

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 FOOTPATHS

- PART B SITE CLEARANCE
- PART C CONCRETE WORK
- PART DA EARTHWORKS : BULK
- PART EF KERBS AND HAUNCHES
- PART EG SIDEWALKS, FOOTPATHS and MEDIAN AREAS
- PART F PROTECTION WORKS

SECTION 3 STORMWATER DRAINAGE

- PART B SITE CLEARANCE
- PART C CONCRETE WORK
- PART DB EARTHWORKS FOR PIPE TRENCHES
- PART F PROTECTION WORKS
- PART PG NON PRESSURE PIPELINES and PC CULVERTS
- PART PH MANHOLES and APPURTENANT DRAINAGE WORKS

SECTION 4 RETAINING STRUCTURES - CIVIL WORKS

- PART B SITE CLEARANCE
- PART C CONCRETE WORK
- PART DA EARTHWORKS : BULK
- PART DB EARTHWORKS FOR PIPE TRENCHES
- PART DD EARTHWORKS FOR STRUCTURES
- PART F PROTECTION WORKS
- PART PG NON PRESSURE PIPELINES and PC CULVERTS

The Provision of Incremental Services to Informal Settlements within the Southern Region: Footpaths and Associated Stormwater Control in Wards 74 & 80, Settlement eMlaza V-V5.

BILL OF QUANTITIES

SECTION 1 PRELIMINARY AND GENERAL

PART AA PRELIMINARIES

Item	Clause	Description	Unit	Quantity	Rate	Amount
		<u>GENERAL CONDITIONS OF CONTRACT (GCC2015) READ IN CONJUNCTION WITH CONTRACT DATA</u>				
1	GCC 2015	Fixed Charge obligations	sum	1		
2	GCC 2015	Time Related obligations	sum	1		
		<u>SANS 1921-1: GENERAL ENGINEERING AND CONSTRUCTION WORKS READ IN CONJUNCTION WITH THE ASSOCIATED SPECIFICATION DATA IN THE SCOPE OF WORKS</u>				
3	SANS 1921-1	Fixed Charge Items	sum	1		
4	SANS 1921-1	Time Related Items	sum	1		
5	C1.2.3.1	COMMUNITY LIAISON OFFICER	PC Sum	180000	1.00	180 000.00
6		Allow for CLO to be appointed	%	180000		

TOTAL CARRIED TO SECTION 1 SUMMARY: PRELIMINARY AND GENERAL

R

PART AB GENERAL SPECIFICATIONS

Item	Clause	Description	Unit	Quantity	Rate	Amount
		FIXED CHARGES				
1	PS.AB.2	Offices for Engineer and Staff	sum	1		
2	PS.14.1	Contractor's Camp Site / Store Yard	sum	1		
3	AB.5	Notice Board as per Annexure C3.6.1	no.	1		
4	PS.15.3	Deductions for re-tests requested when density of a layer is not as per specification as determined by Acceptance Testing (minus R1000 per set)	-1000/Set	—	—	—
5	PS.AB.7	Initial Supply of all signs, barricades and delineators	sum	1		
6	PS.11.1	Survey for, and Preparation of, 'As-Built' Drawings	sum	1		
7	PS.11.3	Additional Site Survey	PC Sum	5000	1.00	5 000.00
8	PS.11.3	Contractor's markup on item 7	%	5000		
		TIME RELATED CHARGES				
9	PS.AB.2	Offices for engineer and staff	sum	1		
10	PS.14.1	Contractors Camp site/Store Yard	sum	1		

The Provision of Incremental Services to Informal Settlements within the Southern Region: Footpaths and Associated Stormwater Control in Wards 74 & 80, Settlement eMlaza V-V5.

Part Continued **PART AB GENERAL SPECIFICATIONS**

Item	Clause	Description	Unit	Quantity	Rate	Amount
11	AB.6/PS.15	Cost of Samples and Contractor's Preliminary and Site Control Testing	sum	1		
12	AB.7	Maintenance of Pedestrian and Traffic Facilities	sum	1		
13	AB.7	Maintenance of all signs, barricades and delineators	sum	1		
14	PS.11.2	Setting out of works	sum	1		
15	PS.12	Site Security	sum	1		
16	C1.2.3.6/PS.A B.8	Expected Risks: De-establishment costs	sum	1		
17	C1.2.3.6/PS.A B.8	Expected Risks: Re-establishment costs	sum	1		
18	PS.19.1	Penalties for not removing unwanted material by end of work day	-R1000/Day	—	—	—

TOTAL CARRIED TO SECTION 1 SUMMARY: PRELIMINARY AND GENERAL

R

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/ PS.10	Contractor's time related obligations in respect of the Occupational Health and Safety Act and Construction Regulations	sum	1		
3	AH.14.3/ PS.10	Submission of the Health and Safety File	sum	1		

TOTAL CARRIED TO SECTION 1 SUMMARY: PRELIMINARY AND GENERAL

R

The Provision of Incremental Services to Informal Settlements within the Southern Region: Footpaths and Associated Stormwater Control in Wards 74 & 80, Settlement eMlaza V-V5.

SECTION 2 FOOTPATHS

PART B SITE CLEARANCE

Item	Clause	Description	Unit	Quantity	Rate	Amount
1	B.8.2	General clearance and grubbing including trees up to a maximum girth of 1.5m	m2	1350		
2	B.8.4	Removal of trees of girth exceeding 1,5 m	no.	35		
3	B.8.9	Removal of existing brickwork	m3	30		
4	PS.B.8.13	Removal of reinforced/unreinforced concrete	m3	30		
5	PS.B.8.24	Removal of informal structures	m2	140		

TOTAL CARRIED TO SECTION 2 SUMMARY: FOOTPATHS

R

PART C CONCRETE WORK

Item	Clause	Description	Unit	Quantity	Rate	Amount
1	C.8.1	Grade 20MPa/19mm concrete for Footpaths (Class 3 - Wood Float Surface Finish)	m3	130		
2	C.8.1	Grade 20MPa/19mm concrete for Handrail Post Bases and Bollard Bases	m3	15		
3	C.8.2	Welded fabric reinforcement - Ref Mesh 193	t	2.5		
4	PS.C.8.4	Movement Joints for footpaths as per Detail Drawing No. 49288 (Sheet 5 of 5)	m	400		
5	PS.C.8.5	Saw cut joints for footpaths as per Detail Drawing No. 49288 (Sheet 5 of 5)	m	270		
6	C.8.3	Class 1 Formwork for concrete works	m2	200		

TOTAL CARRIED TO SECTION 2 SUMMARY: FOOTPATHS

R

PART DA EARTHWORKS : BULK

Item	Clause	Description	Unit	Quantity	Rate	Amount
1	DA.8.2	Remove topsoil to stockpile and if surplus to requirements, spoil in an approved dump site. Rate to include for stockpile handling	m3	135		
2	DA.8.3	Excavation of material, deposit and spread material as fill or stockpile or,if surplus to requirements, spoil in an approved dump site. Rate to include for stockpile handling.	m3	310		
3	DA.8.3	Extra over on item 2 for excavation in intermediate material	m3	80		
4	DA.8.3	Extra over on item 2 for excavation in hard material	m3	50		

The Provision of Incremental Services to Informal Settlements within the Southern Region: Footpaths and Associated Stormwater Control in Wards 74 & 80, Settlement eMlaza V-V5.

Part Continued **PART DA EARTHWORKS : BULK**

Item	Clause	Description	Unit	Quantity	Rate	Amount
5	DA.8.3	Excavate soft material to spoil	m3	105		
6	DA.8.4	Import G7 Material from commercial sources	m3	180		
7	DA.8.5	Compact imported G7 material to 93% Mod. AASHTO.	m3	180		
8	PS.DA.8.11	Rip and re-compact insitu material to 95% Mod AASHTO	m3	250		
9	DA.8.6	Trimming of embankments	m2	400		
10	DA.8.9	Formation	m2	800		
11	DA.8.9	Extra over item 10 above for areas of cut or where the fill layer thickness is less than 150mm	m2	350		

TOTAL CARRIED TO SECTION 2 SUMMARY: FOOTPATHS

R

PART EF KERBS AND HAUNCHES

Item	Clause	Description	Unit	Quantity	Rate	Amount
1	EF.8.1	Fig.12 Kerb	m	790		
2	EF.8.1	Extra over item 1 for curves of radius less than 25 m	m	115		

TOTAL CARRIED TO SECTION 2 SUMMARY: FOOTPATHS

R

PART EG SIDEWALKS, FOOTPATHS and MEDIAN AREAS

Item	Clause	Description	Unit	Quantity	Rate	Amount
1	PS.EG.8.7	Precast Concrete Steps (Base steps or similar approved) including Grade 20MPa/13mm base as per Standard Details Drawing No. 49288 (Sheet 5 of 5)	no.	525		
2	PS.EG.8.8	Handrails as per Standard Detail Drawing No. 49288 (Sheet 5 of 5)	m	580		
3	PS.EG.8.9	Precast Handrail Posts as per Standard Detail Drawing No. 49288 (Sheet 5 of 5)	no.	145		
4	PS.EG.8.10	Precast Concrete Bollards as per Standard Detail Drawing No. 49288 (Sheet 5 of 5)	no.	35		

TOTAL CARRIED TO SECTION 2 SUMMARY: FOOTPATHS

R

PART F PROTECTION WORKS

Item	Clause	Description	Unit	Quantity	Rate	Amount
1	F.8.1	Topsoiling on banks, verges and service lines from stockpile - thickness 100mm	m2	950		

The Provision of Incremental Services to Informal Settlements within the Southern Region: Footpaths and Associated Stormwater Control in Wards 74 & 80, Settlement eMlaza V-V5.

Part Continued **PART** F PROTECTION WORKS

Item	Clause	Description	Unit	Quantity	Rate	Amount
2	PS.F.8.3	Grass planting on banks, verges and service lines. Rate to include for supply and lay of Cynodon 'Dactylon' grass, fertilizer and maintenance etc.	m2	950		

TOTAL CARRIED TO SECTION 2 SUMMARY: FOOTPATHS

R

The Provision of Incremental Services to Informal Settlements within the Southern Region: Footpaths and Associated Stormwater Control in Wards 74 & 80, Settlement eMlaza V-V5.

SECTION 3 STORMWATER DRAINAGE

PART B SITE CLEARANCE

Item	Clause	Description	Unit	Quantity	Rate	Amount
1	B.8.3	General clearance and grubbing for pipelines and drains.	m2	600		

TOTAL CARRIED TO SECTION 3 SUMMARY: STORMWATER DRAINAGE

R

PART C CONCRETE WORK

Item	Clause	Description	Unit	Quantity	Rate	Amount
1	C.8.1	Grade 25MPa/19mm concrete for 600mm wide x 100mm thick 'trapezoidal' drain	m3	15		
2	C.8.2	Welded fabric reinforcement Ref : Mesh 193	t	0.5		
3	C.8.3	Class 1 Formwork for concrete drain	m2	30		

TOTAL CARRIED TO SECTION 3 SUMMARY: STORMWATER DRAINAGE

R

PART DB EARTHWORKS FOR PIPE TRENCHES

Item	Clause	Description	Unit	Quantity	Rate	Amount
1	DB.8.4	Remove Topsoil to stockpile and if surplus to requirement, spoil in approved dump site. Depth 100mm. Rate to include for stockpile handling.	m2	600		
2	DB.8.5	Excavate and backfill in soft material for 450 mm diameter pipe where depth is :- - Over 0,0 m and not exceeding 1,5 m	m3	55		
3	DB.8.5	Excavate and backfill in soft material for 450mm diameter pipe where depth l :- - Over 1,5 m and not exceeding 2,0 m	m3	135		
4	DB.8.5	Excavate and backfill in soft material for 450 mm diameter pipe where depth is :- - Over 2.0 m and not exceeding 2,5 m	m3	30		
5	DB.8.6	Extra over items 2-4 for hard material	m3	25		
6	DB.8.6	Extra over items 2-4 for rock	m3	10		
7	DB.8.19	Provision of selected fill for pipe bedding from scheduled excavation	m3	80		
8	DB.8.9	Provision of selected fill for pipe bedding from a commercial or off- site source	m3	40		
9	DB.8.9	Provision of clean coarse sand for pipe bedding from commercial or off-site source	m3	65		
10	DB.8.10	Placing and compacting of Class B bedding for 450mm diameter pipe	m	120		

The Provision of Incremental Services to Informal Settlements within the Southern Region: Footpaths and Associated Stormwater Control in Wards 74 & 80, Settlement eMlaza V-V5.

Part Continued **PART DB EARTHWORKS FOR PIPE TRENCHES**

Item	Clause	Description	Unit	Quantity	Rate	Amount
11	DB.8.13	Provision of 19 mm stone chippings for trench bottom from commercial or offsite source	m3	10		
12	DB.8.15	Disposal of unsuitable or surplus material including material displaced by pipe from trench excavation	m3	20		
13	DB.8.19	Prove existing services by hand excavation (provisional), where depth is: - - Over 0,0 m and not exceeding 1,5 m	m3	15		

TOTAL CARRIED TO SECTION 3 SUMMARY: STORMWATER DRAINAGE

R

PART F PROTECTION WORKS

Item	Clause	Description	Unit	Quantity	Rate	Amount
1	F.8.1	Topsoiling from stockpile as directed by the Engineer - thickness 100mm	m2	200		
2	PS.F.8.3	Grass planting as directed by the Engineer. Rate to include for supply and lay of Cynodon 'Dactylon' grass, fertilizers, pesticides etc	m2	200		
3	F.8.6	Gabion Mattresses: 300mm thick	m3	15		

TOTAL CARRIED TO SECTION 3 SUMMARY: STORMWATER DRAINAGE

R

PART PG NON PRESSURE PIPELINES and PC CULVERTS

Item	Clause	Description	Unit	Quantity	Rate	Amount
1	PG.8.2	450mm diameter Weholite stormwater pipe with rubber seal joint or similar approved. (Pressure rating = 1.5bar, Ring Stiffness = 4KN/m2)	m	120		

TOTAL CARRIED TO SECTION 3 SUMMARY: STORMWATER DRAINAGE

R

PART PH MANHOLES and APPURTENANT DRAINAGE WORKS

Item	Clause	Description	Unit	Quantity	Rate	Amount
1	PS.PH.8.3	Single Stormwater inlet manhole type S1 as per standard drawing : 38572 Depth :- - Over 0,0 m and not exceeding 1,5 m	no.	1		
2	PS.PH.8.2	Standard Single Stormwater manhole. As per drawing : 38572 Depth :- - Over 0.0m and not exceeding 1.5m	no.	3		
3	PS.PH.8.2	Standard Single Stormwater manhole. As per drawing : 38572 Depth :- - Over 1.5m and not exceeding 2.0m	no.	4		
4	PH.8.2	Extra over item 1-3 for type B benching	no.	5		
5	PH.8.2	Extra over item 1-3 for type A channel with with 450 x 450mm junction including any change in direction	no.	2		

The Provision of Incremental Services to Informal Settlements within the Southern Region: Footpaths and Associated Stormwater Control in Wards 74 & 80, Settlement eMlaza V-V5.

Part Continued **PART** PH MANHOLES and APPURTENANT DRAINAGE WORKS

Item	Clause	Description	Unit	Quantity	Rate	Amount
6	PS.PH.8.10	Construct Standard outlet Headwall as per Drawing 38576	no.	1		

TOTAL CARRIED TO SECTION 3 SUMMARY: STORMWATER DRAINAGE

R

The Provision of Incremental Services to Informal Settlements within the Southern Region: Footpaths and Associated Stormwater Control in Wards 74 & 80, Settlement eMlaza V-V5.

SECTION 4 RETAINING STRUCTURES - CIVIL WORKS

PART B SITE CLEARANCE

Item	Clause	Description	Unit	Quantity	Rate	Amount
1	B.8.2	General site clearance and grubbing	m2	680		

TOTAL CARRIED TO SECTION 4 SUMMARY: RETAINING STRUCTURES - CIVIL WORKS

R

PART C CONCRETE WORK

Item	Clause	Description	Unit	Quantity	Rate	Amount
1	C.8.1	Grade 25MPa/28mm concrete for retaining wall bases	m3	55		

TOTAL CARRIED TO SECTION 4 SUMMARY: RETAINING STRUCTURES - CIVIL WORKS

R

PART DA EARTHWORKS : BULK

Item	Clause	Description	Unit	Quantity	Rate	Amount
1	DA.8.4	Import G7 material from commercial sources	m3	150		

TOTAL CARRIED TO SECTION 4 SUMMARY: RETAINING STRUCTURES - CIVIL WORKS

R

PART DB EARTHWORKS FOR PIPE TRENCHES

Item	Clause	Description	Unit	Quantity	Rate	Amount
1	DB.8.9	Provision of 19 mm single size stone chippings for subsoil drain from commercial or off-site source	m3	80		
2	DB.8.9	Provision of clean coarse sand for pipe trench bedding and the drainage blanket behind the wall from commercial or offsite source	m3	180		

TOTAL CARRIED TO SECTION 4 SUMMARY: RETAINING STRUCTURES - CIVIL WORKS

R

PART DD EARTHWORKS FOR STRUCTURES

Item	Clause	Description	Unit	Quantity	Rate	Amount
1	DD.8.2	Excavate in soft material, load, haul, deposit, stockpile or if surplus to requirements or unsuitable spoil in an approved dump site. Rate to include for stockpile handling	m3	210		
2	DD.8.2	Extra over item 1 for hard material	m3	40		
3	DD.8.2	Extra over item 1 for rock	m3	20		
4	DD.8.3	Backfill G7/G9 material and compact to 93% MOD AASHTO	m3	360		

TOTAL CARRIED TO SECTION 4 SUMMARY: RETAINING STRUCTURES - CIVIL WORKS

R

The Provision of Incremental Services to Informal Settlements within the Southern Region: Footpaths and Associated Stormwater Control in Wards 74 & 80, Settlement eMlaza V-V5.

PART F PROTECTION WORKS

Item	Clause	Description	Unit	Quantity	Rate	Amount
		<u>Supply and construct the following blocks:</u>				
1	PS.F.8.9	Supply and construct dry stack retaining wall using Geolok - G400 or similar approved	m2	750		
2	PS.F.8.10	Soilcrete or stabilised fill material	m3	85		
3	PS.F.8.11	Drainage for retaining walls - 50mm diameter uPVC pipe	no.	80		

TOTAL CARRIED TO SECTION 4 SUMMARY: RETAINING STRUCTURES - CIVIL WORKS

R

PART PG NON PRESSURE PIPELINES and PC CULVERTS

Item	Clause	Description	Unit	Quantity	Rate	Amount
1	PG.8.12.1	Geotextile blanket for retaining walls (2.3mm thick, Penetration load = 2.5KN, Porosity = 93%)	m2	1100		
2	PG.8.12.1	Geotextile blanket as surround to Subsoil Drains (1.6mm thick, Penetration load = 1.7KN, Porosity = 93%)	m2	480		
3	PG.8.12.2	110 mm diameter pitch fibre sub-soil pipes	m	425		
4	PS.PG.8.14	Sub-soil drain connection to existing system	no.	3		
5	PS.PG.8.15	Sub-soil termination stub	no.	3		

TOTAL CARRIED TO SECTION 4 SUMMARY: RETAINING STRUCTURES - CIVIL WORKS

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 FOOTPATHS**

PART B	SITE CLEARANCE	
PART C	CONCRETE WORK	
PART DA	EARTHWORKS : BULK	
PART EF	KERBS AND HAUNCHES	
PART EG	SIDEWALKS, FOOTPATHS and MEDIAN AREAS	
PART F	PROTECTION WORKS	
TOTAL CARRIED TO FINAL SUMMARY		

BILL OF QUANTITIES SECTION SUMMARY**SECTION 3 STORMWATER DRAINAGE**

PART B	SITE CLEARANCE	
PART C	CONCRETE WORK	
PART DB	EARTHWORKS FOR PIPE TRENCHES	
PART F	PROTECTION WORKS	
PART PG	NON PRESSURE PIPELINES and PC CULVERTS	
PART PH	MANHOLES and APPURTENANT DRAINAGE WORKS	
TOTAL CARRIED TO FINAL SUMMARY		

BILL OF QUANTITIES SECTION SUMMARY**SECTION 4 **RETAINING STRUCTURES - CIVIL WORKS****

PART B	SITE CLEARANCE	
PART C	CONCRETE WORK	
PART DA	EARTHWORKS : BULK	
PART DB	EARTHWORKS FOR PIPE TRENCHES	
PART DD	EARTHWORKS FOR STRUCTURES	
PART F	PROTECTION WORKS	
PART PG	NON PRESSURE PIPELINES and PC CULVERTS	
TOTAL CARRIED TO FINAL SUMMARY		

The Provision of Incremental Services to Informal Settlements within the Southern Region: Footpaths and Associated Stormwater Control in Wards 74 & 80, Settlement eMlaza V-V5.

SUMMARY OF BILL OF QUANTITIES

1	PRELIMINARY AND GENERAL		R	_____
	AA PRELIMINARIES	R		_____
	AB GENERAL SPECIFICATIONS	R		_____
	AH OCCUPATIONAL HEALTH and SAFETY	R		_____
2	FOOTPATHS		R	_____
	B SITE CLEARANCE	R		_____
	C CONCRETE WORK	R		_____
	DA EARTHWORKS : BULK	R		_____
	EF KERBS AND HAUNCHES	R		_____
	EG SIDEWALKS, FOOTPATHS and MEDIAN AREAS	R		_____
	F PROTECTION WORKS	R		_____
3	STORMWATER DRAINAGE		R	_____
	B SITE CLEARANCE	R		_____
	C CONCRETE WORK	R		_____
	DB EARTHWORKS FOR PIPE TRENCHES	R		_____
	F PROTECTION WORKS	R		_____
	PG NON PRESSURE PIPELINES and PC CULVERTS	R		_____
	PH MANHOLES and APPURTENANT DRAINAGE WORKS	R		_____
4	RETAINING STRUCTURES - CIVIL WORKS		R	_____
	B SITE CLEARANCE	R		_____
	C CONCRETE WORK	R		_____
	DA EARTHWORKS : BULK	R		_____
	DB EARTHWORKS FOR PIPE TRENCHES	R		_____
	DD EARTHWORKS FOR STRUCTURES	R		_____
	F PROTECTION WORKS	R		_____
	PG NON PRESSURE PIPELINES and PC CULVERTS	R		_____
SUB TOTAL			R	_____
ADD VAT (15%) - (only if a registered VAT Vendor)			R	_____
TOTAL CARRIED TO FORM OF TENDER			R	_____