

**INDEX TO BILL OF QUANTITIES****SECTION 1 PRELIMINARY AND GENERAL**

- PART AA** PRELIMINARIES  
**PART AB** GENERAL SPECIFICATIONS  
**PART AH** OCCUPATIONAL HEALTH and SAFETY

**SECTION 2 CULVERT INLET CONSTRUCTION AND PROTECTION WORKS**

- PART B** SITE CLEARANCE  
**PART C** CONCRETE WORK  
**PART DA** EARTHWORKS : BULK  
**PART DB** EARTHWORKS FOR PIPE TRENCHES  
**PART DC** EARTHWORKS FOR CONCRETE LINED CANALS  
**PART DD** EARTHWORKS FOR STRUCTURES  
**PART EF** KERBS AND HAUNCHES  
**PART F** PROTECTION WORKS  
**PART PG** NON PRESSURE PIPELINES and PC CULVERTS  
**PART PH** MANHOLES and APPURTENANT DRAINAGE WORKS

**SECTION 3 SITE RE-INSTATEMENT**

- PART S** REINSTATEMENT  
**PART TB** ROAD MARKINGS

**BILL OF QUANTITIES**

**SECTION 1 PRELIMINARY AND GENERAL**

**PART AA PRELIMINARIES**

Item	Clause	Description	Unit	Quantity	Rate	Amount
1	GCC 2015	GENERAL CONDITIONS OF CONTRACT (GCC 2015) READ IN CONJUNCTION WITH THE CONTRACT DATA  Fixed Charge obligations	sum	1		
2	GCC 2015	Time Related Items	sum	1		
3	C.1.2.3.1	COMMUNITY LIAISON OFFICER  Allow for a CLO to be appointed.	PC Sum	45360	1.00	45,360
4	C.1.2.3.1	% mark-up for Item 3 above. (Tenderer to state % mark-up)	%	45360		
5	C.1.2.3.2, C.1.2.3.4	LOCAL LABOUR  Allow for the weekly submission of proof of employment of local labour	sum	1		
6	SANS 1921-1	SANS 1921-1 : GENERAL ENGINEERING AND CONSTRUCTION WORKS READ IN CONJUNCTION WITH THE ASSOCIATED SPECIFICATION DATA IN THE SCOPE OF WORKS  Fixed Charge Items	sum	1		

TOTAL CARRIED TO SECTION 1 SUMMARY: PRELIMINARY AND GENERAL

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**PART AB GENERAL SPECIFICATIONS**

Item	Clause	Description	Unit	Quantity	Rate	Amount
1	AB.2	FIXED CHARGES  Offices for Engineer and Staff	sum	1		
2	AB.4	Contractor's Camp Site / Store Yard	sum	1		
3	PS.AB.5	Notice Board	sum	1		
4	AB.7	Initial supply of all signs, barricades and delineators	sum	1		
5	PS.AB.8	Initial supply of plant, materials, labour and services required by the contractor.	sum	1		
6	PS.15	Setting Out	sum	1		
7	PS.AB.2	TIME RELATED ITEMS  Offices for Engineer and Staff	sum	1		
8	PS.AB.7	Road Deviations	sum	1		

Along 121908 STR, Amaoti, Inanda: Culvert inlet Works and Bank Erosion Protection Works-Ward 57

Part Continued **PART AB GENERAL SPECIFICATIONS**

Item	Clause	Description	Unit	Quantity	Rate	Amount
9	PS.16	Initial construction and maintenance for the duration of the contract of stream diversion measures.	sum	1		
10	AB.7	Maintenance of Pedestrian and Traffic Facilities	sum	1		
11	AB.7	Maintenance of all signs, barricades and delineators	sum	1		
12	PS.AB.8	Allow for Progress Photographs (Provisional Sum)	PC sum	500	1.00	500
13	PS.13	Survey for, and Preparation of, 'As-Built' Drawings	sum	1		
14	PS.AB.6	deduction for re-test requested when density and cube tests are not as per specification as determined by accepted testing (-R1000.00/set).	set	1		
15	C.1.2.3.7	expected risk for site de-establishment	sum	1		
16	C.1.2.3.7	expected risk for site re-establishment	sum	1		
17	PS.11	Site Security	sum	1		
18	PS.3	water services to be temporarily relocated by an approved EtheKwini subcontractor and as directed by the Water services Engineers and site engineer for this contract	PC Sum	500000	1.00	500,000
19	PS.3	% mark-up for item 18 above. Tenderer to state % mark-up	%	500000		
20	PS.4	sewer services to be temporarily relocated by an approved EtheKwini subcontractor and as directed by the Sewer services Engineers and site engineer for this contract	PC Sum	280000	1.00	280,000
21	PS.4	% mark-up for item 18 above. Tenderer to state % mark-up	%	280000		

TOTAL CARRIED TO SECTION 1 SUMMARY: PRELIMINARY AND GENERAL

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**PART AH OCCUPATIONAL HEALTH and SAFETY**

Item	Clause	Description	Unit	Quantity	Rate	Amount
1	AH.14.1, PS.10	Contractor's initial obligations in respect of the Occupational Health and Safety Act and Construction Regulations	sum	1		
2	AH.14.2	Contractor's time related obligations in respect of the Occupational Health and Safety Act and Construction Regulations	sum	1		

**Along 121908 STR, Amaoti, Inanda: Culvert inlet Works and Bank Erosion Protection Works-Ward 57**

Part Continued PART AH OCCUPATIONAL HEALTH and SAFETY

Item	Clause	Description	Unit	Quantity	Rate	Amount
3	AH.14.3	Submission of the Health and Safety File.	sum	1		

TOTAL CARRIED TO SECTION 1 SUMMARY: PRELIMINARY AND GENERAL

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**Along 121908 STR, Amaoti, Inanda: Culvert inlet Works and Bank Erosion Protection Works-Ward 57**

**SECTION 2 CULVERT INLET CONSTRUCTION AND PROTECTION WORKS**

**PART B SITE CLEARANCE**

Item	Clause	Description	Unit	Quantity	Rate	Amount
1	PS.B.8.8	Cutting and Removal of old steel barrel in 5m stages as the culvert will be constructed in 3 stages each 5m width.	m	5		
2	B.8.10	Removal of unreinforced concrete around the culvert to be removed	m <sup>3</sup>	3		
3	B.8.9	Removal of brickwork that was used as wingwalls for the culvert that is to be removed	m <sup>2</sup>	10		
4	B.8.2	General clearance and grubbing in temporary stockpile area	m <sup>2</sup>	25		
5	B.8.6	Removal of guardrail and posts and spoil at tip Rate to include all haulage	m	10		
6	B.8.19	Removal of disused pipes, 300 - 500 mm diameter and spoil at tip. Rate to include all haulage	m	5		

**TOTAL CARRIED TO SECTION 2 SUMMARY: CULVERT INLET CONSTRUCTION AND PROTECTION WO R**

**PART C CONCRETE WORK**

Item	Clause	Description	Unit	Quantity	Rate	Amount
1	C.8.1, PS.C.1, PS.C.5.6.1	supply and pour in place concrete for the preparation of in-situ base slab to be 35/19.	m <sup>3</sup>	165		
2	C.8.1, PS.C.1, PS.C.5.6.1	supply and pour in place concrete for the preparation of in-situ wingwalls to be 35/19.	m <sup>3</sup>	16		
3	C.8.2, PS.C.3.1.5, PS.C.5.1.3	supply and fix in place galvanised high tensile steel reinforcement (bars).	t	110		
4	C.8.3, PS.C.5.2.1	supply and fix in place Class 1 shuttering to base slabs	m <sup>2</sup>	50		
5	C.8.3, PS.C.5.2.1	supply and fix in place Class 2 shuttering to wingwalls	m <sup>2</sup>	64		
6	C.8.2, PS.C.3.1.5, PS.C.5.1.3	supply and fix in place galvanised mild steel reinforcement (bars).	t	1.2		
7	C.8.2, PS.C.1, PS.C.5.6.1	supply and pour in place concrete for the preparation of in-situ debris wall to be 35/19.	m <sup>3</sup>	0.76		
8	PS.C.8.19, PS.5.20	supply and cast in 650mm diameter sleeves in wingwalls	m	20		

## Along 121908 STR, Amaoti, Inanda: Culvert inlet Works and Bank Erosion Protection Works-Ward 57

Part Continued **PART C CONCRETE WORK**

Item	Clause	Description	Unit	Quantity	Rate	Amount
9	C.5.14, PS.C.5.20	softboard in expansion joints fixed in position with suitable adhesive	m2	210		

TOTAL CARRIED TO SECTION 2 SUMMARY: CULVERT INLET CONSTRUCTION AND PROTECTION WO R

**PART DA EARTHWORKS : BULK**

Item	Clause	Description	Unit	Quantity	Rate	Amount
1	DA.8.3	Excavate soft material to stockpile	m3	240		
2	DA.8.3	Excavate unsuitable material below embankments or formation and spoil at tip	m3	200		
3	DA.8.3	Import suitable fill material from contractor's off-site source inclusive of haulage and royalties	m3	480		
4	DA.8.5	Compact soft material from site to 95% Mod. A.A.S.H.T.O.	m3	240		
5	DA.8.5	Compact imported fill material to 95% Mod. A.A.S.H.T.O.	m3	480		
6	PS.F.8.9	Supply and place general grade geofabric for gabion wall.	m2	200		

TOTAL CARRIED TO SECTION 2 SUMMARY: CULVERT INLET CONSTRUCTION AND PROTECTION WO R

**PART DB EARTHWORKS FOR PIPE TRENCHES**

Item	Clause	Description	Unit	Quantity	Rate	Amount
1	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	m3	350		
2	DB.8.9	Provision of clean coarse sand for pipe bedding from commercial or off-site source	m3	25		
3	DB.8.10	Placing and compacting of Class B bedding for 450 mm diameter pipe	m	25		

TOTAL CARRIED TO SECTION 2 SUMMARY: CULVERT INLET CONSTRUCTION AND PROTECTION WO R

**PART DC EARTHWORKS FOR CONCRETE LINED CANALS**

Item	Clause	Description	Unit	Quantity	Rate	Amount
1	DC.8.2	Excavate in soft material for PVC Coated Gabions to stockpile	m3	325		
2	DC.8.2	Extra over item 1 for excavating in hard material	m3	150		
3	DC.8.2	Extra over item [1] for excavating in rock	m3	80		

## Along 121908 STR, Amaoti, Inanda: Culvert inlet Works and Bank Erosion Protection Works-Ward 57

Part Continued **PART DC EARTHWORKS FOR CONCRETE LINED CANALS**

Item	Clause	Description	Unit	Quantity	Rate	Amount
4	DC.8.2	Extra over item [1] for excavating unsuitable material below planned depth and spoil	m3	120		
5	DC.8.3	Backfilling and compaction using material from stockpile	m3	325		
6	DC.8.3	Backfilling and compaction using material from contractor's own source. Rate to include all haulage and royalties	m3	150		
7	DC.8.5	Graded crushed stone mat	m3	200		

TOTAL CARRIED TO SECTION 2 SUMMARY: CULVERT INLET CONSTRUCTION AND PROTECTION WO R

**PART DD EARTHWORKS FOR STRUCTURES**

Item	Clause	Description	Unit	Quantity	Rate	Amount
1	DD.8.2	Excavate in all material for culvert wingwalls to stockpile	m3	360		
2	DD.8.3	Backfill and compact using material from stockpile	m3	840		
3	DD.8.3	Backfill and compact using imported material from contractor's own source. Rate to include all haulage and royalties	m3	420		
4	DD.8.5	Culvert inlet slab bedding ([19] mm stone mat)	m3	198		

TOTAL CARRIED TO SECTION 2 SUMMARY: CULVERT INLET CONSTRUCTION AND PROTECTION WO R

**PART EF KERBS AND HAUNCHES**

Item	Clause	Description	Unit	Quantity	Rate	Amount
1	EF.8.1	Type B barrier kerb and channel	m	28		

TOTAL CARRIED TO SECTION 2 SUMMARY: CULVERT INLET CONSTRUCTION AND PROTECTION WO R

**PART F PROTECTION WORKS**

Item	Clause	Description	Unit	Quantity	Rate	Amount
1	F.8.6	supply and erect Gabion boxes : 1000 mm depth for embankment protection with key from the end of each wingwall on the outlet side of the culvert	m3	320		
2	F.8.3	Grass sodding at the gabion wall backfill up to the existing grass	m2	200		
3	F.8.6	Gabion mattresses, 300 mm thick	m3	96		

TOTAL CARRIED TO SECTION 2 SUMMARY: CULVERT INLET CONSTRUCTION AND PROTECTION WO R

## Along 121908 STR, Amaoti, Inanda: Culvert inlet Works and Bank Erosion Protection Works-Ward 57

PART PG NON PRESSURE PIPELINES and PC CULVERTS

Item	Clause	Description	Unit	Quantity	Rate	Amount
1	PG.8.2	supply and lay a 450 mm diameter concrete Class 100D	m	25		

TOTAL CARRIED TO SECTION 2 SUMMARY: CULVERT INLET CONSTRUCTION AND PROTECTION WO R

PART PH MANHOLES and APPURTENANT DRAINAGE WORKS

Item	Clause	Description	Unit	Quantity	Rate	Amount
1	PH.8.2	Manhole type A with inlet type cover S3. Depth :- - Over 0,0 m and not exceeding 1,5 m	no.	1		
2	PH.8.2	Manhole type A with inlet type cover S2. Depth :- - Over 0,0 m and not exceeding 1,5 m	no.	1		
3	PH.8.5.4	Benching	m3	2.5		

TOTAL CARRIED TO SECTION 2 SUMMARY: CULVERT INLET CONSTRUCTION AND PROTECTION WO R

**SECTION 3 SITE RE-INSTATEMENT****PART S REINSTATEMENT**

Item	Clause	Description	Unit	Quantity	Rate	Amount
1	S.8.1	Reinstatement of ground surface	m2	250		
2	S.8.1	Reinstatement of ground surface on temporary stockpile site	m2	25		
3	S.8.2	Permanent road reinstatement 150 mm Crusher Run Layer, 160 mm Mix D Asphalt in 2 layers of 80 mm each - Asphalt Private Plant.	m2	25		

TOTAL CARRIED TO SECTION 3 SUMMARY: SITE RE-INSTATEMENT

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**PART TB ROAD MARKINGS**

Item	Clause	Description	Unit	Quantity	Rate	Amount
1	TB.8.1.1 AA.TB.1	Painted road lines 200mm wide (white), including setting out and premarking	m	28		

TOTAL CARRIED TO SECTION 3 SUMMARY: SITE RE-INSTATEMENT

R

**BILL OF QUANTITIES SECTION SUMMARY**

**SECTION 1    PRELIMINARY AND GENERAL**

PART AA	PRELIMINARIES	
PART AB	GENERAL SPECIFICATIONS	
PART AH	OCCUPATIONAL HEALTH and SAFETY	
TOTAL CARRIED TO FINAL SUMMARY		

**BILL OF QUANTITIES SECTION SUMMARY****SECTION 2 CULVERT INLET CONSTRUCTION AND PROTECTION WORKS**

PART B	SITE CLEARANCE	
PART C	CONCRETE WORK	
PART DA	EARTHWORKS : BULK	
PART DB	EARTHWORKS FOR PIPE TRENCHES	
PART DC	EARTHWORKS FOR CONCRETE LINED CANALS	
PART DD	EARTHWORKS FOR STRUCTURES	
PART EF	KERBS AND HAUNCHES	
PART F	PROTECTION WORKS	
PART PG	NON PRESSURE PIPELINES and PC CULVERTS	
PART PH	MANHOLES and APPURTENANT DRAINAGE WORKS	
<b>TOTAL CARRIED TO FINAL SUMMARY</b>		

**BILL OF QUANTITIES SECTION SUMMARY**

**SECTION 3 SITE RE-INSTATEMENT**

PART S	REINSTATEMENT	
PART TB	ROAD MARKINGS	
TOTAL CARRIED TO FINAL SUMMARY		

**SUMMARY OF BILL OF QUANTITIES**

Section

<b>1</b>	<b>PRELIMINARY AND GENERAL</b>		<b>R</b>	_____
AA	PRELIMINARIES	R		_____
AB	GENERAL SPECIFICATIONS	R		_____
AH	OCCUPATIONAL HEALTH and SAFETY	R		_____
<b>2</b>	<b>CULVERT INLET CONSTRUCTION AND PROTECTION WORKS</b>		<b>R</b>	_____
B	SITE CLEARANCE	R		_____
C	CONCRETE WORK	R		_____
DA	EARTHWORKS : BULK	R		_____
DB	EARTHWORKS FOR PIPE TRENCHES	R		_____
DC	EARTHWORKS FOR CONCRETE LINED CANALS	R		_____
DD	EARTHWORKS FOR STRUCTURES	R		_____
EF	KERBS AND HAUNCHES	R		_____
F	PROTECTION WORKS	R		_____
PG	NON PRESSURE PIPELINES and PC CULVERTS	R		_____
PH	MANHOLES and APPURTENANT DRAINAGE WORKS	R		_____
<b>3</b>	<b>SITE RE-INSTALEMENT</b>		<b>R</b>	_____
S	REINSTATEMENT	R		_____
TB	ROAD MARKINGS	R		_____
<b>SUB TOTAL</b>				<b>R</b> _____
<b>ADD VAT (15%) - (only if a registered VAT Vendor)</b>				<b>R</b> _____
<b>TOTAL CARRIED TO FORM OF TENDER</b>				<b>R</b> _____