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BILL OF QUANTITIES**SECTION 1 PRELIMINARY AND GENERAL ITEMS****PART 0102 C1.2 GENERAL REQUIREMENTS AND PROVISIONS**

Item	Clause	Description	Unit	Quantity	Rate	Amount
1	C1.2.2.4 PS.C1.2.2.3	Submission of a Scheme 2 Full Programme	Lump sum	1		
2	C1.2.2.5 PS.C1.2.2.5	Reviewing and updating a Scheme 2 programme every month	months	6		
		<u>Other Documentation</u>				
3	C1.2.2.6	Preparation and submission of all information and reports specified in the Contract Documentation, including reporting on local labour	months	6		
		<u>Routine road maintenance of existing public roads within the Site of the Works or other public roads outside the Site of the Works which are used as detours</u>				
4	C1.2.3.1	Grass cutting	m2	600		
5	C1.2.3.2	Drain cleaning	m	15		
6	C1.2.3.3	Cleaning out culverts	m3	5		
		<u>Health and Safety</u>				
7	C1.2.5.1 PS.9	Health and safety plan	Lump sum	1		
8	C1.2.5.2 PS.9	Implementation of health and safety plan	months	6		
		<u>Community Liaison Officer</u>				
9	PS.12	Allow for 1 CLO's to be appointed	PC Sum	90000	1.00	90,000.00
10	PS.12	Handling costs and profit in respect of PS.12	%	90000		

TOTAL CARRIED TO SECTION 1 SUMMARY: PRELIMINARY AND GENERAL ITEMS

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PART 0103 C1.3 CONTRACTOR'S SITE ESTABLISHMENT AND

Item	Clause	Description	Unit	Quantity	Rate	Amount
		<u>The Contractor's General Obligations</u>				
1	C1.3.1.1 PS.C1.3.1	Fixed obligations	Lump sum	1		
2	C1.3.1.3 PS.C1.3.1	Time-related obligations	months	6		
3	C1.3.2 PS.C1.3.2	Contract sign boards (as per drawing)	no.	1		
4	PS.17	Submission of As-Built Data	sum	1		

TOTAL CARRIED TO SECTION 1 SUMMARY: PRELIMINARY AND GENERAL ITEMS

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UPGRADE OF 107932 STREET IN UMLAZI H OF WARD 82

PART 0105 C1.5 ACCOMMODATION OF TRAFFIC

Item	Clause	Description	Unit	Quantity	Rate	Amount
1	C1.5.1.1 PS.1.3	Accommodation of pedestrian and non-motorised traffic	months	6		
2	C1.5.2 PS.1.3	Accommodation of vehicular traffic	months	6		
3	C1.5.7.1(b)	Delineators including mounting bases and ballast: Double sided, reversible left or right (1200mm x 250mm)	no	10		
4	C1.5.7.3	Flagmen	months	6		
5	C1.5.7.5 (c)	(c) Illuminated road sign – R & TR series (900mm)	no	2		
6	C1.5.7.5(d)	(d) Illuminated road sign – TW series (900mm)	no	2		
7	C1.5.7.5(d)	(d) Illuminated road sign – TW series (TW407 / TW408)	no	1		

TOTAL CARRIED TO SECTION 1 SUMMARY: PRELIMINARY AND GENERAL ITEMS

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UPGRADE OF 107932 STREET IN UMLAZI H OF WARD 82

SECTION 2 SITE CLEARANCE**PART 0106 C1.6 CLEARING AND GRUBBING**

Item	Clause	Description	Unit	Quantity	Rate	Amount
		<u>Clearing</u>				
1	C1.6.1.1	Clearing with machines and some hand labour where necessary	m2	600		
2	C1.6.1.2	Clearing with hand labour only when labour enhanced work is specified	m2	600		
		<u>Grubbing</u>				
3	C1.6.2.1	Grubbing with machines and some hand labour where necessary	m2	600		
4	C1.6.2.2	Grubbing with hand labour when labour enhancement work is specified or it is not practical to use a machine	m2	600		
		<u>Removal and Grubbing of Large Trees and Tree Stumps</u>				
5	C1.6.3.1	Girth equal to or exceeding 1,0 m up to and including 2,0 m	no	3		
		<u>Removal</u>				
6	C1.6.4.1 PS.C1.6.4.1	Removal of structures: Demolition of brickwork of Manholes and inlets. Depth 0.0m to 1.5m	m3	5		
7	C1.6.4.1 PS.C1.6.4.1	Removal of Stormwater inlets; covers and frames. Store on site.	no	1		
8	C1.6.4.1 PS.C1.6.4.1	Removal of Stormwater manholes and inlet; covers and frames. Spoil at tip, including haulage.	no	1		
9	C1.6.4.1 PS.C1.6.4.1	Removal of Stormwater Pipes, Diameter 300mm-600mm. Spoil at tip, including haulage.	m	12		
10	C13.3.1.1(a) PS.C1.6.4.1	Cast in situ concrete: Strength concrete (class C): Seal Pipe ends (a) Concrete 15/26	m3	2		
11	PS.C1.6.4.2	Removal of buildings and structures: (Spaza Shops/Shacks that are on the road reserve, the area range between 10-16 square metres, including transportation and replacing material that will be damaged while demolishing)	no	3		
12	PS.C1.6.4.3	Removal of Loffelstein/GEOLOK 400 type retaining wall to store onsite as directed by Engineer on Site.	m2	100		
13	PS.C1.6.4.4	Removal of Gabion baskets and store the rocks on site for re-use as directed by the Engineer on Site.	m3	45		

UPGRADE OF 107932 STREET IN UMLAZI H OF WARD 82

PART 0106 C1.6 CLEARING AND GRUBBING

<u>Item</u>	<u>Clause</u>	<u>Description</u>	<u>Unit</u>	<u>Quantity</u>	<u>Rate</u>	<u>Amount</u>
TOTAL CARRIED TO SECTION 2 SUMMARY: SITE CLEARANCE						R

UPGRADE OF 107932 STREET IN UMLAZI H OF WARD 82

SECTION 3 SERVICES**PART 0201 C2.1 GEN REQMENTS AND TRENCHING SERVICE**

Item	Clause	Description	Unit	Quantity	Rate	Amount
		<u>Relocation of Services by Others:</u>				
		<u>Water</u>				
1	C2.1.1.2 PS.3	Permanent services relocation or protection work by others: Water	PC Sum	30000	1.00	30,000.00
2	C2.1.1.3 PS.3	Handling costs and profit in respect of item C2.1.1.2 above	%	30000		
		<u>Sewer</u>				
3	C2.1.1.2 PS.4	Permanent services relocation or protection work by others: Sewer	PC Sum	5000	1.00	5,000.00
4	C2.1.1.3 PS.4	Handling costs and profit in respect of item C2.1.1.2 above	%	5000		
		<u>Electricity</u>				
5	C2.1.1.2 PS.6	Permanent services relocation or protection work by others: Electricity	PC Sum	50000	1.00	50,000.00
6	C2.1.1.3 PS.6	Handling costs and profit in respect of item C2.1:1.2 above	%	50000		
		<u>Telecoms</u>				
7	C2.1.1.2 PS.6	Permanent services relocation or protection work by others: Telecoms	PC Sum	5000	1.00	5,000.00
8	C2.1.1.3 PS.6	Handling costs and profit in respect of item C2.1.1.2 above	%	5000		
		<u>Proving By Hand</u>				
9	C2.1.2.5 PS.2.2	Using hand excavation to locate, expose and verify services, Depth of 0.0m to 1.5m. (Prov)	m3	13.5		
10	C2.1.2.5 PS.2.2	Using hand excavation to locate, expose and verify services, Depth of 1.5m to 2.0m (Prov)	m3	15		
		<u>Cable Ducts</u>				
11	C2.1.6.1(a) PS.C2.1.6	Trench excavation (in soft material): Trenches up to 1,0 m wide (a) Up to 1,0 m deep	m3	23		
12	C2.1.6.1(b) PS.C2.1.6	Trench excavation (in soft material): Trenches up to 1,0 m wide (b) Over 1,0 m and up to 2,0 m deep	m3	10		
13	C2.1.7.1	Extra over item for excavating in hard material irrespective of depth	m3	8		

UPGRADE OF 107932 STREET IN UMLAZI H OF WARD 82

Part Continued **PART 0201 C2.1 GEN REQMENTS AND TRENCHING SERVICE**

Item	Clause	Description	Unit	Quantity	Rate	Amount
14	C2.1.11.1(a) PS.C2.1.6	Backfilling of trenches: Backfill compacted to 93 % (100 % for sand) of MDD (areas subject to traffic loads) using material: (a) From the excavated trench material	m3	39		

TOTAL CARRIED TO SECTION 3 SUMMARY: SERVICES

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PART 0202 C2.2 DRY SERVICES

Item	Clause	Description	Unit	Quantity	Rate	Amount
1	C2.2.1.1(b) PS.C2.2.1.1	U-PVC, type N450, with push fit couplings. (b) 160 mm diameter	m	16		
2	C2.2.6.1	Duct accessories: Duct markers (230 x 250 x 50)	no	4		
3	C2.2.6.3	Duct accessories: Draw wires	m	5		
4	C2.2.6.4	Duct accessories: End caps or plugs (U-PVC for 160mm dia)	no	4		
5	C2.2.7.4 PS.C2.2.7.4	Cable duct headwalls (230mm brickwork). Drawing: 38581	m2	8		
		<u>Bedding for Ducts</u>				
6	C2.2.4.1	Bedding for ducts compacted to 93 % of MDD (100 % for sand) using material: Selected from the excavated trench material	m3	3.5		
7	C2.2.4.5(a)	Bedding for ducts compacted to 93 % of MDD (100 % for sand) using material: From commercial sources : (a) Clean Coarse Sand	m3	3.5		

TOTAL CARRIED TO SECTION 3 SUMMARY: SERVICES

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UPGRADE OF 107932 STREET IN UMLAZI H OF WARD 82

SECTION 4 DRAINAGE**PART 0301 C3.1 DRAINS**

Item	Clause	Description	Unit	Quantity	Rate	Amount
1	C3.1.1.1(a)	Excavation for open drains: Excavating all material situated within the following depth ranges below the surface level using conventional methods: (a) 0 m to 1,5 m	m3	64		
2	C3.1.4.1(a)	Excavation and disposal of material for subsoil drainage systems: in all material situated within the following depth ranges below the surface:(a) 0 m to 1,5 m	m3	24		
3	C3.1.7.2	Crushed stone obtained from commercial sources (13.2mm stone chips)	m3	27		
4	C3.1.8.2	Natural river sand from commercial sources (Clean coarse sand)	m3	33		
5	C3.1.9.1	Pipes in subsoil drainage systems: U-PVC pipes and fittings, normal duty, complete with couplings (state size and whether or not perforated or slotted)	m	40		
6	C3.1.11 PS.C12.11	Geotextiles (Drainage grade, A3.)	m2	10		
7	C3.1.20	Breaking into existing drainage structures and install subsoil drain pipe	no	1		
8	C3.1.22	Test flushing of subsoil drain pipe systems	no	1		

TOTAL CARRIED TO SECTION 4 SUMMARY: DRAINAGE

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PART 0302 C3.2 CULVERTS

Item	Clause	Description	Unit	Quantity	Rate	Amount
1	C3.2.1.1(a) PS.C2.1.6 PS.C3.2.1.1	<u>Excavation:</u> <u>Pipes</u> Excavation for culvert structures for pipes: in all material situated within the following depth ranges below the surface level: (a) 0 m to 1,5 m	m3	50		
2	C3.2.1.1(b) PS.C2.1.6 PS.C3.2.1.1	Excavation for culvert structures for pipes: in all material situated within the following depth ranges below the surface level: (b) Exceeding 1,5 m and up to 3,0 m	m3	120		
3	C3.2.1.4 PS.C2.1.6	Extra over sub-item C3.2.1.1 for excavation in hard or boulder material,irrespective of depth	m3	30		

UPGRADE OF 107932 STREET IN UMLAZI H OF WARD 82

Part Continued **PART** 0302 C3.2 CULVERTS

Item	Clause	Description	Unit	Quantity	Rate	Amount
		<u>Backfilling:</u> <u>Pipes</u>				
4	C3.2.2.1	Backfilling: Using the excavated material	m3	57		
5	C3.2.2.2(a)	Backfilling: Using imported selected material: (a) From commercial sources (Using granular material)	m3	57		
6	C3.2.3.2 PS.C3.2.3.2	Concrete pipe culverts, Spigot and Socket: On Class B bedding (450mm diameter concrete Class 100D)	m	55		
7	C3.2.3.2 PS.C3.2.3.2	Concrete pipe culverts, Spigot and Socket: On Class B bedding (600mm diameter concrete Class 100D)	m	55		
8	C3.2.8	Concrete backfill or encasement for culverts (Grade 20/26)	m3	1		
		<u>Excavation:</u> <u>Manholes, Inlets and Headwalls</u>				
9	C3.2.1.1(a) PS.C2.1.6	Excavation for culvert structures for Manholes Inlets and Headwalls: in all material situated within the following depth ranges below the surface level: (a) 0 m to 1,5 m	m3	17		
10	C3.2.1.1(b) PS.C2.1.6	Excavation for culvert structures for Manholes Inlets and Headwalls: in all material situated within the following depth ranges below the surface level: (b) Exceeding 1,5 m and up to 3,0 m	m3	25		
11	C3.2.1.4 PS.C2.1.6	Extra over sub-item C3.2.1.1(b) for excavation in hard or boulder material,irrespective of depth	m3	13		
		<u>Backfilling:</u> <u>Manholes, Inlets and Headwalls</u>				
12	C3.2.2.1	Backfilling: Using the excavated material	m3	10		
13	C3.2.2.2(a)	Backfilling: Using imported selected material: (a) From commercial sources (Using imported G9 material)	m3	10		
14	PS.C3.2.9	Inlets and outlets to culverts: Headwalls, Type A, for 450mm pipes	no	1		
15	PS.C3.2.15.2	Inlet: Type S1, heavy duty concrete cover; Depth: Exceeding 0,0m and up to 1,5m	no	4		
16	PS.C3.2.15.2	Inlet: Type S2, heavy duty concrete cover; Depth: Exceeding 0,0m and up to 1,5m	no	1		

UPGRADE OF 107932 STREET IN UMLAZI H OF WARD 82

Part Continued **PART 0302 C3.2 CULVERTS**

Item	Clause	Description	Unit	Quantity	Rate	Amount
17	PS.C3.2.15.2	Inlet: Type S1, heavy duty concrete cover; Depth: Exceeding 1,5m and up to 2,0m	no	4		
		Compaction				
18	C3.2.24.1	Compaction of bedding for inlets, outlets, manholes and catchpits: Preparation and compaction of in situ bedding material to 90 % of MDD (depth 150mm)	m ³	20		
		Chutes				
19	C3.3.6.1	Prefabricated concrete chutes (minimum size 0.4m wide x 0.15m depth)	m	15		

TOTAL CARRIED TO SECTION 4 SUMMARY: DRAINAGE

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PART 0303 C3.3 CONCRETE KERBING AND CHANNELING

Item	Clause	Description	Unit	Quantity	Rate	Amount
1	C3.3.2.1, PS.C3.3.2.1	Prefabricated kerbing, cast in-situ channeling: Type A Mountable Kerb, fig. 6, with 300mm channel, Drawing 38577	m	400		
2	C3.3.3.1, PS.C3.3.2.1	Extra over items C3.3.1 and C3.3.2 for concrete kerbing and channeling on curves of radii more than or equal to 2,0 m but less than 25 m	m	10		
3	C3.3.4	Extra over item C3.3.2 for drop kerbs and channel / Fillet at pedestrian crossings and driveways (Drawing 38579)	m	40		
		Sidewalk Edge Restraint				
4	C3.3.2.1, PS.C3.3.2.1	Prefabricated kerbing (edge restraint, Figure 12 kerb including 100mm x 100mm haunching)	m	400		
		Scoops				
5	C13.4.11	Cast in situ concrete for Pedestrian / Vehicular Scoop (Grade 20/13)	m ³	5		
		Clearing				
6	C3.3.16	Demolition and removal of existing kerbs	m	400		
		Open Drians				
7	C3.3.6.2	Cast in situ concrete chutes (V Drain, as per drawing) Item to include formation, backfill and compaction, Concrete, reinforcement and formwork	m	10		

UPGRADE OF 107932 STREET IN UMLAZI H OF WARD 82

Part Continued **PART** 0303 C3.3 CONCRETE KERBING AND CHANNELING

Item	Clause	Description	Unit	Quantity	Rate	Amount
8	C3.3.8.3(a)	Stone pitched lining (200 mm thickness)(a) Grouted stone pitching (type of open drain indicated)	m2	20		

TOTAL CARRIED TO SECTION 4 SUMMARY: DRAINAGE

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PART 1206 C12.6 MECH STABILISED FILL AND GABIONS

Item	Clause	Description	Unit	Quantity	Rate	Amount
		<u>Reno Mattress and Gabions for Headwalls</u>				
1	C12.6.14.1(a)	Foundation trench excavation: Excavating all material for reno mattress situated within the following depth ranges (a) 0 m to 1,5 m	m3	16		
2	C12.6.15	Surface preparation for bedding the reno mattress	m2	16		
3	C12.6.16.2	Reno mattress: PVC coated gabion boxes (2.0mx1.0mx0.3m)	m3	5		
4	C12.6.17, PS.C12.6.17	Geotextile (Filtertation and separation for use with reno mattress, min Grade 7)	m2	32		

TOTAL CARRIED TO SECTION 4 SUMMARY: DRAINAGE

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UPGRADE OF 107932 STREET IN UMLAZI H OF WARD 82

SECTION 5 EARTHWORKS**PART 0402 C4.2 CUT MATERIALS**

Item	Clause	Description	Unit	Quantity	Rate	Amount
		<u>Excavation to Stockpile or Fill</u>				
1	C4.2.3.1 PS.C4.2	Excavating of materials in cuttings for use in the works, material obtained from: Soft excavation	m3	100		
2	C4.2.3.3 PS.C4.2	Excavating of materials in cuttings for use in the works, material obtained from: Boulder excavation class B	m3	20		
3	C4.2.3.4 PS.C4.2	Excavating of materials in cuttings for use in the works, material obtained from: Hard excavation (other than by blasting)	m3	10		
		<u>Removal of Unsuitable (Undercut)</u>				
4	C4.2.7.1	Removal of unsuitable stable cut material to spoil: In layer thicknesses of 200 mm and less	m3	250		
		<u>Excavation to Spoil</u>				
5	C4.2.9.1 PS.C4.2	Excavate material to spoil in sites designated by the Contractor, material obtained from: Soft excavation, overburden and unsuitable material	m3	100		
6	C4.2.9.3 PS.C4.2	Excavate material to spoil in sites designated by the Contractor, material obtained from: Boulder excavation class B	m3	20		
7	C4.2.9.4 PS.C4.2	Excavate material to spoil in sites designated by the Contractor, material obtained from: Hard excavation (other than by blasting)	m3	30		
		<u>Finishing of Banks</u>				
8	C4.2.12.1(a)	Finishing the side slopes of Cuttings: (a) In soft material	m2	105		
9	C4.2.12.1(b)	Finishing the side slopes of Cuttings: (b) In boulder material class A and B	m2	50		

TOTAL CARRIED TO SECTION 5 SUMMARY: EARTHWORKS

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UPGRADE OF 107932 STREET IN UMLAZI H OF WARD 82

PART 0403 C4.3 EXISTING ROAD MATERIALS

Item	Clause	Description	Unit	Quantity	Rate	Amount
		<u>Saw-cut</u>				
1	C4.3.4.1(a)	Saw-cutting existing materials within the following average depth ranges: Asphalt: (a) Up to 50 mm	m	6		
2	C4.3.9.4 PS.C4.2	Excavating material by using conventional road construction equipment to stockpile: Natural gravel and sand materials	m3	30		
3	C4.3.18.1 PS.C4.2	Excavate non-compliant or excess pavement layer material to spoil in sites designated by the Contractor, material consisting of: Asphalt material	m3	32		
4	C4.3.4.1(a)	Saw-cutting existing materials within the following average depth ranges:Asphalt:(a) Up to 50 mm	m	5		
5	C4.3.4.1(b)	(b) Exceeding 50 mm and up to 100 mm	m	5		
6	C4.3.12.1(a)	Removing of existing concrete material within the following average depth ranges by: The break-up method:(a) Not exceeding 150 mm	m3	48		
7	C4.3.12.1(b)	(b) Exceeding 150 mm but not exceeding 250 mm	m3	48		

TOTAL CARRIED TO SECTION 5 SUMMARY: EARTHWORKS

R

PART 0404 C4.4 COMMERCIAL MATERIALS

Item	Clause	Description	Unit	Quantity	Rate	Amount
		<u>Import Fill Material</u>				
1	C4.4.2.1(g)	Commercial materials identified by the Contractor from commercial, private or other non-commercial suppliers: Pavement layer material:Type G7	m3	300		
2	C4.4.2.1(l)	Commercial materials identified by the Contractor from commercial, private or other non-commercial suppliers: Pavement layer material:Type G9	m3	300		

TOTAL CARRIED TO SECTION 5 SUMMARY: EARTHWORKS

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PART 0502 C5.2 FILL

Item	Clause	Description	Unit	Quantity	Rate	Amount
		<u>Processing and Compaction</u>				
1	C5.2.2.1(a)	Fill construction: Normal fill material (G7) in compacted layer thicknesses of 200 mm and less: (a) Compacted to 95 % of MDD	m3	300		

UPGRADE OF 107932 STREET IN UMLAZI H OF WARD 82

Part Continued **PART** 0502 C5.2 FILL

Item	Clause	Description	Unit	Quantity	Rate	Amount
2	C5.2.2.1(b)	Fill construction: Normal fill material (G9) in compacted layer thicknesses of 200 mm and less: (b) Compacted to 93 % of MDD	m3	300		
3	C5.2.3	Side-cut to fill compacted to 93 % of MDD in compacted layer thicknesses of 200 mm and less	m3	150		

TOTAL CARRIED TO SECTION 5 SUMMARY: EARTHWORKS

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UPGRADE OF 107932 STREET IN UMLAZI H OF WARD 82

SECTION 6 LAYERWORKS**PART 0404 C4.4 COMMERCIAL MATERIALS**

Item	Clause	Description	Unit	Quantity	Rate	Amount
1	C4.4.2.1(f)	Commercial materials identified by the Contractor from commercial, private or other non-commercial suppliers: Pavement layer material:Type G5	m ³	180		
2	C4.4.4.1 PS.C4.4.4.1	Cementitious stabilising agents: Cement	t	2		

TOTAL CARRIED TO SECTION 6 SUMMARY: LAYERWORKS

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PART 0501 C5.1 ROADBED

Item	Clause	Description	Unit	Quantity	Rate	Amount
1	C5.1.1.2	Roadbed construction and compaction to 95 % of MDD	m ³	120		

TOTAL CARRIED TO SECTION 6 SUMMARY: LAYERWORKS

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PART 0503 C5.3 ROAD PAVEMENT LAYERS

Item	Clause	Description	Unit	Quantity	Rate	Amount
1	C5.3.2.1(m)	Construction of layers: Gravel base layer (unstabilised), (150mm thick) compacted to 100 % of MDD	m ³	180		
2	C5.3.2.1(n)	Gravel base layer (chemically stabilised), (150mm thick) compacted to 97 % of MDD	m ³	30		

TOTAL CARRIED TO SECTION 6 SUMMARY: LAYERWORKS

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PART 0601 C6.1 PAVER LAID CONCRETE LAYERS

Item	Clause	Description	Unit	Quantity	Rate	Amount
1	C6.1.2.1(a)	Construction of jointed concrete pavement (JCP) (Excluding texturing and curing)JCP without dowels:Labour enhanced consttion (150mm thick, grade 30/26 inclusive of Mesh Ref 395)	m ²	1200		
2	C6.1.7.1	Expansion joints complete (excluding dowels)	m	310		
3	C6.1.9.1	100 mm cores drilled from pavement for testing of compressive strength	no	3		
4	C6.1.5.2	Burlap-dragged and broom finish only	m ²	1200		
5	C6.1.9.2	150 mm cores drilled from pavement for testing of compressive strength	no	4		
6	PS.C13.1.5	Additional concrete, grade 30/26 in panel anchor as detailed on Construction drawings.	m ³	35		

UPGRADE OF 107932 STREET IN UMLAZI H OF WARD 82

Part Continued **PART** 0601 C6.1 PAVER LAID CONCRETE LAYERS

Item	Clause	Description	Unit	Quantity	Rate	Amount
7	PS.C13.1.6	Additional concrete, grade 30/26 in anchor block as detailed on Construction drawings.	m3	24		
8	PS.C13.1.7	Transverse and longitudinal key as detailed on Construction drawings.	m	700		

TOTAL CARRIED TO SECTION 6 SUMMARY: LAYERWORKS

R**PART** 1203 C12.3 GROUND IMPROVEMENT

Item	Clause	Description	Unit	Quantity	Rate	Amount
1	C12.3.20 PS.C12.3.20	Importing dump rock for subgrade improvement, 300mm thick	m3	28		
2	C12.3.20 PS.C12.3.20	Importing dump rock for subgrade improvement, 500mm thick	m3	60		
3	PS.C12.3.20	Supply and place minimum grade 5 geofabric to dumprock layer.	m2	90		
4	C12.3.19 PS.C12.3.20	Importing G5 quality material from approved sources, to be applied over dumprock layer.	t	12		

TOTAL CARRIED TO SECTION 6 SUMMARY: LAYERWORKS

R

UPGRADE OF 107932 STREET IN UMLAZI H OF WARD 82

SECTION 7 ANCILLARY ROAD WORKS**PART 1104 C11.4 ROAD RESTRAINT SYSTEMS**

Item	Clause	Description	Unit	Quantity	Rate	Amount
1	C11.4.1.1(c)	Erecting of guardrails at 3,81 m spacing: Complete galvanized system compliant to SANS 1350: (c) on CONCRETE post (Drawing 38580)	m	66		
2	C11.4.1.2(a)	Terminal sections for 3,81 guardrails comprising of: (a) End wings to SANS 1350	no	8		
3	C11.4.5.1	"Additional guardrail posts for 3,81 m systems: Concrete"	no	34		
4	C11.4.6.2	Reflective Plastic plates	no	34		
5	C11.4.4.1	Extra over C11.4.1 for horizontally curved guard rails factory bent to a radius of less than 45m	m	67		

TOTAL CARRIED TO SECTION 7 SUMMARY: ANCILLARY ROAD WORKS

R

PART 1105 C11.5 FENCING

Item	Clause	Description	Unit	Quantity	Rate	Amount
		Wire Mesh Fence - Drawing 38583				
1	C11.5.1.3	Diamond mesh	m2	30		
2	C11.5.1.9(a)(i)	Straining posts, stays and anchors:(a) Vertical (Concrete straining post)	no	15		
3	C11.5.2 PS.C11.5.4.1	New gates (Vehicular)	no	2		
4	C11.5.2	New gates (Pedestrian)	no	4		

TOTAL CARRIED TO SECTION 7 SUMMARY: ANCILLARY ROAD WORKS

R

PART 1106 C11.6 ROAD SIGNS

Item	Clause	Description	Unit	Quantity	Rate	Amount
1	C11.6.1.3(a)	Road signboards with painted or coloured semi-matt background. Symbols, lettering and borders in semi-matt black or in Class I retro-reflective material, where the sign board is constructed from: Prepainted galvanized steel plate: (a) Area 0 to 0,5 m2	m2	5		
2	C11.6.1.3(b)	Road signboards with painted or coloured semi-matt background. Symbols, lettering and borders in semi-matt black or in Class I retro-reflective material, where the sign board is constructed from: Prepainted galvanized steel plate: (b) Area exceeding 0,5 m2 but not 2,0 m2	m2	5		

UPGRADE OF 107932 STREET IN UMLAZI H OF WARD 82

Part Continued **PART** 1106 C11.6 ROAD SIGNS

Item	Clause	Description	Unit	Quantity	Rate	Amount
3	C11.6.3.1	Road sign supports:Steel tubing (75m diameter), Galvanised	m	7		
4	C11.6.5.1	Excavation and backfilling for road sign supports:Excavating soft material and backfilling	m3	5		
5	C11.6.5.4	Extra over item C11.6.5.1 for hard material excavation	m3	4		
6	C13.4.11	Cast in situ concrete for road sign footings as directed by the Engineer (Grade 20/19)	m3	8		

TOTAL CARRIED TO SECTION 7 SUMMARY: ANCILLARY ROAD WORKS

R

PART 1108 C11.8 LANDSCAPING AND PLANTING PLANTS

Item	Clause	Description	Unit	Quantity	Rate	Amount
1	C11.8.3.3(b)	Preparing the areas for grassing: (b) Topsoil obtained from commercial sources by the Contractor	m3	10		
2	C11.8.6	Watering the already planted grass, trees and shrubs during the growing season	kl	0.2		
3	C11.8.12	Removal of undesirable vegetation	m2	20		
4	C11.8.4.3(c)	(c) Hydroseeding	m2	50		

TOTAL CARRIED TO SECTION 7 SUMMARY: ANCILLARY ROAD WORKS

R

PART 1109 C11.9 FINISHING ROAD AND ROAD RESERVE

Item	Clause	Description	Unit	Quantity	Rate	Amount
1	C11.9.1.2	Single carriageway road	km	0.4		

TOTAL CARRIED TO SECTION 7 SUMMARY: ANCILLARY ROAD WORKS

R

PART 1308 C13.8 ANCILLARY STRUCTURAL ELEMENTS

Item	Clause	Description	Unit	Quantity	Rate	Amount
1	PS.C13.1.2	Precast Steps (base steps or similar approved) including Grade20/13 concrete base min 50mm blinding.	no	30		
2	PS.C13.1.8	Handrails as per Standard Drawing no. 38581 and as directed by Engineer on Site.	m	60		
3	PS.C13.1.3	Precast Handrails Posts as per Standards Drawing no.38581 and as directed by Engineer on Site.	no	24		
4	PS.C13.1.4	Supply and place Precast Concrete Bollards as directed by Engineer on Site.	no	6		
5	PS.C13.1.2,7	Supply and place Grade 20MPa/19mm concrete for handrail post bases as directed by Engineer on Site.	m3	5		

UPGRADE OF 107932 STREET IN UMLAZI H OF WARD 82

Part Continued **PART** 1308 C13.8 ANCILLARY STRUCTURAL ELEMENTS

Item	Clause	Description	Unit	Quantity	Rate	Amount
6	PS.C13.1.7	Supply and lay Grade20MPa concrete for footpaths including transverse joints, curing with Class-3 Wood Float Surface finish. Rate to include all formwork, shuttering and Ref 193 reinforcing mesh as detailed in Construction drawings.	m3	35		

TOTAL CARRIED TO SECTION 7 SUMMARY: ANCILLARY ROAD WORKS

R

UPGRADE OF 107932 STREET IN UMLAZI H OF WARD 82

SECTION 8 RETAINING WALLS**PART 1206 C12.6 MECH STABILISED FILL AND GABIONS**

Item	Clause	Description	Unit	Quantity	Rate	Amount
		<u>Gabions</u>				
1	C12.6.14.1(a)	Foundation trench excavation: Excavating all material for gabions situated within the following depth ranges (a) 0 m to 1,5 m	m3	78		
2	C12.6.14.1(b)	Foundation trench excavation: Excavating all material for gabions situated within the following depth ranges (b) Exceeding 1,5 m and up to 3,0 m	m3	135		
3	C12.6.15	Surface preparation for bedding the gabions	m2	95		
4	C12.6.16.2	Gabions and mattresses: PVC coated gabion boxes (1.0mx1.0mx2.0m)	m3	180		
5	C12.6.17, PS.C12.6.17	Geotextile (Filteration and separation for use with gabions, min Grade 7)	m2	174		
		<u>Segmented Block walls (Geolock or similar approved)</u>				
6	C12.6.2	Excavation for wall base foundation	m3	150		
7	C12.6.3	Concrete for wall base foundation (25/26)	m3	20		
8	C12.6.7	Metallic reinforcing mesh (Mesh Ref. 245)	m2	76		
9	C12.6.12.2	Facings (Geolock 400 or similar approved as per drawing for wall 0-2m): For concrete block wall facing	m2	60		
10	C12.6.12.2	Facings (Geolock 400 or similar approved as per drawing for wall 2m-3m): For concrete block wall facing	m2	50		
11	C12.6.12.2	Facings (Geolock 400 or similar approved as per drawing for wall 3-4m): For concrete block wall facing	m2	70		
12	C12.6.13	Drainage (50mm weepholes installed inclusive of all elements as per drawing)	no	39		
13	C12.6.11	Backfill (19mm stone chips)	m3	9		
14	C12.6.11	Backfill (Cement stabilised backfill as per drawing)	m3	45		
15	C12.6.11	Backfill (compacted to 95%MDD)	m3	160		
16	C12.6.17	Geotextile (Drainage A3)	m2	313		

UPGRADE OF 107932 STREET IN UMLAZI H OF WARD 82

Part Continued PART 1206 C12.6 MECH STABILISED FILL AND GABIONS

Item	Clause	Description	Unit	Quantity	Rate	Amount
17	C12.6.3	Concrete for wall Top blocks of wall (25/26)	m ³	27		

TOTAL CARRIED TO SECTION 8 SUMMARY: RETAINING WALLS

R

SUMMARY OF BILL OF QUANTITIES

Section

1 PRELIMINARY AND GENERAL ITEMS

R _____

0102 C1.2 GENERAL REQUIREMENTS AND PROVISIONS

R _____

0103 C1.3 CONTRACTOR'S SITE ESTABLISHMENT AND

R _____

0105 C1.5 ACCOMMODATION OF TRAFFIC

R _____

2 SITE CLEARANCE

R _____

0106 C1.6 CLEARING AND GRUBBING

R _____

3 SERVICES

R _____

0201 C2.1 GEN REQMENTS AND TRENCHING SERVICE

R _____

0202 C2.2 DRY SERVICES

R _____

4 DRAINAGE

R _____

0301 C3.1 DRAINS

R _____

0302 C3.2 CULVERTS

R _____

0303 C3.3 CONCRETE KERBING AND CHANNELING

R _____

1206 C12.6 MECH STABILISED FILL AND GABIONS

R _____

5 EARTHWORKS

R _____

0402 C4.2 CUT MATERIALS

R _____

0403 C4.3 EXISTING ROAD MATERIALS

R _____

0404 C4.4 COMMERCIAL MATERIALS

R _____

0502 C5.2 FILL

R _____

6 LAYERWORKS

R _____

0404 C4.4 COMMERCIAL MATERIALS

R _____

0501 C5.1 ROADBED

R _____

0503 C5.3 ROAD PAVEMENT LAYERS

R _____

0601 C6.1 PAVER LAID CONCRETE LAYERS

R _____

1203 C12.3 GROUND IMPROVEMENT

R _____

7 ANCILLARY ROAD WORKS

R _____

1104 C11.4 ROAD RESTRAINT SYSTEMS

R _____

1105 C11.5 FENCING

R _____

1106 C11.6 ROAD SIGNS

R _____

1108 C11.8 LANDSCAPING AND PLANTING PLANTS

R _____

1109 C11.9 FINISHING ROAD AND ROAD RESERVE

R _____

1308 C13.8 ANCILLARY STRUCTURAL ELEMENTS

R _____

8 RETAINING WALLS

R _____

1206 C12.6 MECH STABILISED FILL AND GABIONS

R _____

Section

SUB TOTAL	R	_____
ADD VAT (15%) - (only if a registered VAT Vendor)	R	_____
TOTAL CARRIED TO FORM OF TENDER	R	_____
