

C2.2: BILL OF QUANTITIES

The Bill of Quantities follows and comprises of 95 pages.

SCHEDULE A - ROADWORKS

ITEM NO	PAYMENT	DESCRIPTION	UNIT	QTY	RATE	AMOUNT (RAND)
	SABS 1200 AA	PRELIMINARY AND GENERAL				
	AA	PRELIMINARIES				
		GENERAL CONDITIONS OF CONTRACT (GCC 2015) READ IN CONJUNCTION WITH THE CONTRACT DATA				
1	GCC 2015	Fixed Charge obligations	L/Sum	1.0		
2	GCC 2015	Time Related obligations	month	24.0		
		SANS 1921-1: GENERAL ENGINEERING AND CONSTRUCTION WORKS READ IN CONJUNCTION WITH THE ASSOCIATED SPECIFICATION DATA IN THE SCOPE OF WORKS				
3	SANS 1921-1	Fixed Charge Items	L/Sum	1.0		
4	SANS 1921-1	Time Related Items	month	24.0		
	PS.13	COMMUNITY LIAISON OFFICER				
5		Allow for a CLO to be appointed.	PC Sum	1	420,000.00	420,000
6		Extra over to Item 5, Handling fee by main contractor, maximum of 7.5%	%	420,000.0		
		LOCAL LABOUR				
7	PS.12	Allow for the weekly submission of proof of employment of local labour	L/Sum	1.0		
Total Carried Forward						

SCHEDULE A - ROADWORKS

ITEM NO	PAYMENT	DESCRIPTION	UNIT	QTY	RATE	AMOUNT (RAND)
Brought Forward						
	AB	GENERAL SPECIFICATIONS				
		FIXED CHARGES				
1		Offices for Engineer and Staff	L/Sum	1.0		
2	PS.AB.1.4	Installation of Telephone / Internet	L/Sum	1.0		
3	PS.AB.2	Services Connection Fee (electrical / water / telephone) (Provisional)	L/Sum	1.0		
4	PS.1.2	Contractor's Camp Site / Store Yard	L/Sum	1.0		
5	AB.5	Notice Board	No	2		
6	AB.7	Road Deviations	L/Sum	1.0		
7		Initial supply of all signs, barricades and delineators	L/Sum	1.0		
8	PS.AB.10	Temporary barriers for accommodation of traffic, plastic barriers filled with sand (New Jersey type) Contractor's own source	m	250.0		
9	PS.AB.18	Additional supply of delineators and signs during construction	L/Sum	1.0		
10	PS.AB.8	Survey coordination of existing services (valves, manholes, catchpits, and cable duct markers)	L/Sum	1.0		
11	PS.AB.12	Survey for Engineer, as and when required	Prov Sum	1	200,000.00	200,000
12	PS.AB.12	Handling costs for Item 11 above	%	200,000.0		
13	PS.4.2.4; PS.11	Survey for, and Preparation of 'As-built' Drawings	L/Sum	1.0		
		Allow for the following Additional Items which the tenderer requires to be priced separately:				
		a)	L/Sum			
15		b)	L/Sum			
16		c)	L/Sum			
17	PS.AB.1.1; AB.2	Attendance on and Maintenance of Office for Engineer and Staff	L/Sum	1.0		
18	AB.3; PS.AB.1.4	Rental of Telephone / Internet for Engineer's Office Including Payment of Telephone / Service Accounts	PC Sum	1	25,000.00	25,000
19	AB.3; PS.AB.1.4	Handling Cost for Item 18 above	%	25,000.0		
Total Carried Forward						

SCHEDULE A - ROADWORKS

SECTION 1: PRELIMINARY AND GENERAL

ITEM NO	PAYMENT	DESCRIPTION	UNIT	QTY	RATE	AMOUNT (RAND)
Brought Forward						
20	PS.AB.1.1	Provision of photocopying, scanning and printing facilities up to and including paper size A0 for Engineer and Staff	L/Sum	1.00		
21	AB.6	Cost of Samples and Contractor's Preliminary and Site Control Testing	L/Sum	1.0		
22	PS.AB.5; PS.4.2.1.8	Allow for Progress Photographs	L/Sum	1.0		
23	PS.6.3	Protection, relocation and realignment of Electrical services (MV cables) to be relocated by an approved subcontractor	PC Sum	1	1,500,000.00	1,500,000
24	PS.6.3	Contractor's Handling costs and profit with respect to item above	%	1,500,000.00		
25	PS.6.3	Protection, relocation and realignment of Electrical services (LV cables) to be relocated by an approved subcontractor	PC Sum	1	1,500,000.00	1,500,000
26	PS.6.3	Contractor's Handling costs and profit with respect to item above	%	1,500,000.00		
27	PS.6.2	Design of protection, relocation and realignment of Electrical services (Streetlighting) including producing drawings and bill of quantities	PC Sum	1	150,000.00	150,000
28	PS.6.2	Contractor's Handling costs and profit with respect to item above	%	150,000.00		
29	PS.6.2	Protection, relocation and realignment of Electrical services (Streetlighting) to be relocated by an approved subcontractor	PC Sum	1	1,500,000.00	1,500,000
30	PS.6.2	Contractor's Handling costs and profit with respect to item above	%	1,500,000.00		
31	PS.3.1	Protection, relocation and realignment of Water Services (pipelines and fittings) under the supervision of service owners	PC Sum	1	1,000,000.00	1,000,000
32	PS.3.1	Contractor's Handling costs and profit with respect to item above	%	1,000,000.00		
33	PS.4.1	Protection, relocation and realignment of Sewers (pipelines, manholes and reconnection) under the supervision of service owners	PC Sum	1	500,000.00	500,000
34	PS.4.1	Contractor's Handling costs and profit with respect to item above	%	500,000.00		
35	PS.7	Relocation and Installation of MTN Services by MTN Nominated subcontractor	PC Sum	1	500,000.00	500,000
36	PS.7	Contractor's Handling costs and profit with respect to item above	%	500,000.00		
Total Carried Forward						

SCHEDULE A - ROADWORKS

SECTION 1: PRELIMINARY AND GENERAL

ITEM NO	PAYMENT	DESCRIPTION	UNIT	QTY	RATE	AMOUNT (RAND)
Brought Forward						
37	PS.7	Relocation and Installation of Neotel Services by Neotel Nominated subcontractor	PC Sum	1	500,000.00	500,000
38	PS.7	Contractor's Handling costs and profit with respect to item above	%	500,000.0		
39	PS.7	Relocation and Installation of DFA Services by DFA Nominated subcontractor	PC Sum	1	600,000.00	600,000
40	PS.7	Contractor's Handling costs and profit with respect to item above	%	600,000.0		
41	PS.7	Relocation and Installation of Telkom Services by Telkom Nominated subcontractor	PC Sum	1	600,000.00	600,000
42	PS.7	Contractor's Handling costs and profit with respect to item above	%	600,000.0		
43	PS.AB.12	Allowance for Geotechnical Investigations and Testing - Provisional	PC Sum	1	250,000.00	250,000
44	PS.AB.12	Extra-over to above Item, Handling fee for Main Contractor	%	250,000.00		
45	PS.11	Provision of security on site to guard against any disruption of the works throughout the duration of the Contract	Sum	1.0		
46	AB.3; PS.AB.1.5	Allowance for Trunk Sewer Reticulation	PC Sum	1	5,500 000.00	5,500 000.00
47	AB.3; PS.AB.1.5	Contractor's Handling costs and profit with respect to item above	%	5,500 000.00		
Total Carried Forward						

SCHEDULE A - ROADWORKS

SECTION 1: PRELIMINARY AND GENERAL

ITEM NO	PAYMENT	DESCRIPTION	UNIT	QTY	RATE	AMOUNT (RAND)
Brought Forward						
		<u>ECONOMIC EMPOWERMENT</u>				
48	PS.AB.15	Fixed cost for compliance with the requirements of ECONOMIC EMPOWERMENT	Sum	1.0		
49	PS.AB.15	Time related cost for compliance with the requirements of ECONOMIC EMPOWERMENT	month	24.0		
50	PS.AB.15	Employment of Mentor(s) to train and guide the CPG Sub-contractors	L/Sum	1.0		
51		Training of sub-contractors identified by the Business Desk	PC Sum	1	500,000.00	500,000
52		Extra over to item 51, Handling fee by Main Contractor, maximum of 7.5%	%	500,000.0		
53		Employment of Graduates as per ECONOMIC EMPOWERMENT	month	24.0		
54	PS.AB.17	Facilitation and Management of 1CE and 2CE sub-contractors - Time related cost	month	24.0		
55	PS.AB.17	Facilitation and Management of 1CE and 2CE sub-contractors - Provision of PPE and medicals	No	20.0		
Total Carried Forward						

SCHEDULE A - ROADWORKS
SECTION 1: PRELIMINARY AND GENERAL

ITEM NO	PAYMENT	DESCRIPTION	UNIT	QTY	RATE	AMOUNT (RAND)
Brought Forward						
		<u>TRAFFIC ACCOMMODATION</u>				
56	PS.1.3.3	Traffic Safety Officer appointment	month	24.0		
57	PS.1.3.7	(a) Fixed penalty per occurrence, R1000 per day				Rate Only
		<u>TRAFFIC ACCOMMODATION: PENALTIES</u>				
58	PS.1.3.7	(b) Time related penalty per hour, R1000 per hour				Rate Only
		<u>SUBCONTRACTORS</u>				
59	PS.16	Working alongside Specialist Geotechnical Subcontractor	L/Sum	1.0		
60	PS.16	Working adjacent to eThekweni Municipality's Contractor on Contract 1T-45729	L/Sum	1.0		
61	PS.16	Working alongside eThekweni Service Departments Special subcontractor	L/Sum	1.0		
62	PS.12	Acceptance Testing for C3 Stabilised layers	PC Sum	1	80,000.00	80,000
63	PS.12	Extra-over to above Item, Handling fee for Main Contractor	%	80,000.0		
64	DA.3; DB.3; PS.AB.13	Seismic testing on soils on site by specialised laboratory	PC Sum	1	100,000.00	100,000
65	DA.3; DB.3; PS.AB.13	Extra-over to above Item, Handling fee for Main Contractor	%	100,000.0		
66	PS.AB.14	Ad-hoc Adjudication: Employer's Contribution	PC Sum	1	250,000.00	250,000
67	PS.AB.14	Extra-over to above Item, Handling fee for Main Contractor	%	250,000.0		
Total Carried Forward						

SCHEDULE A - ROADWORKS**SECTION 1: PRELIMINARY AND GENERAL**

ITEM NO	PAYMENT	DESCRIPTION	UNIT	QTY	RATE	AMOUNT (RAND)
Brought Forward						
		<u>OCCUPATIONAL HEALTH ANDSAFETY</u>				
1	AH.14.1	Contractor's initial obligations in respect of the Occupational Health and Safety Act and Construction Regulations	L/Sum	1.0		
2	AH.14.2	Contractor's time related obligations in respect of the Occupational Health and Safety Act and Construction Regulations	L/Sum	1.0		
3	AH.14.3	Submission of the Health and Safety File	L/Sum	1.0		
Total Carried Forward To Summary						

SCHEDULE A - ROADWORKS**SECTION 2: SITE CLEARANCE**

ITEM NO	PAYMENT	DESCRIPTION	UNIT	QTY	RATE	AMOUNT (RAND)
		SECTION 2 SITE CLEARANCE				
		PART B: SITE CLEARANCE				
1	B.8.2	General clearance and grubbing in road reserve	m ²	1,500.00		
2	B.8.2	General clearance and grubbing within a servitude	m ²	500.00		
3	B.8.2	General clearance and grubbing in private property	m ²	500.0		
4	B.8.3	General clearance and grubbing for pipelines within a servitude	m	500.0		
5	B.8.3	General clearance and grubbing for pipelines in private property	m	500.0		
6	B.8.4	Removal of trees of girth exceeding 1,5 m	No	5.0		
7	B.8.7	Removal of street/traffic signs and posts and store on site for re-use	No	2.0		
8	B.8.7	Removal of street/traffic signs and posts and spoil at tip Rate to include all haulage	No	2.0		
9	B.8.7	Removal of bollards and spoil at tip Rate to include all haulage	No	10.0		
10	B.8.9	Removal of underground brickwork - Provisional	m ³	10.0		
11	B.8.14	Removal of roadways to tip	m ³	650.0		
12	B.8.14	Removal of roadways and store on site for re-use	m ³	50.0		
13	B.8.15	Removal of asphalt sidewalks/medians to tip	m	10.0		
14	B.8.16	Removal of kerb and channel/fillet to tip	m	200.0		
15	B.8.16	Removal of precast kerb to tip	m	200.0		
16	B.8.19	Removal of existing subsoil drains	m	80.0		
17	B.8.19	Removal of disused pipes, 0 - 300 mm diameter and spoil at tip. Rate to include all haulage - Provisional	m	100.0		
18	B.8.19	Removal of disused pipes, 300 - 500 mm diameter and spoil at tip. Rate to include all haulage - Provisional	m	100.0		
19	B.8.19	Removal of disused pipes, 500 - 800 mm diameter and spoil at tip. Rate to include all haulage.- Provisional	m	100.0		
20	B.8.19	Removal of disused pipes, greater than 800 mm diameter and spoil at tip. Rate to include all haulage. - Provisional	m	50.0		
21	B.8.20	Seal ends of pipes with grade 15/26 concrete	m ³	10.0		
Total Carried Forward						

SCHEDULE A - ROADWORKS**SECTION 2: SITE CLEARANCE**

ITEM NO	PAYMENT	DESCRIPTION	UNIT	QTY	RATE	AMOUNT (RAND)
Brought Forward						
22	B.8.20	Seal ends of pipes with 230 mm brickwork	m ²	10.0		
23	PS.B.9	Removal of heavy duty cast iron covers and transport to Stores.	No	5.0		
24	PS.B.9	Removal of heavy duty cast iron covers and store on site for re-use	No	5.0		
25	B.8.21	Backfilling with suitable material imported from an off-site source	m ³	40.0		
26	B.8.21	Provision of G7 backfill material from an off site source. Rate to include all royalties and haulage.	m ³	40.0		
27	PS.20.1	Appointment of Special Subcontractor to undertake flushing out and cleaning of existing Sewer and stormwater pipes and manholes	PC Sum	1	200,000.00	200,000
28	PS.20.1	Extra over for item above, Contractor's handling fee	%	200,000.0		
Total Carried Forward To Summary						

SCHEDULE A - ROADWORKS
SECTION 3: EARTHWORKS FOR PIPE TRENCHES

ITEM NO	PAYMENT	DESCRIPTION	UNIT	QTY	RATE	AMOUNT (RAND)
3	DB	EARTHWORKS FOR PIPE TRENCHES				
		<u>DUCTS AND SERVICES</u>				
1	PS.DB.[5]	Excavate in all material for services to be laid by others where depth is:- Over 0,0 m and not exceeding 1,5 m	m ³	100.00		
2	PS.DB.[5]	Excavate in all material for services to be laid by others where depth is:- Over 1,5 m and not exceeding 2,0 m	m ³	50.00		
3	PS.DB.[2]	Excavate and backfill in all material for ducts where depth is:- Over 0,0 m and not exceeding 1,5 m	m ³	200.0		
4	PS.DB.[2]	Excavate and backfill in all material for ducts where depth is:- Over 1,5 m and not exceeding 2,0 m	m ³	50.0		
		<u>SUBSOILS</u>				
5	DB.8.5	Excavate and backfill in all material for subsoil drains where depth is :- Over 0,0 m and not exceeding 1,5 m	m ³	100.0		
6	DB.8.5	Excavate and backfill in all material for subsoil drains where depth is :- Over 1,5 m and not exceeding 2,0 m	m ³	50.0		
7	DB.8.5	Excavate and backfill in all material for fin-drains where depth is :- Over 0,0 m and not exceeding 1,5 m	m ³	50.0		
8	DB.8.5	Excavate and backfill in all material for fin-drains where depth is :- Over 1,5 m and not exceeding 2,0 m	m ³	20.0		
9	DB.8.5	Excavate and backfill in all material for 450 mm diameter pipe where depth is :- Over 0,0 m and not exceeding 1,5 m	m	350.0		
10	DB.8.5	Excavate and backfill in all material for 450 mm diameter pipe where depth is :- Over 1,5 m and not exceeding 2,0 m	m	50.0		
11	DB.8.10	Placing and compacting of Class B bedding for 450 mm diameter pipe	m	150.0		
12	DB.8.10	Placing and compacting of Class C bedding for 450 mm diameter Pipe	m	300.0		
		<u>ADDITIONAL ITEMS</u>				
13	DB.8.3, DB.8.3.3	Extra over item 1 to 12 for excavation in Intermediate material	m ³	300.0		
14	DB.8.3, DB.8.3.3	Extra over item 1 to 12 for excavation in hard material	m ³	150.0		
Total Carried Forward						

SCHEDULE A - ROADWORKS
SECTION 3: EARTHWORKS FOR PIPE TRENCHES

ITEM NO	PAYMENT	DESCRIPTION	UNIT	QTY	RATE	AMOUNT (RAND)
Brought Forward						
15	DB.8.15	Disposal of unsuitable or surplus material from trench excavation including haulage and royalties	m³	220.0		
16	DB.8.13	Provision of selected granular backfill material for pipe bedding from commercial source, including haulage.	m³	60.0		
17	DB.8.13	Provision of selected granular backfill material for pipe bedding from site.	m³	40.0		
18	DB.8.13	Provision of selected granular backfill material for pipe trenches from commercial source, including haulage.	m³	160.0		
19	DB.8.13	Provision of selected granular backfill material for pipe trenches from site.	m³	80.0		
20	DB.8.13; PS.PG.6	Extra over for provision of 19mm stone chippings for pipe bedding from commercial source.	m³	10.0		
21	PS.DB.9	Backfill and compact trenches excavated by/for others using material on site.	m³	80.00		
22	PS.DB.9	Backfill and compact trenches excavated by/for others using material from commercial source.	m³	70.00		
23	B.8.21	Provision of G7 backfill from an off site source, including all royalties and haulage.	m³	50.0		
<u>PROVING OF SERVICES - HAND EXCAVATION</u>						
24	DB.8.19, PS.DB.[2]	Prove existing services by hand excavation (provisional), where depth is: - - Over 0,0 m and not exceeding 1,5 m	m³	30.0		
25	DB.8.19, PS.DB.[2]	Prove existing services by hand excavation (provisional), where depth is: - - Over 1,5 m and not exceeding 2,0 m	m³	30.0		
26	DB.8.19, PS.DB.[7]	Extra over item 24 and 25 for excavation to be done by hand in restricted areas.	m³	40.0		
27	DA.8.3	Extra over item 24 and 25 for excavation in intermediate material.	m³	40.0		
<u>OPEN DRAINS</u>						
28	DB.8.5	Excavate and backfill in all material for open drains.	m³	100.0		
29	DB.8.6	Extra over item 28 for intermediate material	m³	40.0		
<u>PG NON-PRESSURE PIPELINES AND PC CULVERTS</u>						
1	PG.8.2	450 mm diameter concrete Class 100D	m	400.0		
Total Carried Forward						

SCHEDULE A - ROADWORKS

SECTION 3: EARTHWORKS FOR PIPE TRENCHES

ITEM NO	PAYMENT	DESCRIPTION	UNIT	QTY	RATE	AMOUNT (RAND)
Brought Forward						
2	PG.8.6	Connection to existing 300 - 600 mm nominal diameter stormwater pipe	No	2		
3	PG.8.12, PS.PG.[2], PS.PG.[4]	110 mm diameter perforated sub-soil pipes	m	160.0		
4	PG.8.12, PS.PG.[8]	Drainage grade geofabric blanket as surround to subsoil drainage, A2 or similar approved.	m²	300.0		
5	PS.PG.[3]	110 mm diameter stub at manholes	No	4		
6	DB.8.13, PS.PG.[6]	Provision of 19 mm stone chippings for subsoil drain from commercial or off-site source	m³	40.0		
7	PS.PG.[7]	Import and compact clean coarse sand, free draining, from contractor's off-site source inclusive of haulage and royalties	m³	40.0		
8	PG.8.12, PS.PG.[2], PS.PG.[4]	Fin-drain pipe for drainage underneath layerworks - Provisional	m	10.0		
9	PG.8.12, PS.PG.[8]	Drainage grade geofabric blanket as surround to Fin-drain, A2 or similar approved - Provisional	m²	200.0		
10	PS.PG.[3]	Stub at manholes for Fin-drains - Provisional	No	3		
11	DB.8.13, PS.PG.[6]	Provision of 19 mm stone chippings for Fin-drain from commercial or off-site source - Provisional	m³	20.0		
12	PS.PG.[7]	Import and compact clean coarse sand, free draining, for Fin-drain, from contractor's off-site source inclusive of haulage and royalties - Provisional	m³	20.0		
<u>CABLE DUCTS</u>						
13	PG.8.11	110 mm diameter U.P.V.C. cable ducts	m	800.0		
14	PG.8.11	160 mm diameter U.P.V.C. cable ducts	m	400.0		
15	PG.8.11, PS.LC.3	50mm diameter U.P.V.C. cable ducts, 7 tube mini duct including caps.	m	400.0		
16	F.8.7, PS.PG.[10]	230 mm brickwork to cable duct headwalls	m²	20.0		
17	PG.8.11	Cable duct markers	No	25		
18	PG.8.11	Grade 20/26 concrete encasement to ducts	m³	50.0		
<u>PH</u> MANHOLES & APPURTENANT DRAINAGE WORKS						
1	PH.8.3	Standard inlet type S2 with Polymer concrete cover and frame. Depth: - Over 0,0 m and not exceeding 1,5 m	No	5		
Total Carried Forward						

SCHEDULE A - ROADWORKS**SECTION 3: EARTHWORKS FOR PIPE TRENCHES**

ITEM NO	PAYMENT	DESCRIPTION	UNIT	QTY	RATE	AMOUNT (RAND)
Brought Forward						
2	PH.8.3	Standard inlet type S2 with Polymer concrete cover and frame. Depth: - Over 1,5 m and not exceeding 2,0 m	No	2		
3	PH.8.3	Standard inlet type D3 with Polymer concrete cover and frame. Depth :- Over 0,0 m and not exceeding 1,5 m	No	1		
4	PH.8.3	Standard inlet type D3 with Polymer concrete cover and frame. Depth :- Over 1,5 m and not exceeding 2,0 m	No	2		
Total Carried Forward						

SCHEDULE A - ROADWORKS**SECTION 3: EARTHWORKS FOR PIPE TRENCHES**

ITEM NO	PAYMENT	DESCRIPTION	UNIT	QTY	RATE	AMOUNT (RAND)
Brought Forward						
		ADDITIONAL ITEMS				
5	PH.8.7	Raise/lower existing manhole with concrete cover and frame in paved area by :- 0 to 250 mm - Provisional	No	2		
6	PH.8.7	Raise/lower existing manhole with concrete cover and frame in paved area by :- 250 to 500 mm - Provisional	No	1		
7	PH.8.7	Raise/lower existing manhole with cast iron cover and frame in paved area by :- 0 to 250 mm - Provisional	No	1		
8	PH.8.7	Raise/lower existing manhole with cast iron cover and frame in paved area by :- 250 to 500 mm - Provisional	No	1		
9		Special manhole Type A1 with heavy duty Polymer Concrete Grid type inlet and frame or similar approved. Depth: -- Over 0,0m and not exceeding 1,5m. As per tender drawing	No	3		
10		Special manhole Type A1 with heavy duty Polymer Concrete Grid type inlet and frame or similar approved. Depth: -- Over 1,5m and not exceeding 2,0m. As per tender drawing	No	4		
11		Construct 1.5m wide concrete V-drains, including formation, backfill and compaction, grade 25/26 concrete, reinforcement and shuttering	m	100.0		
12		Shaping of V-drain around inlets with grade 25/26 concrete	m³	10.0		
Total Carried Forward To Summary						

SCHEDULE A - ROADWORKS

SECTION 4: EARTHWORKS: BULK

ITEM NO	PAYMENT	DESCRIPTION	UNIT	QTY	RATE	AMOUNT (RAND)
4	DA	EARTHWORKS: BULK				
1	DA.8.2	Excavate topsoil and spoil at tip	m³	20.0		
2	DA.8.3	Excavate soft material to spoil	m³	4,200.0		
3	DA.8.3	Extra over for item 2 for excavation in intermediate material to spoil	m³	1,200.0		
4	DA.8.3	Extra over for item 2 for excavation of hard material to spoil	m³	1,200.0		
5	DA.8.3	Excavate soft material and place directly into fill	m³	100.0		
6	DA.8.3	Extra over for item 5 for excavation in intermediate material to fill	m³	50.0		
7	DA.8.3	Extra over for item 5 for excavation in hard material to fill	m³	50.0		
8	DA.8.3	Extra over for item 5 for the excavation of boulders greater than 0,15 m3 to spoil	m³	30.0		
9	DA.8.3	Excavate soft material and stockpile	m³	100.0		
10	DA.8.3	Extra over for item 9 for transporting from stockpile to fill	m³	100.0		
11	DA.8.3	Excavate unsuitable material for 300mm sand-blanket undercut below embankments or formation and spoil at tip (including all dumping, fill, haulage) - Provisional	m³	300.0		
12	DA.8.3	Excavate unsuitable material for 500mm dumprock undercut below embankments or formation and spoil at tip (including all dumping, fill, haulage) - Provisional	m³	1,000.0		
13	DA.8.3	Excavate unsuitable material for 1000mm dumprock undercut below embankments or formation and spoil at tip (including all dumping, fill, haulage) - Provisional	m³	1,000.0		
14	DA.8.4; PS.DA.6	Import suitable fill material (G9) for subgrade improvement from contractor's off-site source inclusive of haulage and royalties - Provisional	m³	200.0		
15	PS.DA.7	Import clean coarse sand, free draining, from contractor's off-site source inclusive of haulage and royalties for 300mm sand-blanket - Provisional	m³	300.0		
16	DA.8.5	Compaction of all material from site to 95% Mod. A.A.S.H.T.O.	m³	200.0		
17	DA.8.5	Compact imported fill material (G9) to 95% Mod. A.A.S.H.T.O. - Provisional	m³	200.0		
18	DA.8.5	Compact clean coarse sand to 95% Mod A.A.S.H.T.O. - Provisional	m³	300.0		
Total Carried Forward						

SCHEDULE A - ROADWORKS

SECTION 4: EARTHWORKS: BULK

ITEM NO	PAYMENT	DESCRIPTION	UNIT	QTY	RATE	AMOUNT (RAND)
Brought Forward						
19	PS.DA.15	Supply and place general grade geofabric, A2 or similar approved for sand-blanket - Provisional	m ²	2,000.0		
20	DA.8.6	Trimming of embankments	m ²	800.0		
		<u>LAYERWORKS</u>				
21	DA.8.9	Formation	m ²	3,200.0		
22	DA.8.3	Excavate road layerworks (Waterbound Macadam) to stockpile - Provisional	m ³	150.0		
23	DA.8.3	Excavate road layerworks to stockpile - Provisional	m ³	200.0		
24	DA.8.3	Extra over for item 23 at municipal stockpile site, Malacca Road.	m ³	200.0		
25	PS.DA.[18], PS.ED.[9]	Milling of existing road asphalt and stockpile at municipal stockpile site, Malacca Road.	m ³	150.00		
26	DA.8.4; PS.DA.6	Import suitable fill material (G7) from contractor's off-site source inclusive of haulage and royalties	m ²	600.00		
27	DA.8.5; PS.DA.7	Compact imported fill material (G7) to 95% Mod. A.A.S.H.T.O.	m ³	600.0		
28	DA.8.4	Import suitable fill material (G9) from contractor's off-site source inclusive of haulage and royalties	m ³	350.0		
29	DA.8.5; PS.DA.7	Compact imported fill material (G9) to 95% Mod. A.A.S.H.T.O.	m ³	350.0		
30	DA.8.5	Rip and re-compact insitu (G9) material from site to 95% Mod. A.A.S.H.T.O.	m ³	100.0		
	EC	<u>CEMENT TREATED GRADED CRUSHED STONE</u>				
		<u>CEMENT STABILISED SUBBASE (C3)</u>				
1	PS.EC.1.2; PS.EC.1.3; EC.8.1	Cement treated graded crushed stone 400 mm thick layers using G4 (for the mixed use lanes) - excluding stab	m ³	500.0		
2	PS.EC.1.2; PS.EC.1.3; EC.8.1	Cement treated graded crushed stone 450 mm thick layers using G4 (for the right of way lane)	m ³	320.00		
3	PS.15.2.2	Extra over for working C3 in restricted areas	m ³	50.0		
4	EC.2.2; EC.8.2	Prime coat (inverted emulsion) MSP1. Application rate of 0.8 l/m ²	m ²	2,200.0		
5	PS.EC.1.2	Stabilising agent - cement	t	120.00		
	ED	<u>ROAD ASPHALT</u>				
Total Carried Forward						

SCHEDULE A - ROADWORKS
SECTION 4: EARTHWORKS: BULK

ITEM NO	PAYMENT	DESCRIPTION	UNIT	QTY	RATE	AMOUNT (RAND)
Brought Forward						
1	ED.8.2, PS.ED.[1], PS.ED.[5], PS.ED.[6], PS.ED.[11]	Laying of Continuously graded Asphalt wearing course (SA-H14) of compacted thickness 50 mm. Bitumen content % as per mix design entered at time of use.- Asphalt Private Plant	t	300.00		
2	ED.8.2, PS.ED.[4], PS.ED.[6], PS.ED.[11]	Laying of Continuously graded Asphalt EME-E14 of compacted thickness 120mm for mixed use lanes. Bitumen content % as per mix design entered at time of use. - Asphalt Private Plant	t	450.00		
3	ED.8.2, PS.ED.[4], PS.ED.[6], PS.ED.[11]	Laying of Continuously graded Asphalt EME-E14 of compacted thickness 160mm for BRT lanes. Bitumen content % as per mix design entered at time of use. - Asphalt Private Plant	t	280.00		
4	ED.8.3.1, PS.ED.[8]	Transverse tie in joints	m	100.00		
5	ED.8.4	Tack coat - 3 layers	m ²	6,000.00		
	EF	<u>KERBS AND HAUNCHES</u>				
1	EF.8.1, PS.EF.[1], PS.EF.[4]	Special Type A Separator Kerb: Right of Way separation kerb with 150mm channel and 150mm fillet including base, As per tender Drawing: []	m	400.0		
2	EF.8.1, PS.EF.[1], PS.EF.[4]	Extra over item 1 for channel/fillet widening from 150mm to 300mm	m ³	20.00		
3	EF.8.1	Type A barrier kerb and 300mm channel, Fig 6 kerb.	m	200.0		
4	EF.8.1	Type A barrier kerb and 300mm fillet, Fig 6 kerb.	m	200.0		
5	EF.8.1	Extra over item 1-4 for curves of radius less than 25m	m	1.0		
6	EF.8.1	Extra over item 1-4 for curves of radius less than 2m	m	1.0		
7	EF.8.1	Extra over items 1-4 for graded channel	m	50.0		
8	EF.8.1	Scoop kerb and channel (Type A) including transition kerb.	m	1.0		
9	EF.8.1	Scoop kerb and fillet (Type A) including transition kerb.	m ³	1.0		
10	PS.EF.[2]	Additional concrete to kerb foundation, as directed by Engineer.	m	5.0		
	EG	<u>SIDEWALKS, FOOTPATHS & MEDIANS</u>				
1	"EG.8.1EG5 .1PS.EG.[8]"	Asphalt sidewalk / median (SA-S7) 25mm - Asphalt Private Plant. Inclusive of 100mm G5 compacted to 95% Mod AASHTO	m ²	600.0		
Total Carried Forward						

SCHEDULE A - ROADWORKS

SECTION 4: EARTHWORKS: BULK

ITEM NO	PAYMENT	DESCRIPTION	UNIT	QTY	RATE	AMOUNT (RAND)
Brought Forward						
2	EG.8.6	Concrete pedestrian access scoop	m ²	1.0		
3	EG.8.3	Expansion joints to paving every 15m to 18m	m	60.0		
	EL	DUMPROCK SUBGRADE IMPROVEMENT				
1	EL.8	Dumprock subgrade improvement, 500 mm thick - Provisional	m ³	1,000.0		
2	EL.8	Dumprock subgrade improvement, 1000 mm thick - Provisional	m ³	1,000.0		
3		Supply and place general grade geofabric, A5 or similar approved - Provisional	m ³	3,000.0		
4		200mm G5 layer on top of Dumprock - Provisional	t	1,500.0		
	TA	ROAD SIGNS				
1	TA.8.1, PS.TA.[1], PS.TA.[2], PS.TA.[4]	Supply and erect road sign boards, area not exceeding 2m2.	No	1		
2	TA.8.1, PS.TA.[1], PS.TA.[2], PS.TA.[4]	Supply and erect road sign boards, area exceeding 2m2 but not exceeding 10m2	No	2		
3	TA.8.7, PS.TA.[4]	Dismantling and storing road signs, area not exceeding 2m2	No	4		
4	TA.8.3	Excavate and backfill for road sign supports	m ³	2.0		
5	TA.8.2, PS.TA.[4], PS.TA.[5]	Supply and erect standard 100mm diameter Timber sign supports. Rate to include haulage.	No	12		
6	TA.8.2	Supply and erect 75mm x 75mm square hot dipped galvanised steel supports. Rate to include all haulage.	No	4		
7	TA.8.2	Supply and erect standard 76mm diameter hotted dipped galvanised sign supports. Rate to include haulage.	No	8		
8	TA.8.4	Concrete grade 20/19 for road sign footings	m ³	2.0		
9	TA.8.5	Steel Reinforcement for footings	t	0.2		
10	TA.8.8, PS.TA.[3]	Re-erecting road signs stored on site, area not exceeding 2m2	No	4		
11		Road signs - Provisional	PC Sum	1.0	200,000.00	200,000.00
	TB	ROAD MARKINGS				
Total Carried Forward						

SCHEDULE A - ROADWORKS

SECTION 4: EARTHWORKS: BULK

ITEM NO	PAYMENT	DESCRIPTION	UNIT	QTY	RATE	AMOUNT (RAND)
Brought Forward						
1	PS.TB.[4]	Remove existing lane, edge and painted island lines by sand blasting.	m	1		
2	TB.8.1.1,PS.TB.[3]	Painted road lines, using PVA road Paint 100mm wide (white), including setting out and premarking	m	100.0		
3	TB.8.1.1,PS.TB.[3]	Painted road lines, using PVA road Paint 100mm wide (yellow), including setting out and premarking	m	100.0		
4	TB.8.1.1, PS.TB.[3]PS.TB.[1]	Painted road lines, Thermoplastic Road Marking material, 100mm wide (white), including setting out and premarking	m	200.0		
5	TB.8.1.1, PS.TB.[3]PS.TB.[1]	Painted road lines, Thermoplastic Road Marking material, 200mm wide (white), including setting out and premarking	m	100.0		
6	TB.8.1.1, PS.TB.[3]PS.TB.[1]	Painted road lines, Thermoplastic Road Marking material, 300mm wide (white), including setting out and premarking	m	50.0		
7	TB.8.1.1, PS.TB.[3]PS.TB.[1]	Painted road lines, Thermoplastic Road Marking material, 100mm wide (yellow), including setting out and premarking - Provisional	m	100.0		
8	TB.8.1.1, PS.TB.[3]PS.TB.[1]	Painted road lines, Thermoplastic Road Marking material, 200mm wide (red), including setting out and premarking - Provisional	m	50.0		
9	TB.8.1.2, PS.TB.[1], PS.TB.[2]	Road Marking for lettering, (white) Thermoplastic Plastic Road Marking material, symbols and traffic islands (white), including setting out lettering, symbols and traffic island markings, including setting out and premarking. - Provisional	m ²	100.0		
10	TB.8.1.2, PS.TB.[1], PS.TB.[2]	Road Marking for lettering, (Yellow) Thermoplastic Plastic Road Marking material, symbols and traffic islands (yellow), including setting out lettering, symbols and traffic island markings, including setting out and premarking.- Provisional	m ²	100.0		
11	TB.8.1.2, PS.TB.[1], PS.TB.[2]	Painted Road Markings, Thermoplastic Plastic Road Marking Material, on Bus Route at intersections, (RED 600mm wide)- Provisional	m	50.0		
12	TB.8.3, PS.TB[6]	Roadstuds, Solar rechargeable.	No	10.0		
13	TB.8.3, PS.TB[6]	Roadstuds, Uni-directional - Stimsonite RSP or similar approved.	No	20.0		
14	TB.8.3, PS.TB[6]	Roadstuds, Bi-directional - Stimsonite RSP or similar approved.	No	0.0		
15	TB.8.3, PS.TB[6]	Temporary road studs	No	20.0		
Total Carried Forward						

SCHEDULE A - ROADWORKS**SECTION 4: EARTHWORKS: BULK**

ITEM NO	PAYMENT	DESCRIPTION	UNIT	QTY	RATE	AMOUNT (RAND)
Brought Forward						
16	TB.8.3, PS.TB[6]	Roadstuds, Tempered glass 360 degree, clear - Holophane or similar approved. - Provisional	No	8.0		
17	TB.8.3, PS.TB[6]	Roadstuds, Tempered glass two colour, clear and red - Holophane or similar approved.- Provisional	No	8.0		
18	TB.8.3, PS.TB[6]	Roadstuds, Tempered glass two colour, clear and yellow - Holophane or similar approved.- Provisional	No	10.0		
19		Supply and Install reflectosite FG300 EFX mounted post deliniators (permanent) or similar approved, orange with white reflectors, including mounting brackets.	No	0.0		
20	TB.8.1.1, PS.TB.5AA. TB.1	Painted Precast concrete kerbs (white)	m	20.0		
21	TB.8.1.1, PS.TB.5AA. TB.1	Painted Precast concrete kerbs (Black)	m	20.0		
Total Carried Forward To Summary						

SCHEDULE A - ROADWORKS
SECTION 5: REINSTATEMENT

ITEM NO	PAYMENT	DESCRIPTION	UNIT	QTY	RATE	AMOUNT (RAND)
5	F	PROTECTION WORKS				
1	F.8.1	Topsoiling from stockpile: thickness 100 mm	m ²	200.0		
2	F.8.1	Imported topsoil: thickness 100 mm	m ²	1,200.0		
3	F.8.3	Grass planting, Hydroseeding	m ²	800.0		
4	F.8.3	Grass sodding	m ²	600.0		
5		Temporary pedestrian facilities during construction	m ²	500.0		
6	F.8.8	Fall protection : double post and rail	m	60.0		
7	F.8.8	Supply and Install single-sided precast concrete fence 1,8 m high - Provisional	m	200.0		
8	PS.F.[15]	Work done to property Frontages	PC Sum	1	100,000.00	100,000
9		EO to Item above, Handling fee by main contractor	%	100,000.0		
10	PS.F.[20]	Landscaping	PC Sum	1	100,000.00	100,000
11		EO to Item above, Handling fee by main contractor	%	100,000.0		
12	F.8.8	Supply and install temporary Hoarding for protection on site, 1.8m high with green/black shade cloths, including maintenance during construction, inclusive of temporary Bonnox fence.	m	500.0		
	S	<u>REINSTATEMENT</u>				
1		Reinstatement of fenceline, driveway and parkings along KZN Oils and Wind Motors Boundary	Prov Sum	1	100,000.00	100,000
2		Extra over to Item above, Handling fee by main contractor	%	100,000.00		
3		Reinstatement of fenceline, driveway and parkings along KZN Department of Health Laundry	Prov Sum	1	40,000.00	40,000
4		Extra over to Item above, Handling fee by main contractor	%	40,000.0		
5		Reinstatement and repairs to recently constructed layerworks	Prov Sum	1	200,000.00	200,000
6		Extra over to Item above, Handling fee by main contractor	%	200,000.0		
	PQ	<u>LATERAL SUPPORT SYSTEMS</u>				
Total Carried Forward						

SCHEDULE A - ROADWORKS

SECTION 5: REINSTATEMENT

ITEM NO	PAYMENT	DESCRIPTION	UNIT	QTY	RATE	AMOUNT (RAND)
Brought Forward						
		Allowance for Geotechnical work (Stabilisation of existing embankment)	Prov Sum	1	250,000.00	250,000
		Extra-over to above Item, Handling fee for Main Contractor	%	250,000.0		
Total Carried Forward To Summary						

SCHEDULE A - ROADWORKS

SUMMARY OF SECTIONS

SECTION	DESCRIPTION	AMOUNT (RAND)
1	SECTION 1: PRELIMINARY AND GENERAL	
1	SECTION 2: SITE CLEARANCE	
1	SECTION 3: EARTHWORKS FOR PIPE TRENCHES	
1	SECTION 4: EARTHWORKS: BULK	
1	SECTION 5: REINSTATEMENT	
Total Carried Forward To Summary Of Schedules		

SCHEDULE B - TFR BRIDGE 1

SECTION 2200

ITEM	DESCRIPTION	UNIT	LI	QTY	RATE	AMOUNT	
						(RAND)	c
22.00	PREFABRICATED CULVERTS						
B22.23	Service ducts						
	(a) Ordinary pipes (uPVC Pipes 110 dia.)	m		236.0			
Total Carried Forward To Summary							

SCHEDULE B - TFR BRIDGE 1
SECTION 6100

ITEM	DESCRIPTION	UNIT	LI	QTY	RATE	AMOUNT	
						(RAND)	c
	SECTION 6100						
61.00	FOUNDATIONS FOR STRUCTURES						
61.02	Excavation:						
	(a) Excavating soft material situated within the following successive depth ranges:						
	(i) 0 m up to 2 m	m ³		144.0			
	(ii) Exceeding 2m and up to 4m	m ³		18.0			
	(b) Extra over sub-item 61.02(a) for excavation in hard material irrespective of depth	m ³		64.6			
	(d) Extra over sub-item 61.02(a) for excavation by hand	m ³		27.0			
B61.03	Access and drainage:						
	(a) Access	-		Lump	Sum		
61.04	Backfill to excavations utilising:						
	(a) Material from the excavation	m ³		80.0			
	(b) Imported material	m ³		49.0			
61.05	Fill within a restricted area (extra over item B33.01)	m ³		144.0			
B61.08	Foundation fill consisting of:						
	(e) Concrete screed (75mm minimum thickness, Class 15/19)	m ³		50.0			
61.15	Establishment on the site for piling	-		Lump	Sum		
61.16	Moving to, and setting up the equipment at each position for installing the piles	No		6.0			
61.17	Augered or bored holes for piles through material situated within the following successive depth ranges:						
	(a) Augered holes:						
	(1) with a diameter of 900mm						
	(i) 0 m up to 10 m	m		30.0			
	(ii) Exceeding 10 m and up to 15 m	m		5.0			
Total Carried Forward							

SCHEDULE B - TFR BRIDGE 1
SECTION 6100

ITEM	DESCRIPTION	UNIT	LI	QTY	RATE	AMOUNT	
						(RAND)	c
Brought Forward							
	(2) with a diameter of 600mm						
	(i) 0 m up to 10 m	m		20.0			
	(ii) Exceeding 10 m and up to 15 m	m		10.0			
	(iii) Exceeding 15 m and up to 20 m	m		10.0			
61.27	Socketing piles into rock formation (class R2 hardness rock, 2m long)	No		6.0			
61.30	Steel reinforcement in cast in situ piles:						
	(a) Mild-steel bars	t		0.5			
	(b) High-yield-stress-steel bars - 450MPa	t		6.0			
61.31	Cast in situ concrete in piles, underreams, bulbous bases and sockets (Class 30/19)	m³		50.0			
61.34	(1) Stripping/cutting the pile heads (900mm diameter in-situ piles)	No		4			
	(2) Stripping/cutting the pile heads (600mm diameter in-situ piles)	No		2			
61.35	Establishment on the site for the load testing of piles	L/SUM		1			
61.36	Load tests on piles	No		4			
B61.50	Pile Integrity Testing on bored/augured piles						
	(a) Constructing 4,0 m long reinforced concrete/grout calibration bored piles of 750mm diameter inclusive of the required number of 50mm diamter mild steel tubes	No		2.0			
	(b) Providing and installing 50mm diameter mild steel tubes used for "Cross Hole Sonic Logging" in all designated piles (per pile construction site)	m		920			
	(c) Cross-Hole Sonic Logging tests and interpreted results (per pile diameter and per pile construction site)	m		230.0			
B61.51	Lateral supports to excavations						
	(a) Adjacent to Sea Cow Lake Road and properties						
Total Carried Forward							

SCHEDULE B - TFR BRIDGE 1

SECTION 6100

[illegible]

SCHEDULE B - TFR BRIDGE 1
SECTION 6200

ITEM	DESCRIPTION	UNIT	LI	QTY	RATE	AMOUNT	
						(RAND)	C
	SECTION 6200						
62.00	FALSEWORK, FORMWORK AND CONCRETE FINISH						
62.02	Vertical formwork to provide:						
	(a) Class F1 surface finish to:						
	(i) Abutment walls	m ²		98.0			
	(ii) Approach slab	m ²		16.0			
	(iii) Track slab	m ²		20.0			
	(iv) Transition slab	m ²		26.0			
	(v) Temporary plinth	m ²		1.0			
	(vi) Piers	m ²		38.0			
	(b) Class F2 surface finish to:						
	(i) Abutments	m ²		60.0			
	(ii) Piers	m ²		45.0			
62.03	Horizontal formwork to provide:						
	(a) Class F2 surface finish to:						
	(i) Transom beams	m ²		15.0			
	(ii) Deck	m ²		334.0			
62.04	Inclined formwork to provide:						
	(a) Class F1 surface finish to:						
	(i) Abutments	m ²		8.0			
	(b) Class F2 surface finish to:						
	(i) Transom beams	m ²		48.0			
	(ii) Deck	m ²		63.0			
B62.10	Contractor's Health and Safety obligations with regard to falsework and formwork	-		Lump	Sum		
	<u>Note:</u>						
Total Carried Forward							

SCHEDULE B - TFR BRIDGE 1

SECTION 6200

SECTION 6200							
ITEM	DESCRIPTION	UNIT	LI	QTY	RATE	AMOUNT	
						(RAND)	C
Brought Forward							
	The design of the entire falsework infrastructure used to temporarily support the bridge structure, shall be carried out by a specialist professionally registered engineer in the design of falsework and formwork. Therefore, the tenderer must allow for the design, inspection and approval of the staging.						
Total Carried Forward To Summary							

SCHEDULE B - TFR BRIDGE 1
SECTION 6300

ITEM	DESCRIPTION	UNIT	LI	QTY	RATE	AMOUNT	
						(RAND)	C
	SECTION 6300						
63.00	STEEL REINFORCEMENT FOR STRUCTURES						
63.01	Steel reinforcement for:						
	(a) Abutments A and B						
	(i) Mild-steel bars	t		0.5			
	(ii) High-yield-stress-steel bars (450 MPa)	t		4.5			
	(b) Piers						
	(i) Mild-steel bars	t		0.1			
	(ii) High-yield-stress-steel bars (450 MPa)	t		26.5			
	(c) Transom beams						
	(i) Mild-steel bars	t		0.1			
	(ii) High-yield-stress-steel bars (450 MPa)	t		3.0			
	(d) Deck						
	(i) Mild-steel bars	t		0.1			
	(ii) High-yield-stress-steel bars (450 MPa)	t		45.0			
	(e) Approach slab						
	(i) Mild-steel bars	t		0.1			
	(ii) High-yield-stress-steel bars (450 MPa)	t		4.0			
	(f) Track slab						
	(i) Mild-steel bars	t		0.1			
	(ii) High-yield-stress-steel bars (450 MPa)	t		3.0			
	(g) Transition slab						
	(i) Mild-steel bars	t		0.1			
	(ii) High-yield-stress-steel bars (450 MPa)	t		4.0			
	(h) Parapets						
	(i) Mild-steel bars	t		0.1			
	(ii) High-yield-stress-steel bars (450 MPa)	t		2.0			
Total Carried Forward To Summary							

SCHEDULE B - TFR BRIDGE 1
SECTION 7500

ITEM	DESCRIPTION	UNIT	LI	QTY	RATE	AMOUNT	
						(RAND)	C
	SECTION 7500						
75.00	GROUND ANCHORS						
75.01	Establishment on the site for drilling	L/SUM		1.0			
75.02	Moving to, and setting up the equipment at each position for drilling the holes	No		50.0			
75.03	Drill holes with a diameter of 80mm diameter to the specified depths and inclinations	m		520.0			
75.04	Water tests	No		4.0			
75.05	Grouting and redrilling the holes	m		520.0			
75.06	Ground anchor tendons:						
	(a) Free length	MN-m		260.0			
	(b) Fixed anchor length	MN-m		150			
75.07	Anchorage and couplers:						
	(a) Anchorage at jacking end	MN		30.0			
75.08	Encasing the anchorages at the jacking end in concrete	No		50.0			
B75.09	Establishment on site for shotcrete works	L/SUM		1.0			
B74.10	Supply and installation of reinforcing						
	(a) Welded steel fabric Mesh Ref. 193	m ²		300.0			
B75.11	Shotcrete of specified thickness applied in one, two or more layers as necessary						
	(i) 25mm thick (unreinforced) flash coat	m ²		300.0			
	(ii) 75mm thick final coat	m ²		300.0			
B75.12	Plastic piping for weepholes 50mm nominal diameter uPVC piping	m		30.0			
B75.13	Removal of shotcrete and ground anchor tendons	L/SUM		1.0			
Total Carried Forward To Summary							

SCHEDULE B - TFR BRIDGE 1**SECTION 8100**

ITEM	DESCRIPTION	UNIT	LI	QTY	RATE	AMOUNT	
						(RAND)	C
	SECTION 8100						
81.00	TESTING MATERIALS AND WORKMANSHIP						
B81.02	Other special tests requested by the engineer						
	(a) Employer's contribution to concrete durability tests						
	(i) Tests for sorptivity	Prov Sum		1	40,000.00	40,000	00
	(ii) Tests for oxygen permeability	Prov Sum		1	40,000.00	40,000	00
	(ii) Tests for chloride conductivity	Prov Sum		1	40,000.00	40,000	00
	(iv) Tests for concrete cover	Prov Sum		1	40,000.00	40,000	00
	(b) Other tests	Prov Sum		1	50,000.00	50,000	00
Total Carried Forward To Summary							

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SCHEDULE C - TFR BRIDGE 2

SECTION 2200

ITEM	DESCRIPTION	UNIT	LI	QTY	RATE	AMOUNT	
						(RAND)	C
22.00	PREFABRICATED CULVERTS						
B22.23	Service ducts						
	(a) Ordinary pipes (uPVC Pipes 110 dia.)	m		245.0			
Total Carried Forward To Summary							

SCHEDULE C - TFR BRIDGE 2
SECTION 6100

ITEM	DESCRIPTION	UNIT	LI	QTY	RATE	AMOUNT	
						(RAND)	C
	SECTION 6100						
61.00	FOUNDATIONS FOR STRUCTURES						
61.02	Excavation:						
	(a) Excavating soft material situated within the following successive depth ranges:						
	(i) 0 m up to 2 m	m ³		144.0			
	(ii) Exceeding 2 m and up to 4 m	m ³		36.0			
	(b) Extra over sub-item 61.02(a) for excavation in hard material irrespective of depth	m ³		72.0			
	(d) Extra over sub-item 61.02(a) for excavation by hand	m ³		27.0			
B61.03	Access and drainage:						
	(a) Access	-		Lump	Sum		
61.04	Backfill to excavations utilising:						
	(a) Material from the excavation	m ³		90.0			
	(b) Imported material	m ³		54.0			
61.05	Fill within a restricted area (extra over item B33.01)	m ³		100.0			
B61.08	Foundation fill consisting of:						
	(e) Concrete screed (75mm minimum thickness, Class 15/19)	m ³		50.0			
61.15	Establishment on the site for piling	-		Lump	Sum		
61.16	Moving to, and setting up the equipment at each position for installing the piles	No		6.0			
61.17	Augered or bored holes for piles through material situated within the following successive depth ranges:						
	(a) Augered holes:						
	(1) with a diameter of 900mm						
	(i) 0 m up to 10 m	m		30.0			
	(ii) Exceeding 10 m and up to 15 m	m		5.0			
Total Carried Forward							

SCHEDULE C - TFR BRIDGE 2
SECTION 6100

ITEM	DESCRIPTION	UNIT	LI	QTY	RATE	AMOUNT	
						(RAND)	C
Brought Forward							
	(2) with a diameter of 600mm						
	(i) 0 m up to 10 m	m		20.0			
	(ii) Exceeding 10 m and up to 15 m	m		10.0			
	(iii) Exceeding 15 m and up to 20 m	m		10.0			
61.27	Socketing piles into rock formation (class R2 hardness rock, 2m long)	No		6.00			
61.30	Steel reinforcement in cast in situ piles:						
	(a) Mild-steel bars	t		0.5			
	(b) High-yield-stress-steel bars - 450MPa	t		6.0			
61.31	Cast in situ concrete in piles, underreams, bulbous bases and sockets (Class 30/19)	m³		50.0			
61.34	(1) Stripping/cutting the pile heads (900mm diameter in-situ piles)	No		4			
	(2) Stripping/cutting the pile heads (600mm diameter in-situ piles)	No		2			
61.35	Establishment on the site for the load testing of piles	L/SUM		1.0			
61.36	Load tests on piles	No		4.0			
B61.50	Pile Integrity Testing on bored/augured piles						
	(a) Constructing 4,0 m long reinforced concrete/grout calibration bored piles of 750mm diameter inclusive of the required number of 50mm diameter mild steel tubes	No		2.0			
	(b) Providing and installing 50mm diameter mild steel tubes used for "Cross Hole Sonic Logging" in all designated piles (per pile construction site)	-		Lump	Sum		
	(c) Cross-Hole Sonic Logging tests and interpreted results (per pile diameter and per pile construction site)	-		Lump	Sum		
B61.51	Lateral supports to excavations						
	(a) Adjacent to Sea Cow Lake Road and properties						
Total Carried Forward							

SCHEDULE C - TFR BRIDGE 2

SECTION 6100[illegible]

SCHEDULE C - TFR BRIDGE 2
SECTION 6200

ITEM	DESCRIPTION	UNIT	LI	QTY	RATE	AMOUNT	
						(RAND)	C
	SECTION 6200						
62.00	FALSEWORK, FORMWORK AND CONCRETE FINISH						
62.02	Vertical formwork to provide:						
	(a) Class F1 surface finish to:						
	(i) Abutment walls	m ²		98.0			
	(ii) Approach slab	m ²		16.0			
	(iii) Track slab	m ²		20.0			
	(iv) Transition slab	m ²		26.0			
	(v) Temporary plinth	m ²		1.0			
	(vi) Piers	m ²		38.0			
	(b) Class F2 surface finish to:						
	(i) Abutments	m ²		60.0			
	(ii) Piers	m ²		45.0			
62.03	Horizontal formwork to provide:						
	(a) Class F2 surface finish to:						
	(i) Transom beams	m ²		15.0			
	(ii) Deck	m ²		350.0			
62.04	Inclined formwork to provide:						
	(a) Class F1 surface finish to:						
	(i) Abutments	m ²		8.0			
	(b) Class F2 surface finish to:						
	(i) Transom beams	m ²		48.0			
	(ii) Deck	m ²		65.0			
B62.10	Contractor's Health and Safety obligations with regard to falsework and formwork	-		Lump	Sum		
	<u>Note:</u>						
Total Carried Forward							

SCHEDULE C - TFR BRIDGE 2

SECTION 6200

[illegible]

SCHEDULE C - TFR BRIDGE 2
SECTION 6300

ITEM	DESCRIPTION	UNIT	LI	QTY	RATE	AMOUNT	
						(RAND)	C
	SECTION 6300						
63.00	STEEL REINFORCEMENT FOR STRUCTURES						
63.01	Steel reinforcement for:						
	(a) Abutments A and B						
	(i) Mild-steel bars	t		0.1			
	(ii) High-yield-stress-steel bars (450 MPa)	t		4.5			
	(b) Piers						
	(i) Mild-steel bars	t		0.1			
	(ii) High-yield-stress-steel bars (450 MPa)	t		26.0			
	(c) Transom beams						
	(i) Mild-steel bars	t		0.1			
	(ii) High-yield-stress-steel bars (450 MPa)	t		4.0			
	(d) Deck						
	(i) Mild-steel bars	t		0.1			
	(ii) High-yield-stress-steel bars (450 MPa)	t		46.5			
	(e) Approach slab						
	(i) Mild-steel bars	t		0.1			
	(ii) High-yield-stress-steel bars (450 MPa)	t		4.0			
	(f) Track slab						
	(i) Mild-steel bars	t		0.1			
	(ii) High-yield-stress-steel bars (450 MPa)	t		3.0			
	(g) Transition slab						
	(i) Mild-steel bars	t		0.1			
	(ii) High-yield-stress-steel bars (450 MPa)	t		2.0			
	(h) Parapets						
	(i) Mild-steel bars	t		0.1			
	(ii) High-yield-stress-steel bars (450 MPa)	t		2.0			
Total Carried Forward To Summary							

SCHEDULE C - TFR BRIDGE 2
SECTION 6400

ITEM	DESCRIPTION	UNIT	LI	QTY	RATE	AMOUNT	
						(RAND)	C
	SECTION 6400						
64.00	CONCRETE FOR STRUCTURES						
B64.01	Cast in situ concrete:						
	(a) Class 40/19 in abutments	m ³		86.0			
	(b) Class 40/19 in piers	m ³		59.0			
	(c) Class 30/19 in transom beams	m ³		24.0			
	(d) Class 40/19 in deck	m ³		255.0			
	(e) Class 40/19 in approach slab	m ³		28.0			
	(f) Class 40/19 in track slab	m ³		22.0			
	(g) Class 40/19 in transition slab	m ³		34.0			
	(h) Class 30/19 in temporary plinths	m ³		0.2			
64.02	Manufacturing precast concrete members						
	(a) Prestressed slabs (refer to drawing no. 1300042-T-4301)	No		2			
B64.03	Transporting and erecting precast concrete members						
	(a) Prestressed slabs (approx. 26.3 ton/slab)	No		2			
B64.06	Demolishing existing concrete:						
	(b) Reinforced concrete in:						
	(i) Existing structure	m ³		150.0			
B64.07	Curing of concrete:						
	(a) Substructure, deck sides and parapets using an approved curing compound	m ²		510.0			
	(b) Deck top surface using moisture curing	m ²		377.0			
	(c) Approach and transition slabs using moisture curing	m ²		67.0			
B64.08	Hot weather concreting	L/SUM		1.0			
Total Carried Forward To Summary							

SCHEDULE C - TFR BRIDGE 2
SECTION 6600

ITEM	DESCRIPTION	UNIT	LI	QTY	RATE	AMOUNT	
						(RAND)	C
	SECTION 6600						
66.00	NO-FINES CONCRETE, JOINTS, BEARINGS, BOLT GROUPS FOR ELECTRIFICATION, PARAPETS AND DRAINAGE FOR STRUCTURES						
B66.05	Expansion joints:						
	(a) 150 mm x 20 mm expansion joint						
	(i) along the full width of the approach slab	m		4.4			
	(ii) along the full width of the deck	m		13.0			
	(iii) along the full width of the transition slab	m		4.0			
66.08	Sealing joints with:						
	(a) Sealant (20 mm x 20 mm) ("Jaycolastic or equal approved") between the deck and abutment B	m		7.0			
66.13	Bearing strips	m ²		6			
66.14	Dowels/guides						
	(a) 600 mm long Y32 galvanized dowels wrapped in Denso tape 300 mm wide	No		12			
	(b) 2 m long Y32 galvanized dowels wrapped in Denso tape 300 mm wide	No		14			
B66.15	Concrete parapets						
	(a) Rail bridge barrier as indicated on drawing	m		118.0			
	(b) Provision for architectural finish	Prov Sum		1	150,000.00	150,000.00	
66.17	End blocks						
	(a) End column 1 indicated in the drawings	No		2			
	(b) End column 2 indicated in the drawings	No		2			
66.18	Numbers for structures:						
	(c) Numbers formed in concrete	No		2			
66.26	Supplying and installing bolt groups complete for electrification brackets:						
	(b) Double-bolt groups	No		2			
Total Carried Forward To Summary							

SCHEDULE C - TFR BRIDGE 2

SECTION 8100

ITEM	DESCRIPTION	UNIT	LI	QTY	RATE	AMOUNT	
						(RAND)	C
	SECTION 8100						
81.00	TESTING MATERIALS AND WORKMANSHIP						
B81.02	Other special tests requested by the engineer						
	(a) Employer's contribution to concrete durability tests						
	(i) Tests for sorptivity	Prov Sum		1	40,000.00	40,000	00
	(ii) Tests for oxygen permeability	Prov Sum		1	40,000.00	40,000	00
	(ii) Tests for chloride conductivity	Prov Sum		1	40,000.00	40,000	00
	(iv) Tests for concrete cover	Prov Sum		1	40,000.00	40,000	00
	(b) Other tests	Prov Sum		1	50,000.00	50,000	00
Total Carried Forward To Summary							

SCHEDULE C - TFR BRIDGE 2

SUMMARY OF SECTIONS

[illegible]

SCHEDULE D - PRASA BRIDGE 3**SECTION 2100**

ITEM	DESCRIPTION	UNIT	LI	QTY	RATE	AMOUNT	
						(RAND)	c
21.00	DRAINS						
21.06	Natural permeable material in sub-soil drainage system:						
	(a) Crushed stone filter	m ³		9.5			
21.08	Pipes in subsoil drainage systems:						
	(c) High-density type polyethylene pressure pipes and fittings, complete with couplings (100 dia., perforated)	m		42.0			
21.10	Synthetic fibre filter fabric (geotextile)	m ²		83.0			
Total Carried Forward To Summary							

SCHEDULE D - PRASA BRIDGE 3

SECTION 2200

ITEM	DESCRIPTION	UNIT	LI	QTY	RATE	AMOUNT	
						(RAND)	c
22.00	PREFABRICATED CULVERTS						
B22.23	Service ducts						
	(a) Ordinary pipes (uPVC Pipes 110 dia.)	m		216.0			
Total Carried Forward To Summary							

SCHEDULE D - PRASA BRIDGE 3

SECTION 3300

ITEM	DESCRIPTION	UNIT	LI	QTY	RATE	AMOUNT	
						(RAND)	c
33.00	MASS EARTHWORKS						
B33.01	Cut and borrow to fill, including free-haul up to 1,0 km:						
	(b) Material in compacted layer thicknesses exceeding 200mm:						
	(ii) Compacted to 93% of modified AASHTO density	m ³		1,108.0			
Total Carried Forward To Summary							

SCHEDULE D - PRASA BRIDGE 3
SECTION 6100

ITEM	DESCRIPTION	UNIT	LI	QTY	RATE	AMOUNT	
						(RAND)	c
	SECTION 6100						
61.00	FOUNDATIONS FOR STRUCTURES						
61.02	Excavation:						
	(a) Excavating soft material situated within the following successive depth ranges:						
	(i) 0 m up to 2 m	m ³		843.0			
	(ii) Exceeding 2 m and up to 4 m	m ³		369.0			
	(iii) Exceeding 4 m and up to 6 m	m ³		30.0			
	(b) Extra over sub-item 61.02(a) for excavation in hard material irrespective of depth	m ³		91.0			
	(d) Extra over sub-item 61.02(a) for excavation by hand	m ³		152.0			
B61.03	Access and drainage:						
	(a) Access	-		Lump	Sum		
61.04	Backfill to excavations utilising:						
	(a) Material from the excavation	m ³		9.0			
	(b) Imported material	m ³		5.0			
61.05	Fill within a restricted area (extra over item B33.01)	m ³		44.0			
B61.08	Foundation fill consisting of:						
	(e) Concrete screed (75mm minimum thickness, Class 15/19)	m ³		180.0			
61.15	Establishment on the site for piling	-		Lump	Sum		
61.16	Moving to, and setting up the equipment at each position for installing the piles	No		10.0			
61.17	Augered or bored holes for piles through material situated within the following successive depth ranges:						
	(a) Augered holes:						
	(1) With a diameter of 900mm						
	(i) 0 m up to 10 m	m		52.0			
Total Carried Forward							

SCHEDULE D - PRASA BRIDGE 3
SECTION 6100

SECTION 6100							
ITEM	DESCRIPTION	UNIT	LI	QTY	RATE	AMOUNT	
						(RAND)	c
Brought Forward							
	(ii) Exceeding 10 m and up to 15 m	m		30.0			
	(iii) Exceeding 15 m and up to 20 m	m		28.0			
	(iv) Exceeding 20 m and up to 25 m	m		2.0			
	(2) With a diameter of 600mm						
	(i) 0 m up to 10 m	m		36.0			
	(ii) Exceeding 10 m and up to 15 m	m		20.0			
	(iii) Exceeding 15 m and up to 20 m	m		16.0			
	(iv) Exceeding 20 m and up to 25 m	m		2.0			
61.27	Socketing piles into rock formation (class R2 hardness rock, 2m long)	No		10.0			
61.30	Steel reinforcement in cast in situ piles:						
	(a) Mild-steel bars	t		0.5			
	(b) High-yield-stress-steel bars - 450MPa	t		13.0			
61.31	Cast in situ concrete in piles, underreams, bulbous bases and sockets (Class 30/19)	m³		100.0			
61.34	Stripping/cutting the pile heads (750mm diameter in-situ piles)	No		20.0			
61.35	Establishment on the site for the load testing of piles	-		Lump	Sum		
61.36	Load tests on piles	-		Lump	Sum		
B61.50	Pile Integrity Testing on bored/augured piles						
	(a) Constructing 4,0 m long reinforced concrete/grout calibration bored piles of 750mm diameter inclusive of the required number of 50mm diameter mild steel tubes	No		2			
	(b) Providing and installing 50mm diameter mild steel tubes used for "Cross Hole Sonic Logging" in all designated piles (per pile construction site)	m		1,760.00			
	(c) Cross-Hole Sonic Logging tests and interpreted results (per pile diameter and per pile construction site)	m		440.0			
Total Carried Forward							

SCHEDULE D - PRASA BRIDGE 3**SECTION 6100**

ITEM	DESCRIPTION	UNIT	LI	QTY	RATE	AMOUNT	
						(RAND)	c
Brought Forward							
B61.51	Lateral supports to excavations						
	(a) Adjacent to Sea Cow Lake Road and properties						
	(i) 0 to 5m depth	L/SUM		1.0			
	(ii) 5 to 10m depth	L/SUM		1.0			

SCHEDULE D - PRASA BRIDGE 3
SECTION 6200

ITEM	DESCRIPTION	UNIT	LI	QTY	RATE	AMOUNT	
						(RAND)	c
	SECTION 6200						
62.00	FALSEWORK, FORMWORK AND CONCRETE FINISH						
62.02	Vertical formwork to provide:						
	(a) Class F1 surface finish to:						
	(i) Abutment walls	m ²		22.0			
	(ii) Approach slab	m ²		16.0			
	(iii) Retaining walls	m ²		55.0			
	(iv) Ballast kerbs	m ²		45.0			
	(v) Piers	m ²		54.0			
	(b) Class F2 surface finish to:						
	(i) Abutments	m ²		31.0			
	(ii) Piers	m ²		58.0			
	(iii) Retaining walls	m ²		250.0			
62.03	Horizontal formwork to provide:						
	(a) Class F2 surface finish to:						
	(i) Transom beams	m ²		45.0			
	(ii) Deck	m ²		295.0			
62.04	Inclined formwork to provide:						
	(a) Class F1 surface finish to:						
	(i) Abutments	m ²		2.0			
	(ii) Retaining wall stems	m ²		250.0			
	(b) Class F2 surface finish to:						
	(i) Transom beams	m ²		48.0			
	(ii) Deck	m ²		55.0			
B62.10	Contractor's Health and Safety obligations with regard to falsework and formwork	-		Lump	Sum		
	<u>Note:</u>						
Total Carried Forward							

SCHEDULE D - PRASA BRIDGE 3

SECTION 6200

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SCHEDULE D - PRASA BRIDGE 3
SECTION 6300

ITEM	DESCRIPTION	UNIT	LI	QTY	RATE	AMOUNT	
						(RAND)	c
	SECTION 6300						
63.00	STEEL REINFORCEMENT FOR STRUCTURES						
63.01	Steel reinforcement for:						
	(a) Abutments A and B						
	(i) Mild-steel bars	t		0.1			
	(ii) High-yield-stress-steel bars (450 MPa)	t		3.0			
	(b) Piers						
	(i) Mild-steel bars	t		0.1			
	(ii) High-yield-stress-steel bars (450 MPa)	t		26.0			
	(c) Transom beams						
	(i) Mild-steel bars	t		0.1			
	(ii) High-yield-stress-steel bars (450 MPa)	t		3.5			
	(d) Deck						
	(i) Mild-steel bars	t		0.1			
	(ii) High-yield-stress-steel bars (450 MPa)	t		46.5			
	(e) Approach slabs						
	(i) Mild-steel bars	t		0.1			
	(ii) High-yield-stress-steel bars (450 MPa)	t		5.5			
	(f) Parapets						
	(i) Mild-steel bars	t		0.1			
	(ii) High-yield-stress-steel bars (450 MPa)	t		2.0			
	(g) Retaining walls						
	(i) Mild-steel bars	t		0.5			
	(ii) High-yield-stress-steel bars (450 MPa)	t		2.0			
Total Carried Forward To Summary							

SCHEDULE D - PRASA BRIDGE 3
SECTION 6400

ITEM	DESCRIPTION	UNIT	LI	QTY	RATE	AMOUNT	
						(RAND)	c
	SECTION 6400						
64.00	CONCRETE FOR STRUCTURES						
B64.01	Cast in situ concrete:						
	(a) Class 40/19 in abutments	m ³		17.0			
	(b) Class 40/19 in piers	m ³		37.0			
	(c) Class 30/19 in transom beams	m ³		23.0			
	(d) Class 40/19 in deck	m ³		213.0			
	(e) Class 40/19 in approach slab	m ³		29.0			
	(f) Class 30/19 in retaining walls	m ³		210.0			
64.02	Manufacturing precast concrete members						
	(a) Prestressed slabs (refer to drawing no. 1300042-T-4301)	No		2			
B64.03	Transporting and erecting precast concrete members						
	(a) Prestressed slabs (approx. 26.3 ton/slab)	No		2			
B64.06	Demolishing existing concrete:						
	(b) Reinforced concrete in:						
	(i) Existing structure	m ³		91.0			
B64.07	Curing of concrete:						
	(a) Substructure, deck sides, parapets and ballast kerbs using an approved curing compound	m ²		634.0			
	(b) Deck top surface using moisture curing	m ²		320.0			
	(c) Approach and transition slabs using moisture curing	m ²		58.0			
	(d) Ballast kerbs using moisture curing	m ²		15.0			
B64.08	Hot weather concreting	L/SUM		1.0			
Total Carried Forward To Summary							

SCHEDULE D - PRASA BRIDGE 3
SECTION 6600

ITEM	DESCRIPTION	UNIT	LI	QTY	RATE	AMOUNT	
						(RAND)	c
	SECTION 6600						
66.00	NO-FINES CONCRETE, JOINTS, BEARINGS, BOLT GROUPS FOR ELECTRIFICATION, PARAPETS AND DRAINAGE FOR STRUCTURES						
B66.05	Expansion joints:						
	(a) 150 mm x 20 mm expansion joint						
	(i) along the full width of the approach slab	m		12.0			
	(ii) along the full width of the deck	m		12.0			
	(b) 500 mm x 20 mm expansion joint between the abutment earwing and approach slab	m		4.0			
66.08	Sealing joints with:						
	(a) Sealant (20 mm x 20 mm) ("Jaycolastic or equal approved") between the deck and abutment B	m		7.0			
66.13	Bearing strips	m ²		6			
66.14	Dowels/guides						
	(a) 600 mm long Y32 galvanized dowels wrapped in Denso tape 300 mm wide	No		12			
	(b) 1.2 m long Y32 galvanized dowels wrapped in Denso tape 300 mm wide	No		20			
	(c) 2 m long Y32 galvanized dowels wrapped in Denso tape 300 mm wide	No		20			
B66.15	Concrete parapets						
	(a) rail bridge barrier as indicated on drawing	m		100.0			
	(b) Provision for architectural finish	Prov Sum		1	150,000.00	150,000	00
66.17	End blocks						
	(a) End column 1 indicated in the drawings	No		3			
	(b) End column 2 indicated in the drawings	No		1			
66.19	Drainage pipes and weep holes:						
	(b) Weep holes						
	(ii) 50 dia.	No		17.0			
Total Carried Forward							

SCHEDULE D - PRASA BRIDGE 3**SECTION 6600**

ITEM	DESCRIPTION	UNIT	LI	QTY	RATE	AMOUNT	
						(RAND)	c
Brought Forward							
66.26	Supplying and installing bolt groups complete for electrification brackets:						
	(b) Double-bolt groups	No		2			
B66.27	Drainage Strips - 325mm wide DN1 Netlon drainage strips covered with filter fabric Grade 3	m		68.0			

SCHEDULE D - PRASA BRIDGE 3
SECTION 7400

ITEM	DESCRIPTION	UNIT	LI	QTY	RATE	AMOUNT	
						(RAND)	c
74.00	PATENTED EARTH RETAINING SYSTEMS						
74.01	Patented earth retaining system:						
	(a) Loffelstein precast concrete blocks of type L750	m ²		210.0			
74.02	Excavation for concrete bases for earth retaining systems:						
	(a) In soft material	m ³		270.0			
74.03	Concrete bases for earth retaining system (25MPa)	m ³		7.5			
Total Carried Forward To Summary							

SCHEDULE D - PRASA BRIDGE 3
SECTION 7500

ITEM	DESCRIPTION	UNIT	LI	QTY	RATE	AMOUNT	
						(RAND)	c
	SECTION 7500						
75.00	GROUND ANCHORS						
75.01	Establishment on the site for drilling	L/SUM		1.0			
75.02	Moving to, and setting up the equipment at each position for drilling the holes	No		60.0			
75.03	Drill holes with a diameter of 80mm diameter to the specified depths and inclinations	m		550.0			
75.04	Water tests	No		8.0			
75.05	Grouting and redrilling the holes	m		550.0			
75.06	Ground anchor tendons:						
	(a) Free length	MN-m		250.0			
	(b) Fixed anchor length	MN-m		150			
75.07	Anchorage and couplers:						
	(a) Anchorage at jacking end	MN		30.0			
75.08	Encasing the anchorages at the jacking end in concrete	No		60.0			
B75.09	Establishment on site for shotcrete works	L/SUM		1.0			
B74.10	Supply and installation of reinforcing						
	(a) Welded steel fabric Mesh Ref. 193	m ²		200.0			
B75.11	Shotcrete of specified thickness applied in one, two or more layers as necessary						
	(i) 25mm thick (unreinforced) flash coat	m ²		230.0			
	(ii) 75mm thick final coat	m ²		80.0			
B75.12	Plastic piping for weep holes 50mm nominal diameter uPVC piping	m		30.0			
B75.13	Removal of shotcrete and ground anchor tendons	L/SUM		1.0			
Total Carried Forward To Summary							

SCHEDULE D - PRASA BRIDGE 3
SECTION 8100

ITEM	DESCRIPTION	UNIT	LI	QTY	RATE	AMOUNT	
						(RAND)	c
	SECTION 8100						
81.00	TESTING MATERIALS AND WORKMANSHIP						
B81.02	Other special tests requested by the engineer						
	(a) Employer's contribution to concrete durability tests						
	(i) Tests for sorptivity	Prov Sum		1	40,000.00	40,000	00
	(ii) Tests for oxygen permeability	Prov Sum		1	40,000.00	40,000	00
	(ii) Tests for chloride conductivity	Prov Sum		1	40,000.00	40,000	00
	(iv) Tests for concrete cover	Prov Sum		1	40,000.00	40,000	00
	(b) Other tests	Prov Sum		1	50,000.00	50,000	00
Total Carried Forward To Summary							

SCHEDULE D - PRASA BRIDGE 3

SUMMARY OF SECTIONS

[illegible]

SCHEDULE E - RAIL INFRASTRUCTURE UPGRADE

ITEM	DESCRIPTION	UNIT	LI	QTY	RATE	PROVISIONS	
						AMOUNT	
						(RAND)	c
	PROVISIONS						
E1	Provision for Bridge 1 rail infrastructure operational upgrades including signalling/interlocking, OHTE and perway requirements (works to be undertaken by specialist rail selected subcontractor)	Prov Sum		1.0	8,320,000.00	8,320,000	00
E2	Provision for Bridge 2 rail infrastructure operational upgrades including signalling/interlocking, OHTE and perway requirements (works to be undertaken by specialist rail selected subcontractor)	Prov Sum		1.0	8,450,000.00	8,450,000	00
E3	Provision for Bridge 3 rail infrastructure operational upgrades including signalling/interlocking, OHTE and perway requirements (works to be undertaken by specialist rail selected subcontractor)	Prov Sum		1.0	9,830,000.00	9,830,000	00
E4	Handling cost and profit in respect of item E1, E2 and E3	%		26,600,000.00			
Total Carried Forward To Summary							

SCHEDULE E - RAIL INFRASTRUCTURE UPGRADE

SUMMARY OF SECTIONS

[illegible]

SCHEDULE F - OCCUPATIONAL HEALTH & SAFETY
PART 1

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT	
					(RAND)	c
	PART 1: GENERAL					
1.1	Preparation and submission of safety and health and COVID-19 Management Plan: The preparation and submission of the Safety and Health Plan comprising with but not limited to: a. Description of project b. Site project organisation structure c. Arrangements for controlling significant site risks, and; d. Detail - Occupation Safety and Health Specification	L/SUM	1.0			
1.2	OSH Management System Review Occupational Safety and Health management system of worksite at least once every 6 months	L/SUM	1.0			
1.3	The Safety and Health Committee Conduct HSE meetings and inspections during the duration of the contract as below: a) HSE Safety committee meetings monthly for the duration of the contract b) Site Safety and Health inspection for the workplace (once in every four months) for the duration of the contract	No No	24.0 6.0			
1.4	Temporary Works by Designer Provision for the submission of design of any temporary works by a competent person / professional engineer (third party) of the following to the Supervising Officer, if requested by the Client: a) Formwork and support system b) Scaffolding c) Catch platform d) Construction rubbish/debris disposal chute e) Runways and ramp used by vehicles f) Support for stability of structure where adjoining area to be excavated or piled	L/SUM L/SUM L/SUM L/SUM L/SUM L/SUM	1.0 1.0 1.0 1.0 1.0 1.0			
Total Carried Forward						

SCHEDULE F - OCCUPATIONAL HEALTH & SAFETY
PART 1

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT	
					(RAND)	c
Brought Forward						
1.5	g) Loading platform	L/SUM	1.0			
	Construction Health and Safety Manager and Construction Health and Safety Officer					
1.6	Full time competent Construction Health and Safety Officer for the entire duration of the contract and part-time Construction Health and Safety Manager to supervise CHSO for the entire duration of contract	L/SUM	1.0			
	Traffic Safety Officer					
1.7	A competent Traffic Safety Officer for the entire duration of the contract to be stationed full time at site	L/SUM	1.0			
	Medical Check Up					
1.8	Conduct health fitness by a medical officer at least on yearly basis to ensure their operator/workers are in good health before and during their engagement in the period of contract	L/SUM	1.0			
	Screening employees for COVID-19 symptoms	L/SUM	1.0			
	Allow for exit medical examinations	L/SUM	1.0			
	Personal Protective Equipment					
	Provide, maintain and replace any damage personal protective equipment as per specification to all employees	L/SUM	1.0			
	Provide, maintain and replace any damaged items of the following personal protective equipment during the construction period:					
	a) Eye and face protection	No	10.0			
	b) Fall protection (Harnesses, lanyards, lifeline, safety belt)	No	4.0			
	c) Foot protection (Safety shoes/boots)	No	10.0			
	d) Hand protection (suitable glove - pair)	No	10.0			
	e) Head protection (safety helmet)	No	10.0			
	f) Hearing protection	No	10.0			
	g) Respiratory protection	No	50.0			
Total Carried Forward						

SCHEDULE F - OCCUPATIONAL HEALTH & SAFETY

PART 1

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT	
					(RAND)	c
Brought Forward						
1.9	Safety and Health Training & Briefing					
	Conducting briefings and induction course to each worker and any related courses that required for the entire project					
	Plan and conduct relevant safety and health training plan as per site requirement					
	a) Site safety and health induction course for site personnel	L/SUM	1.0			
	b) Site health and safety induction for approved visitors	L/SUM	1.0			
	c) Fire fighting	L/SUM	1.0			
	d) Emergency preparedness, respond and evacuation	L/SUM	1.0			
	e) Tool box meetings/briefing (once a week at site)	L/SUM	1.0			
	f) Allow for COVID-19 management training	L/SUM	1.0			
	g) Others (please specify)	L/SUM	1.0			
1.10	Hazards Identification Risk Assessment And Risk Control (HIRARC)					
	Prepare and undertake Hazards Identification, Risk Assessment and Risk controls (HIRARC) for all construction activities	L/SUM	1.0			
1.11	Monthly Report					
	Printing/copying, papers, inks, binding or related cost in providing the monthly report within the contract period inclusive of any investigation expertise.	month	24.0			
1.12	Notification of Accidents, Dangerous Occurrences, Occupational Diseases					
	Provision for Accident / Incident Investigation Report inclusive for the cost to engage if there is any third parties involve (competent person / specialist) to investigate any accident at workplace.	L/SUM	1.0			
1.13	General Signage					
Total Carried Forward						

SCHEDULE F - OCCUPATIONAL HEALTH & SAFETY
PART 1

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT	
					(RAND)	c
Brought Forward						
1.14	Safety signage in the workplace to ensure the workers and the public are aware about safety within the environment of the project.					
	Provide, install and maintain the following standard signage:					
	a) Keep Site Clean	L/SUM	1.0			
	b) No Open Fires / Burning	L/SUM	1.0			
	c) Emergency exit routes	L/SUM	1.0			
	d) Any other safety signs as instructed and approved by the	L/SUM	1.0			
	S.O. (please specify)					
1.15	Site Safety and Health Information Board					
	Provide at least one (1) information board to update any HSE information to the employee at worksite.					
	Provision and maintenance of Safety and Health information board including regular updating of safety and health information	L/SUM	1.0			
1.16	First Aid Facilities					
	A trained first-aider for any minor accident and first aid arrangement in case of any accidents at the workplace. This includes providing complete set of first aid kit for office within the period of contract. Requirement to be as set out in the OHS Act One qualified First Aider appointed where more than 10 persons are employed. One additional First Aider for every 50 persons employed					
	a) To provide suitable trained person to attend first-aid treatment.	L/SUM	1.0			
	b) To provide and maintain first aid kit	No	2.0			
1.16	Portable Fire Extinguisher					
Total Carried Forward						

SCHEDULE F - OCCUPATIONAL HEALTH & SAFETY

PART 1

ITEM	DESCRIPTION	UNIT	QTY	RATE	PART 1	
					AMOUNT (RAND)	c
Brought Forward						
	Provide enough fire extinguishers at the workplace. The locations of the fire extinguishers include the site office, quarters and standby for any hot works activities within the contract period. The cost also includes the maintenance and training of the use of equipment. At least one unit for office, two units for each quarter and one unit standby for hot work area. Provision and maintenance of approved fire extinguisher to be provided for around each 200m2 of floor space with a minimum of one per floor at designated area.	L/SUM	1.0			
Total Carried Forward To Summary						

SCHEDULE F - OCCUPATIONAL HEALTH & SAFETY
PART 2

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT	
					(RAND)	c
	PART 2: AMENITIES AND FACILITIES (CONSTRUCTION SITE AND SITE ACCOMMODATION)					
2.1	Toilets Provide, maintain and the dislodging of toilets for workers. Toilet shall be connected to a sewer / temporary septic tank with the approval of the relevant competent authority. Contractor shall estimate the number of workers for entire project and at least 1 toilet per every 30 workers. For every 100 workers, there should be 4 numbers of toilet.	L/SUM	1.0			
2.2	Temporary Structures and Sanitary conveniences at construction worksites Temporary site office with adequate lighting and ventilation Sanitary facilities in the ratio of 1 water closet, 1 shower and 1 wash basin for every 25 workers or less shall be provided. The toilet facilities shall be connected to a sewer/temporary septic tank	L/SUM	1.0			
2.3	Temporary rest area Provide and maintain rest area for the workers and site staff with safe area, ventilated and lighted	L/SUM	1.0			
2.4	Lighting Provide adequate lighting in dark environment at work areas, access and egress. Note: Dark environment with inadequate lighting (access to upper floor, tanks, any confined space, etc).	L/SUM	1.0			
2.5	Ventilation Provide mechanical ventilator in areas where natural ventilation is not possible and in accordance to the specification. Areas which requires constant air circulation which involves fumes and smoke e.g. generator, welding activities, confine space, etc.	L/SUM	1.0			
Total Carried Forward To Summary						

SCHEDULE F - OCCUPATIONAL HEALTH & SAFETY

PART 3

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT	
					(RAND)	c
	PART 3: PREVENTION OF FALL AT WORKPLACE					
3.1	Unprotected Sides and Edges					
	Supply, install and erect guardrail, barricade and toe board (where required) to exposed edges / openings but not limited to:	L/SUM	1.0			
	a) Bridge work					
	b) Lift shaft openings					
	c) Floor openings					
	d) Working platform					
	e) Loading platform					
	Provide, install and maintain temporary hand railings to the stairs use as an access and egress	L/SUM	1.0			
	Provision of providing temporary closure by using sufficient thick and strong material for any floor openings where when erecting guardrail / barricade are not suitable	L/SUM	1.0			
3.2	Safety nets					
	Install and maintain safety net as close as possible to the working level. Should it be on the outside of the structure, the outer edges should be higher than the inner edge. Contractor to calculate the area to be close/cover base on the proposed design of the building.	L/SUM	1.0			
3.3	Individual fall arrest systems					
	Fall arrest systems must be provided for every workers working at height above 1.8m. Double lanyards to be equipped on the safety harness.					
	Provide, anchor /install and maintain individual fall arrest systems that includes:	L/SUM	1.0			
	a) Inertia reel systems;					
	b) Safety harness;					
	c) Lanyards; and					
	d) Static lines					
3.6	Ladders					
Total Carried Forward						

SCHEDULE F - OCCUPATIONAL HEALTH & SAFETY
PART 3

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT	
					(RAND)	c
Brought Forward						
3.7	Supply, install and maintain suitable lockable step ladder spreader bars on both sides connected to the front and rear stiles. All ladders must be specified with its certification standards.	L/SUM	1.0			
	Scaffolding for Temporary Working Platform, Access and Egress					
3.8	Scaffold board should not be less than 225mm wide. Working platforms for men without materials or only for passage of materials must be 500mm width. For men and materials provided there is 800mm width, provided there is 430mm left clear for the passage of men or 600mm if barrows are used. Toe-board must be fitted in conjunction with all guard rails, a minimum height of 150mm.					
	Erect, maintain and dismantle suitable scaffolding for temporary working platform including access and egress.	L/SUM	1.0			
3.9	Rubbish Chute					
	Provision for rubbish / debris disposal chute For high-rise building, chute openings must be properly supported with adequate strength and the discharge end of the chute to the debris collection area shall not be more than 3m. At least 1 chutes to be provided during construction period for high- rise building.	L/SUM	1.0			
3.9	Safety Signage					
	Provide safety signage for all the above items. Provision for the following but not limited to: a) Beware of falling objects b) Safety harness c) Safe access or egress d) Openings and apertures e) Rubbish chute operation and limitations f) Others (please specify)	L/SUM	1.0			
Total Carried Forward To Summary						

SCHEDULE F - OCCUPATIONAL HEALTH & SAFETY
PART 4

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT	
					(RAND)	c
	PART 4: ELECTRICAL					
4.1	Reports					
	Submission of regular safety inspection and maintenance reports on electrical distribution box, switch box, temporarily wiring and generator set both indoors and outdoors on weekly basis.	L/SUM	1.0			
4.2	Electrical Safety Signage					
	Provide electrical safety signs at workplace to ensure workers and public aware about electrical safety within the contract period.	L/SUM	1.0			
	Provide, install and maintain the following approved 300mm x 400mm safety warning signs but not limited to : a) BEWARE ELECTRICITY b) USE ELECTRICITY SAFELY c) USE SAFE ELETRICAL TOOLS d) BEWARE OF OVERHEAD CABLE e) Others (please specify)					
4.3	Inspection of equipment					
	Inspection of all electrical tools and equipment prior to their first use at site and throughout the contract period.	L/SUM	1.0			
Total Carried Forward To Summary						

SCHEDULE F - OCCUPATIONAL HEALTH & SAFETY
PART 5

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT	
					(RAND)	c
	PART 5: HAZARDOUS CHEMICALS AND MATERIALS					
5.1	Chemical Health Risk Assessment					
	a) Prepare a Chemical Register for all hazardous chemical to health used in the place of work inclusive of updating during the contract period.	L/SUM	1.0			
	b) Carry out Chemical Health Risk Assessment by a registered assessor.	L/SUM	1.0			
	c) Develop control measures and policies to ensure the hazardous chemical to health are handled and used safely inclusive of updating during the contract period but not limited to : i. Handling ii. Correct and safe storage iii. Transportation procedure iv. Disposal procedure include schedule waste	L/SUM	1.0			
5.2	Labelling and Storage					
	Provision of labelling, control and safe storage area for hazardous material at site to the requirement of the authority.	L/SUM	1.0			
5.3	Personal Protective Equipment					
	Suitable PPE for handling hazardous chemical at workplace as per OHS Act	L/SUM	1.0			
	Provide the following PPE for visitors/inspectors and other personnel working with hazardous chemical but not limited to:					
	i. Goggles	No	5.0			
	ii. Mask	No	5.0			
	iii. Gloves	No	5.0			
	iv. Suitable full face mask (where necessary)	No	5.0			
	v. Protective clothing (where necessary)	No	5.0			
5.4	Waste Disposal					
Total Carried Forward						

SCHEDULE F - OCCUPATIONAL HEALTH & SAFETY

PART 5

PART 5						
ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT	
					(RAND)	c
Brought Forward						
5.5	The cost for handling any chemical waste as required including proper arrangement by the approved contractor (third party).					
	Handle, transport and disposal of schedule waste by licensed / approved contractor to the requirement of the authority.	L/SUM	1.0			
5.5	Chemical Safety Signage					
	All related safety signage in handling hazardous chemicals at the workplace as per OHS Act. Safety signage needs to be installed at the designated chemical area.					
5.6	Provide, install and maintain the following approved 300mm x 400mm safety warning signs but not limited to :					
	a) USE SUITABLE FACE MASK b) USE SUITABLE GLOVES c) WARE SUITABLE CLOTHINGS d) BEWARE OF HADZADOUS MATERIAL e) USE SUITABLE GOGGLES f) Any other signs related to chemical safety	L/SUM	1.0			
5.6	Hazardous chemical training and handling					
	Provisions to provide the following: a) Training of hazardous chemicals on site b) Monitoring of exposure hazardous chemical on site c) Health surveillance for workers expose to the hazardous chemical on site	L/SUM	1.0			
Total Carried Forward To Summary						

SCHEDULE F - OCCUPATIONAL HEALTH & SAFETY
PART 6

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT	
					(RAND)	c
	PART 6: PLANTS					
6.1	Compile and maintain on a monthly basis all inspection records for plants but not limited to: a) Mobile and rigging equipment b) Pilling equipment c) Portable mechanical powered fastening tools d) Scaffold e) Compressor and Pressure Vessel f) Dozer, motor grader, etc. Note: The cost for printing/copying, papers, inks, binding, files or related cost in providing and maintaining all inspection records during the contract period.	L/SUM	1.0			
6.2	Provision of designated personnel a) Provide for trained and appointed personnel to operate the equipment in allowed for in 6.1	L/SUM	1.0			
6.3	Communication a) Provide for all radio equipment to safely operate all plant and machinery on site where required	L/SUM	1.0			
6.4	Inspection Inspection by authorised inspector (third party) at least once (1) per year Arrange inspection and approval of special plants, tools and before use at site for : a) Air compressor b) Pilling equipment c) Mobile crane d) Any others	L/SUM	1.0			
Total Carried Forward To Summary						

SCHEDULE F - OCCUPATIONAL HEALTH & SAFETY
PART 7

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT	
					(RAND)	c
	PART 7: SPECIAL WORK SITUATIONS					
7.1	Working in confined space					
	a) Carry out air testing for toxic, flammable gas fumes and oxygen adequacy before access to the confined area of work by authorised gas tester.					
	b) Provision of:					
	i. entry supervisor (one man per test)	L/SUM	1.0			
	ii. standby person (one man per test)	L/SUM	1.0			
	Provision of a ventilation system for the provision of fresh air and the extraction of pollutants	L/SUM	1.0			
	Develop a permit system and procedures for the entering of confined spaces during construction	L/SUM	1.0			
	Provide, install and maintain all warning signage for working in confined spaces.	L/SUM	1.0			
7.2	Traffic movement within site					
	The cost to ensure safety and proper traffic management at workplace by providing all the following items within the contract period.					
	a) Provision for planning of safe traffic movement within the site.	L/SUM	1.0			
	b) Provision of flagman to control and regulate the movement of site traffic / vehicle within, going out and coming into the site.	L/SUM	1.0			
	c) Provision of the following to be used by the worker and flagman but not limited to :					
	i. Reflective safety vest.					
	ii. Dust mask					
	iii. Traffic control baton light					
	iv. Flags (Both Green and Red flags)					
	v. Any other suitable PPE	L/SUM	1.0			
	Provide all road traffic signage	L/SUM	1.0			
	Accommodating traffic and maintaining temporary deviations	L/SUM	1.0			
	Provision of other traffic control measures, as instructed by the Engineer	Prov Sum	1	100.00	100	00
	7.3 Excavations (more than 1.5m deep)					
Total Carried Forward						

SCHEDULE F - OCCUPATIONAL HEALTH & SAFETY
PART 7

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT	
					(RAND)	c
Brought Forward						
	The cost to ensure safety and proper arrangement for any excavation activities at workplace by providing all the following items within the contract period. Minimum one (1) no. per item when the excavation is more than 1.5m deep.					
	a) Provision for the designing of safe strutting for deep excavation work by professional.	L/SUM	1.0			
	b) Provision for the competent / designated person to supervise the excavation work.	L/SUM	1.0			
	c) Provision for the protection and barricading the excavated work.	L/SUM	1.0			
	d) Provide, install and maintain an approved hazard warning lights for the excavated area during the night.	L/SUM	1.0			
	e) Provide, install and maintain approved warning signage	L/SUM	1.0			
	Note: Applicable for demolition works only otherwise ignore Section 7.4					
7.4	General Demolition Works					
	Ensure safety and proper arrangement of the demolition activities by providing all the following items within the contract period or for the demolition works. Minimum one (1) no per item is required.					
	a) Provision of planning for safe demolition work, stage by stage, including the safety of adjoining structure for the approval of the local authority.	L/SUM	1.0			
	b) Provision of inspection and supervision of demolition work by competent person.	L/SUM	1.0			
	c) Provision of adequate notice before demolition work as required by the local authority.	L/SUM	1.0			
	d) Provision for the suppression of dust to the approval limit of the local authority.	L/SUM	1.0			
	e) Provide, install and maintain all safety warning signage	L/SUM	1.0			
Total Carried Forward						

SCHEDULE F - OCCUPATIONAL HEALTH & SAFETY

PART 7

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT	
					(RAND)	c
Brought Forward						
	f) Provision of approved netting for prevention of uncontrolled fall of demolishing material.	L/SUM	1.0			
	g) Provide, install and maintain approved barricade / fencing for preventing unauthorised entry for the whole duration of the demolition work.	L/SUM	1.0			
	h) Provision of security personnel at strategic locations during the demolition operation.	L/SUM	1.0			
	i) Provision of noise monitoring and testing.	L/SUM	1.0			
Total Carried Forward To Summary						

SCHEDULE F - OCCUPATIONAL HEALTH & SAFETY

SUMMARY OF SECTIONS

SECTION	DESCRIPTION	AMOUNT	
		(RAND)	c
1	GENERAL		
2	AMENITIES AND FACILITIES		
3	PREVENTION OF FALL AT WORKPLACE		
4	ELECTRICAL		
5	HAZARDOUS CHEMICALS AND MATERIALS		
6	PLANTS		
7	SPECIAL WORK SITUATIONS		
Total Carried Forward To Summary Of Schedules			

SCHEDULE G - UMGANI IRON WORKS**SECTION 1500**

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT	
					(RAND)	c
	SECTION 1500					
15.00	ACCOMMODATION OF TRAFFIC					
B15.01	Accommodating traffic and maintaining temporary deviations	km	0.10			
B15.03	Temporary traffic-control facilities:					
	(a) Flagmen	man-day			Rate Only	
	(b) Portable STOP and GO-RY signs	No			Rate Only	
	(h) Delineators (DTG50J) (1200mm x 250mm):					
	(i) Single	No	20			
	(ii) Mounted back to back	No	20			
	(i) Movable barricade/road sign combination (8m wide chevron and road closed types)	No	5			
	(j) Traffic cones (750mm)	No	30			
Total Carried Forward To Summary						

SCHEDULE G - UMGENI IRON WORKS**SECTION 1700**

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT	
					(RAND)	c
	SECTION 1700					
17.00	CLEARING AND GRUBBING					
B17.01	Clearing and grubbing	ha	0.20			
17.03	Re-clearing of surfaces (on the written instructions of the Engineer only)	ha	0.20			
17.04	Clearing and grubbing at inlets and outlets of hydraulic structures	m ²	10.00			
17.05	Cleaning out of hydraulic structures:					
	(a) Pipes with an internal diameter up to and including 750mm	m ³	5.00			
Total Carried Forward To Summary						

SCHEDULE G - UMGENI IRON WORKS
SECTION 2300

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT	
					(RAND)	c
	SECTION 2300					
23.00	CONCRETE KERBING, CONCRETE CHANNELLING, CHUTES AND DOWNPIPES, AND CONCRETE LININGS FOR OPEN DRAINS					
23.02	Concrete kerbing-channelling combination (Class 15/20 concrete):					
	(a) 500mm wide combined precast kerb to SABS 927 (Figure 6) and cast in situ channel	m	317.0			
Total Carried Forward To Summary						

SCHEDULE G - UMGENI IRON WORKS
SECTION 3300

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT	
					(RAND)	c
	SECTION 3300					
33.00	MASS EARTHWORKS					
B33.01	Cut and borrow to fill, including free-haul up to 1,0 km:					
	(a) Material in compacted layer thicknesses of 200mm and less:					
	(i) Compacted to 90% of modified AASHTO density	m ³	120.0			
	(i) Compacted to 93% of modified AASHTO density	m ³	120.0			
	(iii) Eight roller passes compaction	m ³	50.0			
33.03	Extra over item B33.01 for excavating and breaking down material in:					
	(a) Intermediate excavation	m ³	10.0			
	(b) Hard excavation	m ³	10.0			
B33.04	Cut to spoil, including free-haul up to 1,0 km. Material obtained from:					
	(a) Soft excavation	m ³	2,500.0			
	(b) Intermediate excavation	m ³	965.0			
	(c) Hard excavation	m ³	500.0			
	(d) Boulder excavation class A	m ³	10.0			
	(e) Boulder excavation class B	m ³	10.0			
B33.07	Removal of unsuitable material (including free-haul of 1,0 km):					
	(a) In layer thicknesses of 200 mm and less:					
	(i) Stable material	m ³	15.0			
	(ii) Unstable material	m ³	5.0			
33.10	Roadbed preparation and the compaction of material:					
	(a) Compaction to 90% of modified AASHTO density	m ³	360.0			
33.13	Finishing-off cut and fill slopes, medians and interchange areas:					
	(a) Cut slopes	m ²	480.0			
Total Carried Forward						

SCHEDULE G - UMGENI IRON WORKS

SECTION 3300

[illegible]

SCHEDULE G - UMGENI IRON WORKS**SECTION 3400**

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT	
					(RAND)	c
	SECTION 3400					
34.00	PAVEMENT LAYERS OF GRAVEL MATERIAL					
B34.14	Pavement layers constructed from gravel obtained from commercial sources					
	(a) Gravel selected layer compacted to:					
	(i) 93% of modified AASHTO density (150mm G9)	m ³	120.0			
	(b) Gravel subbase compacted to:					
	(i) 95% of modified AASHTO density (150mm G6)	m ³	120.0			
	(c) Gravel base (chemically stabilized material) compacted to:					
	(i) 97% of modified AASHTO density (150mm G5)	m ³	120.0			
Total Carried Forward To Summary						

SCHEDULE G - UMGNI IRON WORKS

SECTION 3500

[illegible]

SCHEDULE G - UMGENI IRON WORKS

SECTION 4100

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT	
					(RAND)	c
	SECTION 4100					
41.00	PRIME COAT					
41.01	Prime coat:					
	(e) Invert bitumen emulsion	l	2,800.0			
41.02	Aggregate for blinding	m²	795.0			
41.03	Extra over item 41.01 for applying the prime coat in areas accessible only to hand held equipment	l	200.0			
Total Carried Forward To Summary						

SCHEDULE G - UMGENI IRON WORKS
SECTION 4200

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT	
					(RAND)	c
	SECTION 4200					
42.00	ASPHALT BASE AND SURFACING					
B42.02	Asphalt surfacing					
	(a) Constructed with new asphalt and compacted to the required thickness commercially obtained:					
	(i) Sa-S14 50mm thick compacted to min 93% MTRD, max 96% MTRD (Level IB)	t	100.0			
42.04	Tack coat of 30% stable-grade emulsion	l	1,400.0			
42.05	Binder variations					
	(i) 35/50 pen	t	1.0			
B42.08	100 mm cores in asphalt paving	No	4.0			
Total Carried Forward To Summary						

SCHEDULE G - UMGENI IRON WORKS
SECTION 5500

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT	
					(RAND)	c
	SECTION 5500					
55.00	FENCING					
55.01	Clearing the fence line, 2 m wide strip	km	0.16			
B55.02	Supply and erect new fencing material for new fences and for supplementing material in existing fences which are being repaired or removed:					
	(j) Concrete palisade fence, 2.1 m high	km	0.16			
55.03	New gates					
	(a) Single leaf					
	(2) 5m 'w' pattern	No	1			
55.04	Moving existing fences and gates:					
	(a) Fences:					
	(4) Security fences	km	0.16			
	(b) Gates	No	1			
55.05	Dismantling existing fences:					
	(a) Fences:					
	(4) Security fences	km	0.16			
	(b) Gates	No	1			
Total Carried Forward To Summary						

SCHEDULE G - UMGNI IRON WORKS

SECTION 5900[illegible]

SCHEDULE G - UMGENI IRON WORKS**SECTION 6600**

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT	
					(RAND)	c
	SECTION 6600					
66.00	NO-FINES CONCRETE, JOINTS, BEARINGS, BOLT GROUPS FOR ELECTRIFICATION, PARAPETS AND DRAINAGE FOR STRUCTURES					
B66.30	Provisional Sums for the Replacement of Existing Buildings					
	(a) Provision for the replacement of an existing car port	Prov. Sum	1	25,000.00	25,000	00
	(b) Provision for the replacement of an existing weighbridge	Prov. Sum	1	100,000.00	100,000	00
	(c) Provision for the replacement of an existing guardhouse	Prov. Sum	1	25,000.00	25,000	00
Total Carried Forward To Summary						

SCHEDULE G - UMGENI IRON WORKS

SECTION 8100						
ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT	
					(RAND)	c
	SECTION 8100					
81.00	TESTING MATERIALS AND WORKMANSHIP					
81.02	Other Special Tests Requested by the Engineer					
	(a) Cost of Testing	Prov. Sum	1	50,000.00	50,000	00
	(b) Handling Cost and Profit in respect of item 81.02					
	(a)	%	50,000.00			
Total Carried Forward To Summary						

SCHEDULE G - UMGENI IRON WORKS

SUMMARY OF SECTIONS

SECTION	DESCRIPTION	AMOUNT	
		(RAND)	c
1500	ACCOMMODATION OF TRAFFIC		
1700	CLEARING AND GRUBBING		
2300	CONCRETE KERBING, CONCRETE CHANNELLING, CHUTES AND DOWNPIPES, AND CONCRETE LININGS FOR OPEN DRAINS		
3300	MASS EARTHWORKS		
3400	PAVEMENT LAYERS OF GRAVEL MATERIAL		
3500	STABILIZATION		
4100	PRIME COAT		
4200	ASPHALT BASE AND SURFACING		
5500	FENCING		
5900	FINISHING THE ROAD AND ROAD RESERVE AND TREATING OLD ROADS		
6600	NO-FINES CONCRETE, JOINTS, BEARINGS, PARAPETS AND DRAINAGE FOR STRUCTURES		
8100	TESTING MATERIALS AND WORKMANSHIP		
Total Carried Forward To Summary Of Schedules			

SUMMARY OF SCHEDULES
CONTRACT No. 1T-34277
for
WIDENING OF SEA COW LAKE ROAD PHASE 2
INCLUDING THE CONSTRUCTION OF OVERHEAD RAIL BRIDGES

SUMMARY OF SCHEDULES

DESCRIPTION	AMOUNT
Totals of Schedule of Quantities brought forward:	
SCHEDULE A: ROADWORKS	R
SCHEDULE B: TFR BRIDGE 1	R
SCHEDULE C: TFR BRIDGE 2	R
SCHEDULE D: PRASA BRIDGE 3	R
SCHEDULE E: RAIL INFRASTRUCTURE UPGRADES	R
SCHEDULE F: OCCUPATIONAL HEALTH AND SAFETY	R
SCHEDULE G: UMGENI IRON WORKS	R
SUBTOTAL 1	R
Add: VAT (15% of SUBTOTAL 1)	R
TOTAL CARRIED FORWARD TO FORM OF OFFER	R

Signed on behalf of the Tenderer: (Signature)

Date:

Tenderer's Name: (Company Name)

