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BILL OF QUANTITIES**SECTION 1 PRELIMINARY AND GENERAL****PART AA PRELIMINARIES**

Item	Clause	Description	Unit	Quantity	Rate	Amount
1	GCC 2015	GENERAL CONDITIONS OF CONTRACT (GCC 2015) READ IN CONJUNCTION WITH THE CONTRACT DATA	sum	1		
2	GCC 2015	Time Related Obligations	sum	1		
3	SANS 1921-1	SANS 1921-1 : GENERAL ENGINEERING AND CONSTRUCTION WORKS READ IN CONJUNCTION WITH THE ASSOCIATED SPECIFICATION DATA IN THE SCOPE OF WORKS	sum	1		
4	SANS 1921-1	Time Related Obligations	sum	1		
5	C.1.2.3.1	COMMUNITY LIAISON OFFICER	PC Sum	125000	1.00	125,000.00
		Allow for CLO to be appointed and monthly submission of proof of employment and payment for the CLO.				
6		Handling costs etc. in respect of Item 7. Tenderer to state % markup. (Markup =%)	%	125000		

TOTAL CARRIED TO SECTION 1 SUMMARY: PRELIMINARY AND GENERAL**R****PART AB GENERAL SPECIFICATIONS**

Item	Clause	Description	Unit	Quantity	Rate	Amount
1	AB.4 PS.AB.1.2	Contractor's Camp Site / Store Yard	sum	1		
2	AB.5 PS.AB.6	Notice Board	sum	1		
3	AB.7 PS.AB.4	Road Deviations	sum	1		
4	AB.7.2	Initial supply of all signs, barricades and delineators	sum	1		
5	AB.7.1	Maintenance of Pedestrian and Traffic Facilities	sum	1		
6	AB.7.2	Maintenance of all signs, barricades and delineators	sum	1		
7	PS.AB.5	Allow for Progress Photographs	PC Sum	1000	1.00	1,000.00
8		Handling costs etc. in respect of Item 7. Tenderer to state % markup. (Markup =%)	%	1000		
9	PS.11	Survey for, and Preparation of, 'As-Built' Drawings	sum	1		

Upgrade of 200058 Str and Access Lanes in Ward 13

Part Continued **PART** **AB** **GENERAL SPECIFICATIONS**

Item	Clause	Description	Unit	Quantity	Rate	Amount
10		Allow the following additional items which the tenderer required to be priced separately :-	sum	1		
11		a)	sum	1		
12		b)	sum	1		
13		c)	sum	1		
14	PS.14	Site Security	sum	1		
15	PS.13 AB.6	Acceptance testing: Allow for testing of subgrade by a SANAS accredited Specialist Materials Testing Laboratory as directed by Engineer on Site.	PC Sum	30000	1.00	30,000.00

TOTAL CARRIED TO SECTION 1 SUMMARY: PRELIMINARY AND GENERAL

R

PART **AH** **OCCUPATIONAL HEALTH and SAFETY**

Item	Clause	Description	Unit	Quantity	Rate	Amount
		<u>The Tenderer shall ensure that the total sum of Part AH shall not be less than one percent (1%) of the Tender Amount (excluding VAT)</u>				
1	AH.14.1 PS.10	Contractor's initial obligations in respect of the Occupational Health and Safety Act and Construction Regulations	sum	1		
2	AH.14.2 PS.10	Contractor's time related obligations in respect of the Occupational Health and Safety Act and Construction Regulations	sum	1		
3	AH.14.3 PS.10	Submission of the Health and Safety File	sum	1		

TOTAL CARRIED TO SECTION 1 SUMMARY: PRELIMINARY AND GENERAL

R

Upgrade of 200058 Str and Access Lanes in Ward 13

SECTION 2 SITE CLEARANCE**PART B SITE CLEARANCE**

Item	Clause	Description	Unit	Quantity	Rate	Amount
1	B.8.2	General clearance and grubbing in road reserve.	m2	2950		
2	B.8.4 PS.B.3	Removal of trees of girth exceeding 0,250 m to tip as directed by Engineer on Site.	no.	6		
3	B.8.9 PS.B.3 PS.13	Removal of brickwork to tip as directed by Engineer on site.	m3	12		
4	B.8.10 PS.B.5 PS.12	Removal of unreinforced concrete to tip as directed by Engineer on Site	m3	12		
5	B.8.11 PS.B.5 PS.12	Removal of reinforced concrete to tip as directed by Engineer on Site	m3	12		
6	B.8.15	Removal of sidewalk as directed by engineer upto depth of 0.125m.	m3	12		
7	B.8.5 PS.B.6	Removal of Fence and store onsite (camp site/ Store Yard) for re-use or to tip directed by Engineer.	m	120		

TOTAL CARRIED TO SECTION 2 SUMMARY: SITE CLEARANCE**R**

Upgrade of 200058 Str and Access Lanes in Ward 13

SECTION 3 EARTHWORKS**PART DA EARTHWORKS : BULK**

Item	Clause	Description	Unit	Quantity	Rate	Amount
1	DA.8.3 PS.DA.3 PS.12	Excavate soft material to spoil	m3	530		
2	DA.8.3 PS.DA.2 PS.DA.3 PS.12	Extra over Item 1 for the excavation of intermediate material to spoil as directed by Engineer on Site	m3	160		
3	DA.8.3 PS.DA.2 PS.DA.3 PS.12	Extra over Item 1 for excavation of hard material (no blasting) to spoil as directed by Engineer on Site	m3	160		
4	DA.8.3 PS.DA.2 PS.DA.3 PS.12	Extra over Item 1 for the excavation of boulders greater than 0,15 m3 to spoil as directed by Engineer on Site	m3	30		
5	DA.8.9 PS.13 PS.DA.7/8	Formation	m3	1760		
6	PS.DA.5	Import,process and compact suitable G7 material from contractor's off-site source inclusive of haulage and royalties	m3	65		
7	DA.8.6	Trimming of embankments.	m2	1170		
8	DB.8.19 PS.2/3/4/5/6/7/8	Proving of existing services by hand excavation (provisional), where depth is :- Over 0,0m and not exceeding 1,5m	m3	30		
9	DA.8.3 PS.DA.3 PS.DA.4 PS.12	Excavate to spoil un-suitable material below formation.	m3	55		

TOTAL CARRIED TO SECTION 3 SUMMARY: EARTHWORKS

R

PART DD EARTHWORKS FOR STRUCTURES

Item	Clause	Description	Unit	Quantity	Rate	Amount
1	DD.8.2 PS.F.3 PS.12	Excavate to spoil at approved tip for retaining/gabion wall base as directed by Engineer on Site.	m3	30		

TOTAL CARRIED TO SECTION 3 SUMMARY: EARTHWORKS

R

PART EB GRADED CRUSHED STONE

Item	Clause	Description	Unit	Quantity	Rate	Amount
1	EB.8.1 PS.EB.1	Graded crushed stone G2, 150mm thick compacted to 98% Mod.A.A.S.H.T.O	m3	60		
2	EB.8.1 PS.EB.1	Graded crushed stone G5, 150mm thick compacted to 95% Mod.A.A.S.H.T.O	m3	325		
3	EB.8.2 PS.EB.2	Prime Coat @ 0,6litres/m2	m2	405		

TOTAL CARRIED TO SECTION 3 SUMMARY: EARTHWORKS

R

PART EL DUMPROCK SUBGRADE IMPROVEMENT						
Item	Clause	Description	Unit	Quantity	Rate	Amount
1	EL.8	Dumprock subgrade improvement.	m3	20		
TOTAL CARRIED TO SECTION 3 SUMMARY: EARTHWORKS					R	

Upgrade of 200058 Str and Access Lanes in Ward 13

SECTION 4 ROADWORKS**PART C CONCRETE WORK**

Item	Clause	Description	Unit	Quantity	Rate	Amount
1	PS.C.1/2/3/4/9 /10/11/14/15/1 6/17/18/19	Concrete pavement, Grade 40/26 150mm thick as detailed on Drawing No.48958.	m3	275		
2	PS.C.1/2/3/4/9 /10/11/14/15/1 6/17/18/20	Supply and lay Mesh Ref 395 to Concrete Roadway	m2	1760		
3	PS.C.1/2/3/4/2 0	Panel anchors, Grade 40/26 in as detailed on Drawing No.48958.	m3	25		
4	PS.C.1/2/3/4/2 1	Anchor blocks, Grade 40/26 as detailed on Drawing	m3	13		
5	PS.C.13	L shape Y10 tiebars in anchor blocks, 250mm x 250mm in length.	no.	880		
6	PS.ED.8	Saw Cut New concrete Rd/existing road edge (40mm deep)	m	200		
7	PS.C19	Polysulphide sealant to construction joint (3 mm wide)	m	200		

TOTAL CARRIED TO SECTION 4 SUMMARY: ROADWORKS

R

PART ED ROAD ASPHALT

Item	Clause	Description	Unit	Quantity	Rate	Amount
1	ED.8.1 PS.ED.1/2/4/5/ 6/7/8/9	Private Plant Asphalt Sa-S14. Bitumen content % as per mix design entered at time of use.	m	39		
2	ED.8.4	Tack Coat @ 0,3litres/m2	m2	410		

TOTAL CARRIED TO SECTION 4 SUMMARY: ROADWORKS

R

PART EF KERBS AND HAUNCHES

Item	Clause	Description	Unit	Quantity	Rate	Amount
1	EF.8.1 PS.EF.1 PS.EF.1	Supply and lay Type F Fig.6 Barrier Kerb as detailed on Drawing No.48958.	m	585		
2	PS.EF.2	Supply and lay Fig.12 kerb edge restraint as detailed on Drawing No.48815	m	20		
3	EF.8.1	Extra over Item1 for curves of radius less than 25 m.	m	10		

TOTAL CARRIED TO SECTION 4 SUMMARY: ROADWORKS

R

Upgrade of 200058 Str and Access Lanes in Ward 13

SECTION 5 STORMWATER DRAINAGE**PART C CONCRETE WORK**

Item	Clause	Description	Unit	Quantity	Rate	Amount
1	PS.C.1/2/3/4/2 1	Construct 100mm thick V-Drain with 25Mpa/19mm concrete reinforced with steel Mesh ref 195 (rate to include formwork)	m3	36		
2	C.8.1 PS.C.1/2/3/4/7	Supply and place Grade 20/26 concrete for cast insitu encasement to ducts as directed by Engineer on Site	m3	6		

TOTAL CARRIED TO SECTION 5 SUMMARY: STORMWATER DRAINAGE

R

PART DB EARTHWORKS FOR PIPE TRENCHES

Item	Clause	Description	Unit	Quantity	Rate	Amount
1	DB.8.5 PS.DB.1/2/3/4/ 6/8/9/10 PS.DB.1/2/3/4/ 6/8/9/10	Excavation for V-Drain.	m3	75		
2	DB.8.5 PS.DB.1/2/3/4/ 6/8/9/10 PS.DB.1/2/3/4/ 6/8/9/10 PS.DB.1/2/3/4/ 6/8/9/10	Excavate and backfill in soft material for 450mm diameter concrete pipe where depth is:- - Over 0,0 m and not exceeding 1,5 m.	m	60		
3	DB.8.5 PS.DB.1/2/3/4/ 6/8/9/10	Excavate and backfill in soft material for 450mm diameter concrete pipe where depth is:- - Over 1,5 m and not exceeding 2,0 m	m	30		
4	DB.8.6 PS.DB.1/9	Extra over on items 1 and 2 above for excavation in hard material.	m	30		
5	BD.8.9 DB.8.10 PS.DB.1/9	Supply, placing and compacting of Class B pipe bedding as per detail on Standard Drawing 38575.	m	30		
6	BD.8.9 DB.8.10 PS.DB.1/9 PS.DB.1/2/3/4/ 6/8/9/10	Supply, placing and compacting of Class C pipe bedding as per detail on Standard Drawing 38575.	m	30		
7	DB.8.5 PS.DB.1/2/3/4/ 6/8/9/10 PS.DB.1/2/3/4/ 6/8/9/10	Excavate and backfill in soft material for 110mmØ perforated subsoil drainage where depth is:- Over 0,0 m and not exceeding 1,5 m.	m3	40		
8	DB.8.5 PS.DB.1/2/3/4/ 6/8/9/10	Extra over item 7 above for intermediate material	m3	12		
9	DB.8.5 PS.DB.1/2/3/4/ 6/8/9/10	Extra over item 7 above for hard material	m3	12		

TOTAL CARRIED TO SECTION 5 SUMMARY: STORMWATER DRAINAGE

R

Upgrade of 200058 Str and Access Lanes in Ward 13

PART PG NON PRESSURE PIPELINES and PC CULVERTS

Item	Clause	Description	Unit	Quantity	Rate	Amount
1	PG.8.2	Supply and lay 450 mm diameter concrete Class 100D stormwater pipe as directed by Engineer on Site	m	60		
2	PG.8.11	Supply and lay 110 mm diameter U.P.V.C. cable ducts as directed by Engineer on Site	m	40		
3	PG.8.11	Supply and lay 160 mm diameter U.P.V.C. cable ducts as directed by Engineer on Site	m	295		
4	PG.8.11.3	Concrete Cable duct Marker (ethekwini Spec)	no.	60		
5	PS.PG.1/2/3/4/5	Supply and lay approved 110mm diameter perforated drainage as per subsoil detail. Class 2 pipe.	m	120		
6	PG.3.10	Supply and lay of 13.2 mm stone material for subsoil pipe bedding from commercial or off-site source complete.	m3	20		
7	PS.PG.4	Supply and lay clean coarse sand for subsoil pipe bedding from commercial or off-site source complete.	m3	20		
8	PS.PG.5	Geofabric to Sub-Soil Filter	m2	20		

TOTAL CARRIED TO SECTION 5 SUMMARY: STORMWATER DRAINAGE

R

PART PH MANHOLES and APPURTENANT DRAINAGE WORKS

Item	Clause	Description	Unit	Quantity	Rate	Amount
1	PH.8.3 PS.1 PS.6 PS.PH.1 PS.PH.6 PS.PH.1 PS.PH.6	Manhole Type A with inlet type cover S2. Depth : Over 0,0 m and not exceeding 1,5m as per detail on Standard Drawing 38572.	no.	2		
2	PH.8.3 PS.PH.1 PS.PH.6	Construct Standard inlet Type S1. Depth :- - Over 0,0 m and not exceeding 1,5 m as per detail on Standard Drawing 38572.	no.	2		
3	PH.8.3 PS.PH.1 PS.PH.6	Construct Standard inlet Type S1. Depth :- - Over 1,5 m and not exceeding 2,0 m as per detail on Standard Drawing 38572.	no.	2		
4	PH.8.3 PS.PH.1 PS.PH.6	Construct Standard inlet Type D3. Depth :- - Over 0,0 m and not exceeding 1,5 m as per detail on Standard Drawing 38572.	no.	2		
5	PS.PH.7	Construct Standard outlet headwall as per detail on Standard Drawing 38576 and as directed by Engineer on Site.	no.	2		

TOTAL CARRIED TO SECTION 5 SUMMARY: STORMWATER DRAINAGE

R

Upgrade of 200058 Str and Access Lanes in Ward 13

SECTION 6 EMBANKMENT PROTECTION**PART C CONCRETE WORK**

Item	Clause	Description	Unit	Quantity	Rate	Amount
1	PS.C.1/2/3/4/6	Supply and place Grade 15/19 mass concrete in and between top row of blocks as detailed on Drawing No.48958 and as directed by Engineer on Site	m3	3		
2	PS.C.1/2/3/4/5 /7	Supply and place Grade 25/26 concrete to cast insitu concrete to retaining wall foundation, excavation and compaction of sub-grade to 95% Mod. A.A.S.H.T.O as detailed on Drawing No.48958.	m3	27		
3	PS.C.1/2/3/4/5 /7	Supply and place steel mesh ref.245 to retaining wall foundation.	m2	180		

TOTAL CARRIED TO SECTION 6 SUMMARY: EMBANKMENT PROTECTION

R

PART F PROTECTION WORKS

Item	Clause	Description	Unit	Quantity	Rate	Amount
1	PS.F.9	Supply and install Gabion Baskets (PVC and Zinc Coated -1m x 1m x 1m)	m3	18		
2	F.8.6 PS.F.8	Supply and lay Gabion mattresses, 300 mm thick as detailed on Drawing No.49128 and as directed by Engineer on Site	m2	8		
3	F8.3 PS.F.11	Supply and lay Grass sodding (Cynodon Dactilon -Creepy Variety).	m2	1170		
4	PS.F.9	Supply and lay plantable interlocking TB300/ Geolok 400 or approved equivalent earth retaining system blocks as detailed on Drawing No.48958 and as directed by Engineer on Site.	m2	180		
5	PS.F.4	Supply and install approved grade geofabric to earth retaining system as detailed on Drawing No.48958.	m2	200		
6	PS.F.2 PS.F.5	Supply and install 50mm weepholes to earth retaining system as detailed on Drawing No.48958.	no.	360		
7		Re-erect wire fence using materials previously recovered from site.	m	100		

TOTAL CARRIED TO SECTION 6 SUMMARY: EMBANKMENT PROTECTION

R

Upgrade of 200058 Str and Access Lanes in Ward 13

SECTION 7 ROAD SIGNS AND MARKINGS**PART TA ROAD SIGNS**

Item	Clause	Description	Unit	Quantity	Rate	Amount
1	TA.8.1 PS.TA.1/2/5/6/ 7	Supply and erect road sign boards, area not exceeding 2m2	m2	6		
2	TA.8.2 PS.TA.3	Supply and erect standard 76mm diameter hotted dipped galvanised road name sign supports. Rate to include haulage.	no.	6		
3	TA.8.3 PS.DA.3	Excavate and backfill for road sign supports	m3	3		
4	TA.8.4 PS.C.1/2/3/4/7	Supply and place Grade 20/19 concrete for road sign footings	m3	3		

TOTAL CARRIED TO SECTION 7 SUMMARY: ROAD SIGNS AND MARKINGS

R

PART TB ROAD MARKINGS

Item	Clause	Description	Unit	Quantity	Rate	Amount
1	TB.8.1.1	Retroreflective painted road lines 150mm wide (white), including setting out and premarking as directed by Engineer on Site.	m	100		
2	TB.8.1.1	Retroreflective painted road lines 300mm wide (white), including setting out and premarking as directed by Engineer on Site.	m	20		
3	TB.8.1.2	Retroreflective painted road Marking for lettering, symbols and traffic islands (white), including setting out lettering, symbols and traffic island markings as directed by Engineer on Site.	m2	2		

TOTAL CARRIED TO SECTION 7 SUMMARY: ROAD SIGNS AND MARKINGS

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SUMMARY OF BILL OF QUANTITIES

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4	ROADWORKS		R	
	C	CONCRETE WORK	R	
	ED	ROAD ASPHALT	R	
	EF	KERBS AND HAUNCHES	R	
5	STORMWATER DRAINAGE		R	
	C	CONCRETE WORK	R	
	DB	EARTHWORKS FOR PIPE TRENCHES	R	
	PG	NON PRESSURE PIPELINES and PC CULVERTS	R	
	PH	MANHOLES and APPURTENANT DRAINAGE WORKS	R	
6	EMBANKMENT PROTECTION		R	
	C	CONCRETE WORK	R	
	F	PROTECTION WORKS	R	
7	ROAD SIGNS AND MARKINGS		R	
	TA	ROAD SIGNS	R	
	TB	ROAD MARKINGS	R	
SUB TOTAL				R
ADD VAT (15%) - (only if a registered VAT Vendor)				R
TOTAL CARRIED TO FORM OF TENDER				R