

CITY OF MBOMBELA
CONTRACT NO: COM 13/2023
UPGRADING OF A ROAD FROM MAROBOTINI TO GEDLEMBANI, LEHAWU WARD 40

SUMMARY OF COSTS		
SECTION	DESCRIPTION	AMOUNT (ZAR)
SCHEDULE A	PRELIMINARY AND GENERAL	
1200	GENERAL REQUIREMENTS AND PROVISIONS	
1300	CONTRACTOR'S ESTABLISHMENT ON SITE AND GENERAL OBLIGATIONS	
1400	HOUSING, OFFICES AND LABORATORIES FOR THE ENGINEER'S SITE PERSONNEL	
TOTAL SCHEDULE A		
SCHEDULE B	ROADWORKS	
1500	ACCOMMODATION OF TRAFFIC	
1600	OVERHAUL	
1700	CLEARING AND GRUBBING	
1800	DAYWORKS	
2100	DRAINS	
2200	PREFABRICATED CULVERTS	
2300	CONCRETE LININGS FOR OPEN DRAINS (LI)	
3100	BORROW MATERIALS	
3300	MASS EARTHWORKS	
3400	PAVEMENT LAYERS OF GRAVEL MATERIALS	
3500	STABILIZATION	
5100	PITCHING, STONEMWORK AND PROTECTION AGAINST EROSION (LI)	
5400	GUARDRAILS (LI)	
5600	ROAD SIGNS	
5700	ROAD MARKINGS	
6200	FALSEWORK, FORMWORK AND CONCRETE FINISH	
6300	STEEL REINFORCEMENT	
6400	CONCRETE	
6600	NO-FINES CONCRETE JOINTS, BEARINGS,	
7300	CONCRETE BLOCK PAVING FOR ROADS	
8100	TESTING MATERIAL AND WORKMANSHIP	
TOTAL SCHEDULE B		
SCHEDULE C	PROVISIONAL SUMS	
C3	PROVISION OF STRUCTURED TRAINING	
TOTAL SCHEDULE C		
SUMMARY OF SCHEDULES		
SCHEDULE A PRELIMINARY AND GENERAL		
SCHEDULE B ROADWORKS		
SCHEDULE C PROVISIONAL SUMS		
SUB-TOTAL		
Add 10% CPA (Contract Price Adjustment)		
Add 10% CONTIGENCIES		
SUB-TOTAL		
15% VAT		
TOTAL CONSTRUCTION COST		

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SCHEDULE A : GENERAL

SECTION 1200

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
1200	GENERAL REQUIREMENTS AND PROVISIONS				
B12.01	The contractor's obligations in respect of local and other labourers: (a) Utility services (i) Relocation of services and payments to service owners (ii) Handling costs and profit in respect of sub-item B12.01(a)(i) above	Prov Sum %	1,00 500 000,00	500 000,00	R 500 000,00
B12.03	Provision for Relocation/Protection of Servises (a) Allow a provisional sum for existing eskom services to be relocated and/or protected as ordered by the engineer (b) By the contractor (boundary walls and fences, 2,4m in height) (c) Allow a provisional sum for the relocation of water bulk and distribution lines and/ or protection as ordered by engineer (b) Handling cost and profit in respect of subitem B12,03(a) and B12,03 (c)	Prov Sum m Prov Sum %	1,00 450,00 1,00 %	2 000 000,00 2 500 000,00	R 2 000 000,00 R 2 500 000,00
B12.04	Provision for a Community Liaison Officer (a) Provisional Sum for the payment of the Community Liaison Officer (R9500 per month) (b) Provision for Student Trainee (@R7500 per month) (c) Provision for the SHE Representative	Prov Sum Prov Sum Prov Sum	1,00 1,00 1,00	133 000,00 105 000,00 105 000,00	R 133 000,00 R 105 000,00 R 105 000,00
B12.05	(a) Occupational Health and Safety & construction regulation time related obligations (b) Special information signs (c) Handling costs and profit in respect of subitem B12,05(a)+(b)+(c)	Month PC Sum %	14,00 1,00 25 000,00	25 000,00	R 25 000,00
B12.06	a)Provision for use by Engineer of Surveyor Handling costs and profit in respect of the above	Prov Sum %	14,00 84 000,00	6000	R 84 000,00
B12.07	Supply and Install Contract Notice boards as instructed by the Engineer (as per drawing)	No,	2,00		
1200	TOTAL CARRIED TO SUMMARY				

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SCHEDULE A : GENERAL

SECTION 1300

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
1300	CONTRACTORS ESTABLISHMENT ON SITE AND GENERAL OBLIGATIONS				
13,01	The contractors general obligations				
(a)	Fixed obligations	L/sum	1,00		
(b)	Value related obligations	L/sum	1,00		
(c)	Time related obligations	Month	1,00		
B13,02	Contractor's initial obligation in respect of the OHS Act and Construction Regulations including submission of the Health and Safety file for approval	L/Sum	1,00		
B13.03	(d)Health and Safety obligations				
	(ii) Execution of the works	Month	14,00		
	(f) Environmental obligation	Month	14,00		
	(h) Security on site	Month	14,00		
	<i>NB: The combined tendered total for subitem (a) (b) and (c) should not exceed 15% of the tender sum , excluding VAT, (refer to form H; CONTRACTOR'S ESTABLISHMENT ON SITE)</i>				
(a)	Compilation of a Risk Assessment prior to commencement of Construction.	L/sum	1,00		
(b)	Health & safety induction training of employees	L/sum	1,00		
(c)	Compilation and keeping up to date the Health & Safety file which shall include all documentation required in terms of the Act including COVID 19 . Implementation of the health and Safety plan over the entire construction period	Month	12,00		
(d)	Handling cost and profit in respect of subitem B13.02 (a)	%	36 000,00		
B13.04	Contractor's time-related obligations in respect of the Occupational Health and Safety Act and Construction Regulations including COVID-19 compliance as promulgated.	month	14,00		
B13,05	Submission of the Health and Safety File, and obtaining the construction permit	L/sum	1,00		
13/22.26	Hand excavation to detremine the position of existing services	m3	150,00		
1300	TOTAL CARRIED TO SUMMARY				

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SCHEDULE A : GENERAL

SECTION 1400

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
1400	HOUSING, OFFICES AND LABORATORIES FOR THE ENGINEER'S SITE PERSONNEL				
14,01	Office and laboratory accommodation:				
(a)	Offices (interior floor space only)	m ²	24,00		
	(e) Ablution units	m ²	9,00		
14,02	Office furniture:				
	(a) Chairs	No	10,00		
	(d) Desks, complete with drawers and locks	No	5,00		
	(f) Conference tables	No	1,00		
14,03	Office and laboratory fittings, installations and equipment:				
	(a) Items measured by number:				
	(i) 220/250 volt power points	No	4,00		
	(ii) 400/231 volt 3-phase power points	No	4,00		
	(iii) Double 80 watt fluorescent-light fittings complete with ballast and tubes	No	3,00		
	(iv) Double 55 watt fluorescent light fittings complete with ballast and tubes	No	3,00		
	(v) Single incandescent-light fittings complete with 100 watt globes	No	1,00		
	(vi) Wash-hand basins complete with taps and drains	No	1,00		
	(viii) Extractor fans installed complete with own power connection	No	1,00		
	(x) Fire extinguishers, 2,5 kg, type complete, mounted on wall with brackets	No	1,00		
	(xi) Air-conditioning units with 2,2 kW minimum capacity, mounted and with own power connection	No	1,00		
	(xiv) General-purpose steel cupboards with shelves	No	3,00		
	(xv) Steel filing cabinets with drawers	No	2,00		
	(xvi) 220l (min.) refrigerators with lockable doors	No	1,00		
	(xix) Steel drawing hangers	No	1,00		
	(xx) Floodlights with 500W globes controlled by a photocell and mounted on a steel pole 3.5m above ground level	No	1,00		
B14,03	(xvi) Refrigerator (200 l min)	No	1,00		
B14,03	(xix) Rain gauge	No	1,00		
	(xx) Maximum and minimum thermometer	No	1,00		
14,03	(b) Prime-cost items and items paid for in a lump sum:				
	(i) Provision of telephone service, including the cost of calls in connection with contract administration and	PC Sum	1,00	30000,00	R 30 000,00
	(ii) Handling costs and profit in respect of subsubitem 14,03(b)(i) above	%	30 000,00		
	(v) The provision of a Email/fax apparatus as specified	PC Sum	1,00	8000,00	R 8 000,00
	(vi) Handling costs and profit in respect of subsubitem 14,03(b)(v) above	%	8 000,00		
14,04	Car ports as specified at offices and laboratory buildings	No	5,00		
B14,11	Telecommunication system				
	(a) Supply (1) Cellular phone	Prov Sum	1,00	15000,00	R 15 000,00
	(b) Costs of calls by Engineer	Prov Sum	1,00	6000,00	R 6 000,00
	(b) Costs of calls by Engineer	Prov Sum	1,00	6000,00	R 6 000,00
	(c) Handling costs and profit for items (a & b) above	%	21 000,00		
B14,12	Independent Laboratory				
	a) Provision for the use of an independent Laboratory for the Engineer	Prov Sum	1,00	500000,00	R 500 000,00
	b) Handling Cost and profit in respect of item B14.12(a)	%	500 000,00		
1400	TOTAL CARRIED TO SUMMARY				

CITY OF MBOMBELA
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SCHEDULE B : ROADWORKS

SECTION 1500

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
1500	ACCOMMODATION OF TRAFFIC				
15,01	Accommodating traffic and maintaining temporary deviations (Including Watering of By Pass/Deviation)	km	2,00		
15,02	Earthworks for temporary deviations:				
(a)	Shaping of temporary deviations	km	2,00		
	(b) Cut and borrow to fill	m3	80,00		
	(c) Cut to spoil	m3	80,00		
15,03	Temporary traffic control facilities :	No	6,00		
(a)	Flagmen	Man days	265,00		
(b)	Portable STOP & GO-RY signs	No	6,00		
(e)	Road signs, R- and TR series, (1200 mm dia)				
	(i) 1200mm	No	5,00		
	(ii) 1500mm	No	5,00		
	(d) Amber flicker lights	No	6,00		
(f)	Road signs, TW series (1500 mm sides)				
	(i) 1200mm	No	6,00		
	(ii) 2400mm x 400mm	No	6,00		
(g)	Road signs, STW,-DTWG,TGS-, and TG series (excluding delineators and barricades)				
	(i) 1200mm	No	6,00		
	(ii) 2400mm x 400mm	No	6,00		
(h)	Delineators (DTG50J)				
(ii)	(i) Mounted back to back (1200 mm x 150 mm)	No	450,00		
(iii)	Moveable barricades/road signs combination	No	20,00		
(j)	Traffic cones (750 mm high)	No	60,00		
(n)	Provision of high visibility safety jackets and safety boots	No	10,00		
B15,11	Temporary traffic-control facilities				
(a)	Provision, first erection on site and final removal	No	2,00		
(b)	Re-use on site of traffic-control	No	5,00		
(c)	Manual operation of traffic-control signal systems	100h	5,00		
(d)	Traffic signals	lump s	4,00		
B15.14	Amber flashing lights mounted on signs	no	6,00		
15/34.01	Pavement layers constructed from gravel taken from cut or borrow borrow including free-haul up to 1,0 km:				
	(b) Gravel shoulders compacted to:				
	(ii) 93% of modified AASHTO density for a compacted layer (ii) thickness of 150mm	m³	700,00		
	Watering of temporary deviations	Kiloliter	2 900,00		
1500	TOTAL CARRIED TO SUMMARY				

CITY OF MBOMBELA
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SCHEDULE B : ROADWORKS

SECTION 1600

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
1600	OVERHAUL				
16.01	Overhaul on material hauled in excess of a free-haul distance of 0,5 km, for haul up to or through 1,0 km (restricted overhaul)	m ³	2900,00		
16.02	Overhaul on material hauled in excess of 5,0 km (ordinary overhaul)	m ³ -km	4400,00		
1600	TOTAL CARRIED TO SUMMARY				

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UPGRADING OF A ROAD FROM MAROBOTINI TO GEDLEMBANI, LEHAWU WARD 40

SCHEDULE B : ROADWORKS

SECTION 1700

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
1700	CLEARING AND GRUBBING				
17,01	Clearing and grubbing within the road reserve	ha	2,00		
17,02	Removal and grubbing of large trees and tree stumps				
(a)	Girth exceeding 1m up to and including 2m	no	5,00		
	(b) Girth exceeding 2 m up to and including 3 m	No.	3,00		
	Girth larger than 3m up to and including 4m	No.	3,00		
17,05	Cleaning out of hydraulic structures:				
(a)	Pipes with an internal diameter up to 750mm	m ³	100,00		
17/16.01	Overhaul on material hauled in excess of 1 km	m ³ -km	450,00		
17/33.11	Three roller passes compaction:				
	(a) Vibratory roller	m ²	500,00		
1700	TOTAL CARRIED TO SUMMARY				

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SCHEDULE B : ROADWORKS

SECTION 1800

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
1800	DAYWORKS				
	<i>Note: Dayworks executed on the instruction of the Engineer Only, Supervision of dayworks is not payable under this section and is deemed to be included under section 1300</i>				
B18,01	Labourers:				
	(i) Unskilled	hr	250,00		
	(ii) Semi-skilled	hr	250,00		
	(iii) Skilled	hr	250,00		
	(iv) Ganger	hr	125,00		
	(v) Flagmen	hr	125,00		
B18,02	Foreman	hr	125,00		
B18,03	Tipper trucks:				
	(i) 3 - 5 ton	hr	80,00		
	(ii) 5,1 - 10 ton	hr	125,00		
B18,04	Loader (0,5m³)	hr	45,00		
B18,05	Grader (CAT 140G or similar)	hr	125,00		
B18,06	LDV	hr	125,00		
B18,07	Compaction Rollers:				
	(i) Vibrator roller	hr	90,00		
	(ii) Tamping roller	hr	35,00		
	(iii) Grid roller	hr	40,00		
B18,08	Hand Controlled Compactors				
	(i) Pedestrian roller (Bomag BW90 or similar)	hr	125,00		
	(ii) Vibratory plate	hr	125,00		
	(iii) Rammers	hr	125,00		
B18,09	Water truck (min 10 000 l)	hr	125,00		
B18,10	Dozer (D7 or similar)	hr	40,00		
1800	TOTAL CARRIED TO SUMMARY				

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SCHEDULE B : ROADWORKS

SECTION 2100

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
2100	DRAINS				
B21.01	Excavation for open drains: (a) Excavating soft material situated within the following depth ranges below the surface level:				
	(i) 0m up to 1,5m	m ³	420,00		
	(b) Extra over subitem 21,01(a) for excavation in (b) hard material, irrespective of depth	m ³	60,00		
21,02	Clearing and shaping of existing open drains	m ³	63,00		
21,03	Excavation for subsoil drainage systems:				
(a)	Excavating soft material situated within the following depth ranges below the surface level :				
(i)	0m up to 1,5m	m ³	40,00		
(b)	Extra over subitem 21,01(a) for excavation in hard material, irrespective of depth	m ³	15,00		
21,06	Natural permeable material in subsoil drainage systems(crushed-stone):				
(b)	Crushed-stone obtained from commercial sources (no-overhaul):	m ³	50,00		
(i)	Fine grade stone (13,2mm nominal size aggregate)	m ³	68,00		
21,08	Pipes in subsurface drainage systems:				
(b)	Unplasticized uPVC pipes and fittings, normal duty, complete with couplings:				
(i)	100mm diameter (perforated)	m	600,00		
21,1	Synthetic-fibre filter fabric:				
(a)	Non-woven needle punched type:				
(i)	"Kaymat U24" or approved equivalent	m ²	600,00		
21,12	Concrete outlet structures, manhole boxes, junction boxes and cleaning eyes for subsoil drainage systems:				
(a)	Outlet structures	No,	5,00		
(b)	Cleaning eyes	No	2,00		
(c)	Junction boxes	No	4,00		
21,13	Concrete caps for sub-soil drain pipes	No	8,00		
21,15	Overhaul for material hauled in excess of 1,0km free-haul (normal overhaul)	m ³ -km	250,00		
21,16	Backfilling existing eroded side drains	m ³	30,00		
21,17	Test flushing of pipe subsoil drains	kl	100,00		
B21.22	Subsoil outlet marker board	No	6,00		
B21.23	Break into existing drainage structures and install subsoil drain pipe	No	4,00		
2100	TOTAL CARRIED TO SUMMARY				

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SCHEDULE B : ROADWORKS

SECTION 2200

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
2200	PREFABRICATED CULVERTS				
22,01	Excavation :				
(a)	Excavating soft material situated within the following depth ranges below the surface level :				
(i)	0m up to 1,5m	m ³	1000,00		
(ii)	Exceeding 1,5 m up to 3,0 m	m ³	500,00		
22,02	Backfilling :				
(a)	Using the excavated material :	m ³	550,00		
(b)	Using imported selected material :	m ³	200,00		
22,03	Concrete interlocking pipe culverts:				
(b)	On class B bedding				
(i)	Class 50 D pipes, 600mm diameter	m	1000,00		
(ii)	Class 50 D pipes, 900mm diameter	m	550,00		
(iii)	Class 100 D pipes, 600mm diameter	m	15,00		
22,05	Portal and rectangular culverts :				
(b)	With prefabricated floor slabs, 1,2m x 1,2m (RP) Type class 100S				
	(i) 1200mm X 1200mm	m	30,00		
	(iii) 1500mm X 900mm	m	30,00		
22,07	Cast in situ concrete and formwork :				
(b)	In floor slabs for portal culverts including formwork joints and class U2 surface finish (class 30/19 concrete)	m ³	35,00		
(c)	In inlet and outlet structures, excluding formwork but including class U2 surface finish (class 30/19 concrete)	m ³	15,00		
22,12	Removing existing concrete				
(a)	Plain concrete	m ³	50,00		
(b)	Reinforced concrete	m ³	30,00		
22,18	Brickwork (concrete bricks)				
(b)	230 mm thick	m ²	15,00		
22/32,06	Stockpiling of material	m ³	300,00		
22/64,01	Encasing of service ducts/ culverts in concrete:				
(a)	Class 15/19 Mass concrete	m ³	20,00		
2200	TOTAL CARRIED TO SUMMARY				

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SCHEDULE B : ROADWORKS

SECTION 2300

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
2300	CONCRETE KERBING, CHANNELING, CHUTES, DOWNPIPES, AND LININGS FOR OPEN DRAINS				
23,01	Concrete kerbing (class 25/19 concrete) Prefabricated mountable kerb, SABS 927: (i) Fig 8c Kerb, as shown on drawings	m	5000,00		
(b)	300 mm x 200 mm cast in situ class 25/19 concrete edge beam, as shown on the drawings	m	65,00		
23,02	Concrete kerbing-channelling combination				
(a)	Type A in situ cast side drain, class 25/19 concrete	m ³	40,00		
(b)	150mm thick concrete drift, class 25/19 concrete	m ³	5,00		
23,03	Concrete chutes				
(a)	Type E in situ cast concrete chute, class 25/19 concrete (see drawing series 213-2020-BM-SW)	m	30,00		
23,05	Inlet, outlet, transition and similar structures:				
(a)	Energy breaker, class 25/19 concrete (see drawing)	No	15,00		
23,07	Trimming of excavations for concrete-lined open drains:				
(a)	In soft material	m ²	120,00		
(b)	In hard material	m ²	40,00		
23,08	Concrete lining for open drains:				
(a)	Cast in situ class 15/19 concrete lining for v-drains	m ³	300,00		
(b)	Class U2 surface finish to cast in situ concrete in drains*	m ²	1950,00		
23,09	Formwork to cast in situ concrete lining for open drains (class F2 surface finish):				
(a)	To sides with formwork on the internal face only	m ²	130,00		
(b)	To sides with formwork on both internal and external faces (each face measured) to ends of slabs	m2	130,00		
23,10	Sealed joints in concrete linings of open drains (description of type with reference to drawing)	m	200,00		
23,11	Concrete screed or backfill below chutes, class 15/19 concrete*	m ³	10,00		
23,12	Steel reinforcing:				
(c)	Welded steel fabric	kg	8000,00		
23,13	Polyethylene sheeting (0,15 mm thick) for concrete-lined open drains	m ²	400,00		
2300	TOTAL CARRIED TO SUMMARY				

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SCHEDULE B : ROADWORKS

SECTION 3100

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
3100	BORROW MATERIALS				
31,01	a) Strip and stockpile suitable topsoil by mechanical means as directed by the Engineer to a depth of and including 0,5 m and be replaced and made good after completion of excavations around the borrow pit	m ³	7500,00		
	b) Ditto but exceeding 0,5 m up to 1,0 m	m ³	1500,00		
	NOTE : <i>All excavated material is measured in cut</i>				
3100	TOTAL CARRIED TO SUMMARY				

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SCHEDULE B : ROADWORKS

SECTION 3300

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
3300	MASS EARTHWORKS				
33,04	Cut to spoil, including free-haul up to 0,5km, Material obtained from:				
(a)	Soft excavation	m ³	7500,00		
(b)	Intermediate excavation	m ³	1600,00		
(c)	Hard excavation	m ³	300,00		
(d)	Boulder excavation class A	m ³	100,00		
(e)	Boulder excavation class B	m ³	100,00		
33.10	Roadbed preparation and the compaction of material:				
(a)	Compaction to 90% of modified AASHTO density	m ³	2880,00		
33.11	Three-roller-passes compaction:				
(a)	Vibratory roller	m ²	10000,00		
(b)	Oscillatory roller	m ²	5000,00		
(c)	Grid roller	m ²	4200,00		
B33,20	Reshaping the road formation with material obtained from the road reserve and compacted to 90% of modified AASHTO density	m ²	19200,00		
33/33,06	Chemical blasting for rock outcrops	m ³	60,00		
3300	TOTAL CARRIED TO SUMMARY				

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SCHEDULE B : ROADWORKS

SECTION 3400

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
3400	PAVEMENT LAYERS OF GRAVEL MATERIAL				
B34.01	Pavement Layers constructed from gravel taken from commercial sources				
(e)	G4 Base layer compacted to:				
(i)	97% of modified AASHTO density for a compacted layer thickness of 150 mm	m ³	2800,00		
34,03	Pavement layers constructed from gravel obtained from existing pavement layers :				
(l)	Gravel subbase wearing coarse compacted to 95% mod AASHTO density using:				
(i)	Non-cemented G5 material (150mm thick)	m ³	2900,00		
B34,04	Pavement Layers constructed from gravel taken from commercial sources				
	(a) Sub-grade material G6 or better 93% of modified AASHTO density for a compacted layer thickness of 150 mm	m ³	3000,00		
34,04	Cost of sampling and material testing	Prov Sum	1,00	20000,00	R 20 000,00
34,05	Handling cost and profit in respect of item 34,05	%	20000,00		
3400	TOTAL CARRIED TO SUMMARY				

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SCHEDULE B : ROADWORKS

SECTION 3500

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
3500	STABILIZATION				
35,01	Chemical stabilization extra over unstabilized compacted layers:				
(b)	Base layer, G4 material, 150 mm thick	m ³	270,00		
35,02	Chemical stabilizing agent				
(a)	Ordinary portland cement (Mix design required to achieve C3 material)	t	240,00		
35,04	Provision and application of water for curing	kl	450,00		
3500	TOTAL CARRIED TO SUMMARY				

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SCHEDULE B : ROADWORKS

SECTION 5100

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
5100	PITCHING, STONEWORK AND PROTECTION AGAINST EROSION				
51.01 (b)	Stone masonry walls: Grouted stone pitching	m3	80,00		
51.03 (b)	Stone masonry walls: Cement - mortared stone wall	m3	65,00		
	GABIONS				
51/52.01	Foundation trench excavation				
(b)	In all other classes of material	m3	180,00		
51/52.02	Surface preparation for bedding the gabions	m²	320,00		
51/52.03	Gabions				
(a)	Galvanised gabions boxes (dimensions of box, nominal diameter of mesh wire and mesh size)				
(i)	(2m x 1m x 1m) with 80x100x2,7 mm mesh	m3	24,00		
(ii)	(3m/4m x 1m x 1m) with 80x100x2,7 mm class A mesh	m3	12,00		
(iii)	Gabion mattresses 0,3m deep with 80x80x2,7 mm mesh) - (3mx1mx.3m)	m3	12,00		
52.04	Filter fabric (Grade U24 or similar approved)	m²	60,00		
5100	TOTAL CARRIED TO SUMMARY				

CITY OF MBOMBELA
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SCHEDULE B : ROADWORKS

SECTION 5400

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
5400	GUARDRAILS				
54.01	Guardrails on timber posts:				
(a)	Galvanised	m	120,00		
54.03	Extra over items 54.01 for horizontally curved guardrails factory bent to a radius of less than 45m	m	50,00		
54,04	End treatments				
	(ii) End treatments where single guardrail sections are used (including additional posts)	No	10,00		
(a)	End wings				
	(b) Bull noses	No.	30,00		
(d)	End teatments in accordance with the drawings where single guardrail sections are used	no	5,00		
	(e) End treatments in accordance with the drawings where double guardrail sections are used	No	8,00		
54,06	Reflective plates	No	60,00		
5400	TOTAL CARRIED TO SUMMARY				

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SCHEDULE B : ROADWORKS

SECTION 5600

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
5600	ROAD SIGNS				
	<i>All Road traffic signs and Rail signage to be compliant to the SARTSM manual</i>				
56,01	Road sign boards with painted or coloured semi-matt background.Symbols, lettering and borders in semi-matt black or class 1 retroreflective material, where the sign board is constructed from :				
(c)	Prepainted galvinised steel plate (chromadek or similar equivalent)				
(i)	Road signs, R series (1200mm dia)				
	(i) Area not exceeding 2m ²	m ²	50,00		
	(ii) Area exceeding 2m ² but not exceeding 10m ²	m ²	50,00		
	(iii) Area exceeding 10m ²	m ²	50,00		
56,02	Extra over item 56.01 for using:				
	(a) Background of retro-reflective material:				
	(i) Class I	m ²	50,00		
	(i) Class III	m ²	50,00		
	(b) Lettering Symbols, numbers, arrows, emblems and borders of retro-reflective material:				
	(iii) Class IV (Micro-Prismatic)	m ²	250,00		
56,03	Road sign supports (over-head road sign structures excluded):				
	(b) Timber				
	(i) 125mm minimum dia CCA Treated	m	15,00		
	(ii) 150mm minimum dia CCA Treated	m	50,00		
	(iii) 175mm minimum dia CCA Treated	m	50,00		
56,05	Excavation and Backfilling for road sign supports	m3	80,00		
56,06	Extra Over item 56.05 for cement-treated soil backfill	m3	20,00		
56,07	Extra over item 56.05 for rock excavation	m3	30,00		
B56.10	<i>Danger plates at the speed hump/ headway:</i>				
LI	(a) Type W332 speed humps	No	16,00		
	(b) Type W401 danger plates	No	20,00		
	(c) Type W402 danger plates	No	20,00		
	(c) Type R1 traffic control ahead sign	No	10,00		
	(d) Type R1,5A and R1,5B regulatory signs	No	2,00		
	(e) TW410 warning device	No	8,00		
5600	TOTAL CARRIED TO SUMMARY				

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SCHEDULE B : ROADWORKS

SECTION 5700

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
5700	ROAD MARKINGS				
57.01	Road-marking paint:				
(a)	White lines (broken or unbroken):				
(i)	100 mm wide	km	1,20		
(ii)	150mm wide	km	0,50		
(b)	Yellow lines (broken or unbroken):				
(i)	100 mm wide	km	5,00		
(d)	White lettering and symbols	m ²	120,00		
57,02	Retro-reflective road marking paint				
(a)	White lines (broken or unbroken)				
(i)	100 mm wide	km	2,40		
(b)	Yellow lines (broken or unbroken)				
(i)	100 mm wide	km	5,00		
(d)	White lettering and symbols	m ²	25,00		
57,06	Setting out and premarking the lines				
	(Excluding traffic island markings, lettering and symbols)	km	10,00		
57,07	Re-establishing the painting unit at the end of the maintenance period	Lump Sum	1,00		
5700	TOTAL CARRIED TO SUMMARY				

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SCHEDULE B : ROADWORKS

SECTION 6200

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
6200	FALSEWORK, FORMWORK AND CONCRETE FINISH				
	<i>Provide concrete finish:</i>				
a	Class F1 surface finish to:				
	(i) Concrete pavement layer	m ²	1300,00		
6200	TOTAL CARRIED TO SUMMARY				

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SCHEDULE B : ROADWORKS

SECTION 6300

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
6300	STEEL REINFORCEMENT				
63,01	Steel reinforcement for:				
	(a) Concrete pavement layer				
	(i) Steel reinforcing: Welded steel fabric	kg	6000,00		
6300	TOTAL CARRIED TO SUMMARY				

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SCHEDULE B : ROADWORKS

SECTION 6400

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
6400	CONCRETE				
B64.01	Cast in situ concrete				
	(a) Class 30/19 in:				
	(i) Concrete pavement layer	m ³	200,00		
6400	TOTAL CARRIED TO SUMMARY				

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SCHEDULE B : ROADWORKS

SECTION 6600

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
6600	NO-FINES CONCRETE JOINTS, BEARINGS, PARAPETS AND DRAINAGE FOR STRUCTURES				
66,05	Expantion Joints				
(a)	Expansion-Contraction Control joint (see construction drawings)	m	220,00		
6600	TOTAL CARRIED TO SUMMARY				

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SCHEDULE B : ROADWORKS

SECTION 7300

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
7300	CONCRETE BLOCK PAVING FOR ROADS				
73,01	<i>Concrete block Paving</i>				
	(a) 80mm thick interlocking concrete block paving, Class 25, including 20mm sand bedding	m ²	13500,00		
73,01A	Construction of traffic calming devices (Speed Humps)	No	15,00		
73,03 LIC	Provision of approved herbicide and ant poison				
	(a) Provision of materials as stated above	PC Sum	1,00	60000,00	R 60 000,00
	(b) Contractors charges and profit to the PC Sum above	%	60000,00		
7300	TOTAL CARRIED TO SUMMARY				

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SCHEDULE B : ROADWORKS

SECTION 8100

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
8100	TESTING MATERIALS AND WORKMANSHIP				
81,02	Other special tests requested by the Engineer				
(a)	Cost of testing	PC Sum	1,00	100000,00	R 100 000,00
(b)	Charge on prime cost sum	%	100000,00		
	Additional tests ordered by Engineer				
8100	TOTAL CARRIED TO SUMMARY				

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SCHEDULE C : TESTING AND PROV SUMS

SECTION TRAINING

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
C3	PROVISION OF STRUCTURED TRAINING				
12,06	Provision for accredited training:				
	(a) Generic skills	Prov. Sum	1,00	160000,00	R 160 000,00
	(b) Entrepreneurial skills	Prov. Sum	1,00	160000,00	R 160 000,00
	(c) Handling cost and profit in respect of sub-items E12.06(a) and (b) above	%	320000,00		
	(d) Training Venue	Lump sum	1,00		
C3	TOTAL CARRIED TO SUMMARY				