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BILL OF QUANTITIES**SECTION 1 Preliminaries 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 Fixed Charge obligations	sum	1		
2	GCC 2015	Time Related obligations	sum	1		
3	SANS 1921-1 & SABS 1200 A	SANS 1921-1 & SABS 1200 A: GENERAL ENGINEERING AND CONSTRUCTION WORKS READ IN CONJUNCTION WITH THE ASSOCIATED SPECIFICATION DATA IN THE SCOPE OF WORKS Fixed Charge Items	sum	1		
4	SANS 1921-1	Time Related Items	sum	1		
5	C.1.2.3.1	COMMUNITY LIAISON OFFICER Allow for a CLO to be appointed.	PC Sum	114240	1.00	114,240.00
6	C.1.2.3.1	% Mark-up for item 5 above	%	114240		
7	C.1.2.3.4	LOCAL LABOUR Allow for the weekly submission of proof of employment of local labour	sum	1		

TOTAL CARRIED TO SECTION 1 SUMMARY: Preliminaries and General**R****PART AB GENERAL SPECIFICATIONS**

Item	Clause	Description	Unit	Quantity	Rate	Amount
1	PS.AB.14	Setting out	sum	1		
2	PS.AB.14	Additions to setting out (fixing of control points)	sum	1		
3	AB.4	Contractor's Camp Site / Store Yard	sum	1		
4	AB.5	Notice Board	sum	1		
5	AB.6	Cost of Samples and Contractor's Preliminary and Site Control Testing	sum	1		
6	AB.7	Initial supply of all signs, barricades and delineators	sum	1		
7	AB.7	Maintenance of all signs, barricades and delineators	sum	1		
8	PS.AB.8	Road Deviations (Temporary by-pass of Type B category)	sum	1		

Culvert Upgrade & Stream Protection Works along Ubobo Walk & Ubani Road, Inanda - Ward 107

Part Continued **PART AB GENERAL SPECIFICATIONS**

Item	Clause	Description	Unit	Quantity	Rate	Amount
9	PS.AB.9	Survey coordination of existing valves, manholes, catchpits, and cable duct markers	sum	1		
10	PS.AB.15	Temporary stream diversion and removal of stream diversion	sum	1		
11	PS.AB.10	Survey for, and Preparation of, 'As-Built' Drawings	sum	1		
12	C1.2.3.7	Excepted Risks: Establishment	sum	1		
13	C1.2.3.7	Excepted Risks: De-establishment	sum	1		
14	PS.11	Site Security	PC Sum	369478.9	1.00	369,478.90

TOTAL CARRIED TO SECTION 1 SUMMARY: Preliminaries and General

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PART AH OCCUPATIONAL HEALTH and SAFETY

Item	Clause	Description	Unit	Quantity	Rate	Amount
1	PS.AH.10	Contractor's initial obligations in respect of the Occupational Health and Safety Act and Construction Regulations	sum	1		
2	PS.AH.10	Contractor's time related obligations in respect of the Occupational Health and Safety Act and Construction Regulations	sum	1		
3	PS.AH.10	Submission of the Health and Safety File	sum	1		

TOTAL CARRIED TO SECTION 1 SUMMARY: Preliminaries and General

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Culvert Upgrade & Stream Protection Works along Ubobo Walk & Ubani Road, Inanda - Ward 107**SECTION 2 Culvert Construction****PART B SITE CLEARANCE**

Item	Clause	Description	Unit	Quantity	Rate	Amount
1	B.8.2	General clearance of the site area and remove all debris such as gabbage and the existing concrete structures and brickwork from the site and spoil at tip. Rate to include all haulage	m2	600		
2	B.8.2	General clearance and grubbing in contractor's camp site	m2	100		
3	B.8.2	General clearance and grubbing in temporary stockpile area	m2	96		
4	B.8.9	Removal of brickwork	m3	12		
5	B.8.10	Removal of unreinforced concrete	m3	20		
6	B.8.11	Removal of reinforced concrete	m3	20		
7	B.8.14	Removal of roadways to tip	m3	28		
8	B.8.16	Removal of kerb and channel/fillet to tip	m	40		
9	B.9.19	Removal of disused pipes, greater than 800 mm diameter and spoil at tip. Rate to include haulage	m	32		

TOTAL CARRIED TO SECTION 2 SUMMARY: Culvert Construction**R****PART C CONCRETE WORK**

Item	Clause	Description	Unit	Quantity	Rate	Amount
1	C.8.1	Grade 15/26 concrete blinding of thickness 75 mm	m2	92		
2	C.8.1	Grade 30/26 concrete in base slab of culvert	m3	16.5		
3	C.8.1	Grade 30/26 concrete in deck slab of culvert	m3	5.5		
4	C.8.1	Grade 30/26 concrete in apron slabs of culvert	m3	13.8		
5	C.8.1	Grade 30/26 concrete in wing walls of culvert	m3	27.5		
6	C.8.2	High tensile steel reinforcement	t	3		
7	C.8.3	Class 3a shuttering to base slabs	m2	21.5		
8	C.8.3	Class 3a shuttering to deck slabs	m2	7		
9	C.8.3	Class 3a shuttering to apron slabs of culvert	m2	16.9		
10	C.8.3	Class 3a shuttering to wing walls of culvert	m2	191.6		

Culvert Upgrade & Stream Protection Works along Ubobo Walk & Ubani Road, Inanda - Ward 107**Part Continued PART C CONCRETE WORK**

Item	Clause	Description	Unit	Quantity	Rate	Amount
11	PS.C.2	Sealant in expansion joint POLYSULPHIDE OR SIMILAR APPROVED (Applied strictly to manufacturers instruction)	m	101		
12	PS.C.8	Dowel bars installation	no.	20		

TOTAL CARRIED TO SECTION 2 SUMMARY: Culvert Construction**R****PART DA EARTHWORKS : BULK**

Item	Clause	Description	Unit	Quantity	Rate	Amount
1	DA.8.2	Excavate topsoil and spoil at tip	m3	40		
2	DA.8.3	Excavate unsuitable material below embankments or formation and spoil at tip	m3	120		
3	PS.DA.5	Import suitable fill material from contractor's off-site source inclusive of all haulage and royalties	m3	120		
4	DA.8.5	Compact imported fill material to 93% Mod. A.A.S.H.T.O.	m3	120		
5	DA.8.6	Trimming of embankments	m2	50		
6	DA.8.9	Formation	m2	120		

TOTAL CARRIED TO SECTION 2 SUMMARY: Culvert Construction**R****PART DD EARTHWORKS FOR STRUCTURES**

Item	Clause	Description	Unit	Quantity	Rate	Amount
1	DD.8.2	Excavate in all unsuitable material for culvert to spoil at an approve tip. Rate to include all haulage)	m3	182.8		
2	DD.8.2	Extra over item for hard material	m3	10		
3	DD.8.2	Extra over item for excavation in excess of planned depth [provisional]	m3	20		
4	DD.8.3	Backfill and compact (90% Mod A.A.S.H.T.O) using imported material from contractor's own source. Rate to include all haulage and royalties	m3	167		
5	DD.8.5	Culvert bedding ([19] mm stone mat)	m3	2		
6	PS.DD.2	Design, installation and removal of a ground lateral support system to secure the excavated surfaces	sum	1		
7	PS.DD.5	Prove existing services by hand excavation (provisional), where depth is: - - Over 0.0 m and not exceeding 0,5 m	m3	120		

TOTAL CARRIED TO SECTION 2 SUMMARY: Culvert Construction**R**

Culvert Upgrade & Stream Protection Works along Ubobo Walk & Ubani Road, Inanda - Ward 107**PART EB GRADED CRUSHED STONE**

Item	Clause	Description	Unit	Quantity	Rate	Amount
1	EB.8(1)	G2 Graded crushed stone and gravel CBR @ 98% MDD>80%, 150 mm thick	m3	16		
2	EB.8(1)	G5 Natural gravel or soil CBR @ 93% MDD>45%, 200 mm thick	m3	20		

TOTAL CARRIED TO SECTION 2 SUMMARY: Culvert Construction**R****PART ED ROAD ASPHALT**

Item	Clause	Description	Unit	Quantity	Rate	Amount
1	PS.ED.2	Saw Cut existing road	m	40		
2	ED	Private Plant Asphalt Sa-V14. Bitumen content & as per mix design entered at time of use	t	4		

TOTAL CARRIED TO SECTION 2 SUMMARY: Culvert Construction**R****PART EF KERBS AND HAUNCHES**

Item	Clause	Description	Unit	Quantity	Rate	Amount
1	EF.8.1	Type A barrier kerb and channel	m	20		

TOTAL CARRIED TO SECTION 2 SUMMARY: Culvert Construction**R****PART EH STEEL GUARDRAILS & CONC. MEDIAN BARRIERS**

Item	Clause	Description	Unit	Quantity	Rate	Amount
1	EH 8.1	Straight steel guard rails	m	40		
2	EH.8.1	End wings	no.	8		
3	EH.8.1	Precast concrete posts	no.	25		
4	EH.8.2	In-situ concrete foundation for precast concrete posts	m3	5		

TOTAL CARRIED TO SECTION 2 SUMMARY: Culvert Construction**R****PART F PROTECTION WORKS**

Item	Clause	Description	Unit	Quantity	Rate	Amount
1	F.8.1	Imported topsoil: thickness 100 mm	m2	50		
2	F.8.3	Grass planting	m2	50		
3	F.8.4	Stone pitching	m2	40		
4	F.8.7	230 mm brickwork	m2	27		

TOTAL CARRIED TO SECTION 2 SUMMARY: Culvert Construction**R****PART PG NON PRESSURE PIPELINES and PC CULVERTS**

Item	Clause	Description	Unit	Quantity	Rate	Amount
1	PG.8.7	Supply and install Standard precast concrete portal culvert Class C - 1200 x 1200 mm	m	32		

Culvert Upgrade & Stream Protection Works along Ubobo Walk & Ubani Road, Inanda - Ward 107

Part Continued PART PG NON PRESSURE PIPELINES and PC CULVERTS

Item	Clause	Description	Unit	Quantity	Rate	Amount
2	PG.8.9	Form recess for portal legs	m	32		

TOTAL CARRIED TO SECTION 2 SUMMARY: Culvert Construction R

Culvert Upgrade & Stream Protection Works along Ubobo Walk & Ubani Road, Inanda - Ward 107**SECTION 3 Gabion Protection Works****PART B SITE CLEARANCE**

Item	Clause	Description	Unit	Quantity	Rate	Amount
1	B.8.2	General clearance of the site area and remove all debris such as gabbage and all debris	m2	600		
2	B.8.2	General clearance and grubbing within a servitude	m2	50		
3	B.8.2	General clearance and grubbing in private property	m2	300		
4	B.8.5	Removal of 1.5 m high wire mesh fence and store on site for re-use	m	50		

TOTAL CARRIED TO SECTION 3 SUMMARY: Gabion Protection Works**R****PART DA EARTHWORKS : BULK**

Item	Clause	Description	Unit	Quantity	Rate	Amount
1	DA.8.3	Excavate unsuitable material below embankments or formation and spoil at tip	m3	240		
2	DA.8.3	Extra over above for excavation in hard material to fill	m3	10		
3	PS.DA.5	Import suitable fill material from contractor's off-site source inclusive of haulage and royalties	m3	240		
4	DA.8.5	Compact imported fill material to 93% Mod. A.A.S.H.T.O. Rate to include all haulage and royalties	m3	240		
5	DA.8.6	Trimming of embankments	m2	200		
6	DA.8.9	Formation	m2	480		

TOTAL CARRIED TO SECTION 3 SUMMARY: Gabion Protection Works**R****PART DC EARTHWORKS FOR CONCRETE LINED CANALS**

Item	Clause	Description	Unit	Quantity	Rate	Amount
1	DC.8.2	Excavate in all unsuitable material for gabions to spoil at an approved tip. Rate to include stockpile handling	m3	784		
2	DC.8.2	Extra over item 1 for excavating in hard material	m3	30		
3	DC.8.3	Backfilling and compaction (90% Mod A.A.S.H.T.O) using material from contractor's own source. Rate to include all haulage and royalties	m3	680		
4	DC.8.4	Overhaul	m3km	20		

TOTAL CARRIED TO SECTION 3 SUMMARY: Gabion Protection Works**R**

Culvert Upgrade & Stream Protection Works along Ubobo Walk & Ubani Road, Inanda - Ward 107**PART EL DUMPROCK SUBGRADE IMPROVEMENT**

Item	Clause	Description	Unit	Quantity	Rate	Amount
1	EL.8	Dumprock subgrade improvement, 300 mm thick	m3	240		

TOTAL CARRIED TO SECTION 3 SUMMARY: Gabion Protection Works**R****PART F PROTECTION WORKS**

Item	Clause	Description	Unit	Quantity	Rate	Amount
1	F.8.1	Imported topsoil: thickness 100 mm	m2	240		
2	F.8.3	Grass planting	m2	240		
3	F.8.6	Supply and placement of Galvanised PVC Coated Gabion boxes : 1000 mm depth	m3	700		
4	F.8.6	Supply and placement of Galvanised PVC Coated Gabion mattresses, 300 mm thick	m3	192		
5	F.8.6	Supply and placement of Galvanised PVC Coated Gabion boxes : 500 mm depth	m3	100		
6	PS.F.3	Supply and place general grade geofabric	m2	1550		

TOTAL CARRIED TO SECTION 3 SUMMARY: Gabion Protection Works**R**

SECTION 4 Reinstatement

PART S REINSTATEMENT

Item	Clause	Description	Unit	Quantity	Rate	Amount
1	S.8.1	Reinstatement of ground surface	m2	240		
2	S.8.2	Road Category C-Permanent road reinstatement 80 mm Mix D, 150mm Crusher run, Trench backfill with CBr 4 or more	m2	60		
3	S.8.2	Reinstatement of in-situ concrete sidewalk/median	m2	60		
4	S.8.4	Reinstatement of wire or plastic coated mesh fence, 1,5 m high	m	50		
TOTAL CARRIED TO SECTION 4 SUMMARY: Reinstatement					R	

BILL OF QUANTITIES SECTION SUMMARY

SECTION 1 Preliminaries and General

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TOTAL CARRIED TO FINAL SUMMARY			

BILL OF QUANTITIES SECTION SUMMARY**SECTION 2 Culvert Construction**

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BILL OF QUANTITIES SECTION SUMMARY**SECTION 3 Gabion Protection Works**

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TOTAL CARRIED TO FINAL SUMMARY			

BILL OF QUANTITIES SECTION SUMMARY

SECTION 4 Reinstatement

PART S	REINSTATEMENT	
TOTAL CARRIED TO FINAL SUMMARY		

SUMMARY OF BILL OF QUANTITIES

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DA	EARTHWORKS : BULK	R		
DD	EARTHWORKS FOR STRUCTURES	R		
EB	GRADED CRUSHED STONE	R		
ED	ROAD ASPHALT	R		
EF	KERBS AND HAUNCHES	R		
EH	STEEL GUARDRAILS & CONC. MEDIAN BARRIERS	R		
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PG	NON PRESSURE PIPELINES and PC CULVERTS	R		
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EL	DUMPROCK SUBGRADE IMPROVEMENT	R		
F	PROTECTION WORKS	R		
4	Reinstatement		R	
S	REINSTATEMENT	R		
SUB TOTAL			R	
ADD VAT (15%) - (only if a registered VAT Vendor)			R	
TOTAL CARRIED TO FORM OF TENDER			R	