty	no.	
		Supply and place left or right pre-cast concrete splay to existing or modified stormwater inlets:		

3	PS.PH.8.16	a) Heavy duty	no.	
4	PS.PH.8.16	b)Light duty	no.	
		<u>Supply and place 790x790mm pre-cast concrete covers including lids to existing or modified stormwater inlets:</u>		
5	PS.PH.8.16	Supply and place 790x790 manhole cover and lid (heavy duty)	no.	
6	PS.PH.8.16	Supply and place 790x790 manhole cover and lid (light duty)	no.	
7	PS.PH.8.16	Supply and place standard pre-cast concrete bollards	no.	
8	PS.PH.8.16	Supply and place support concrete beams to stormwater inlets	no.	
		<u>Supply and place concrete lids to existing 1200x1200mm pre-cast covers:</u>		
9	PS.PH.8.16	a)Heavy duty	no.	
10	PS.PH.8.16	b)Light duty	no.	
		<u>Supply and place circular manhole covers including lids as follows</u>		
11	PS.PH.8.16	a) Heavy duty	no.	
12	PS.PH.8.16	b) Light duty	no.	
		<u>Dismantle existing structure</u>		
13		Dismantle existing loffelstein type structure	m2	