

SCHEDULE A: ROADWORKS

SECTION 001

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT R
Section 001	SERIES 0 : GENERAL				
	GENERAL REQUIREMENTS AND CHARGES				
001.01	Preliminary and General Charges				
001.01.01	Fixed charges	L/ Sum	1		
001.01.02	Time-related charges	L/ Sum	1		
001.02	Locating existing services	L/ Sum	1		
001.03	Excavate by hand to expose existing services, and backfill	m ³	750		
001.04	Compliance with the Occupational Health and Safety Act and applicable regulations				
001.04.01	Provision of a Health and Safety plan	L/Sum	1		
001.04.02	Provision of Health and Safety file	L/Sum	1		
001.04.04	Provision of a Safety Officer (full-time)	L/Sum	1		
001.04.05	Health and safety training (All employees)	L/Sum	1		
B001.04.06	Provision of personal protective clothing and equipment	L/Sum	1		
001.04.07	Provision of safety fences, signs and barricades	L/Sum	1		
001.04.08	Other obligations				
	(a) Environmental obligations	month	18		
	(b) Health and safety obligations	month	18		
B001.05	Community Liaison Officer	month	18	16,040.00	288,720.00
B001.06	Selected sub-contractors for specialist activities				
B001.06.01	Relocation and protection of services	PC Sum	1	2,000,000.00	2,000,000.00
B001.06.02	Contractor's profit and handling cost in respect of B001.06.01	%	2,000,000.00		
TOTAL CARRIED FORWARD					

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SECTION 001

TOTAL BROUGHT FORWARD					
B001.06.07	Landscaping	PC Sum	1	1,755,000.00	1,755,000.00
B001.06.08	Contractor's profit and handling cost in respect of B001.0.07	%	1,755,000.00		
B001.06.09	Gantry relocation	PC Sum	1	1,200,000.00	1,200,000.00
B001.06.09	Contractor's profit and handling cost in respect of B001.0.09	%	1,200,000.00		
B001.07	Training				
	(a) Training courses (35% for SMME's and 65% for unskilled labourers)	Prov.Sum	1	201,693.60	201,693.60
	(d) Contractor's cost and mark-up on (a), (b) and (c)	%	201,693.60		
B001.08	Traffic Control Signals				
	(a) Provision and Installation of new and/or upgrading and relocating of existing traffic control signals by the City of Tshwane	Prov.Sum	1	2,800,000.00	2,800,000.00
	(b) Contractor's handling costs, profit and all other charges in respect of subitem B001.10.7(a)	%	2,800,000.00		
TOTAL CARRIED FORWARD					

SCHEDULE A: ROADWORKS

SECTION 002

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT R
Section 002	SERIES 0 : GENERAL				
	ENGINEER'S ACCOMMODATION				
	002.01 Services				
	002.01.01 Services for offices and laboratories	L/Sum	1		
	002.02 Treatment and maintenance of areas surrounding offices and laboratories	L/Sum	1		
	002.03 Office and laboratory accommodation				
	002.03.01 Provision of office and laboratory accommodation, including fittings, furniture and equipment and car ports, as specified in project specification	L/ Sum	1		
	B002.03.01 Offices and laboratory				
	(a) Provision of cellular telephones for Engineer's Office, including cost of calls in connection with contract administration and telephone rental	L/Sum	1		
	Contractor's profit and handling cost in respect of item 002.03(a)	%			
B002.04	(b) Laboratory plus additional roof area and concrete slabs	L/Sum	1		
	Provision of survey equipment and assistants	L/ Sum	1		
TOTAL CARRIED FORWARD TO SUMMARY					

SCHEDULE A: ROADWORKS

SECTION 101

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT R
	SERIES 1 : ANCILLARY WORKS				
Section 101	CLEARING AND GRUBBING				
101.01	Clearing and grubbing				
101.01.01	Areas	m ²	20,000		
101.02	Cutting and removing large trees with a girth-				
101.02.01	exceeding 1,0m and up to and including 2,0m	No	110		
101.02.02	exceeding 2,0m and up to and including 3,0m	No	2		
101.02.03	exceeding 3,0m and up to and including 4,0m	No	6		
101.03	Grubbing and the removal of the stumps and roots of large trees with a girth:				
101.03.01	exceeding 1m and up to and including 2m	No	5		
101.03.02	exceeding 2m and up to and including 3m	No	5		
101.03.03	exceeding 3m and up to and including 4m	No	5		
101.05	Removal and Disposal of specific elements to a municipal dumping site including dumping site fees and unlimited free haul distance				
101.05.01	Concrete Kerbing / Kerbing combination	m	9,150		
101.05.02	Concrete or Brick elements				
	(a) Concrete, reinforced	m ³	80		
	(b) Concrete, unreinforced and paving blocks	m ³	200		
	(c) Brickwork	m ³	70		
101.05.03	Asphalt surfacing irrespective of thickness	m ²	15,640		
TOTAL CARRIED TO SUMMARY					

SCHEDULE A: ROADWORKS

SECTION 102

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT R
102	ACCOMMODATION OF TRAFFIC				
B102.01	Accommodation of traffic and maintenance of bypasses				
	(a) Along main road	km	4		
	(b) Intersections - Signallised	No	7		
	(c) Intersections - non Signallised	No	3		
	(d) Pedestrian traffic	L/Sum	1		
102.08	Maintenance of surfacing and pavement layers of bitumen- surfaced bypasses and existing bitumen-surfaced roads used as bypasses	Prov Sum	1	100,000.00	100,000.00
102.09	Traffic lights	L/Sum	1		
102.14	Temporary traffic control facilities				
B102.14.01	Flagmen	L/ Sum	4		
102.14.02	Portable STOP/GO signs	No	4		
102.14.03	Amber flicker lights	No	12		
102.14.04	Road signs, TR-series, 1200 mm in diameter	No	100		
102.14.05	Road signs, TW-series, 1524 mm sides	No	90		
102.14.06	Road signs, TG-series	m ²	20		
102.14.07	Danger plates and delineators	No	5,000		
102.14.08	Moveable barricades (chevron and ROAD CLOSED types)	No	50		
TOTAL CARRIED FORWARD					

SCHEDULE A: ROADWORKS

SECTION 102

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT R
BROUGHT FORWARD					
102.14.09	Traffic cones	No			
102.14.10	Plastic new jersey barrier	no	3,668		
102.15	Re-use or removal of traffic control facilities	L/Sum	1		
102.15.01	Amber flashing lights mounted on signs	No	6		
B102.17	Barriers				
	(a) Concrete:				
	Supply to site, initial placement, dismantling and re-erecting rented barriers during the works and removal from site of rented barriers	m	100		
B102.20	Flashing illuminated arrow board	No	4		
TOTAL CARRIED TO SUMMARY					

SCHEDULE A: ROADWORKS

SECTION 103

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT R
103	SERIES 1 : ANCILLARY WORKS				
	OVERHAUL				
103.01	Overhaul on material hauled outside the defined free-haul boundaries Note: The haul distance shall be from the free-haul boundaries of the contract to the entrance gate of the municipal dumping site. The tenderer must allow for any possible additional haul distance inside the municipal dumping site.	m ³ -km	214,200		
TOTAL CARRIED TO SUMMARY					

SCHEDULE A: ROADWORKS

SECTION 106

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT R
106	SERIES 1 : ANCILLARY WORKS				
	SERVICE DUCTS				
106.01	Bedding and backfilling up to 300mm above pipes				
106.01.01	Using Selected excavated material	m ³	3,400		
106.01.04	Using crushed stone	m ³	150		
106.01.05	Using stabilized material	m ³	20		
106.03	Soilcrete	m ³	405		
106.04	Service duct pipes				
106.04.01	Ordinary pipes				
106.04.01.01	110mm dia uPVC	m	17,500		
106.04.01.02	160mm dia uPVC	m	100		
106.04.02	Split pipes				
106.04.02.01	40mm dia. Miniduct	m	5,000		
106.05	Duct Markers	No	20		
106.06	Extra over items 106.01 and 106.03 for using material obtained from sources provided by the contractor	m ³	30		
B106.07	Manholes:				
B106.07.01	Supply and installation of prefabricated fibre cement manhole (Basix type)	No	70		
B106.08	Testing of ducts Mendrill test	L/Sum	1		
TOTAL CARRIED TO SUMMARY					

SCHEDULE A: ROADWORKS

SECTION 003

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT R
Section B107	DAYWORKS				
B107.01	Labour during normal working hours				
B107.01.01	Unskilled labour	h	200		
B107.01.02	Semi-skilled labour	h	150		
B107.01.03	Skilled labour (Artisan)	h	100		
B107.01.04	Ganger	h	100		
B107.01.05	Foreman	h	100		
B107.02	Equipment				
B107.02.01	Tipper Trucks	h	100		
B107.02.05	Generator (15kVA)	h	100		
B107.02.06	Grader (Mass 16-20 ton)	h	100		
B107.02.09	Pneumatic Roller (14-21 ton)	h	100		
B107.02.10	Pedestrian Roller	h	100		
B107.02.13	Pumps	h	100		
B107.03	Transport of Construction Equipment				
B107.03.01	Class 2 or 3 vehicle	km	100		
B107.03.02	Lowbed	km	100		
TOTAL CARRIED FORWARD TO SUMMARY					

SCHEDULE A: ROADWORKS

SECTION 202

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT R
202	SERIES 2 : EARTHWORKS				
202.01	TRENCHING				
202.01.01	Trench excavations				
202.01.01.01	Up to 1.0m wide				
202.01.01.01	Up to 1,0m deep	m ³	20,836.20		
202.01.01.02	Over 1,0m and up to 1,5m deep	m ³	500.00		
202.01.01.03	Over 1,5m and up to 2,0m deep	m ³	300.00		
202.01.02.04	Over 2,0m deep and up to 2,5m deep	m ³	100.00		
202.01.02.05	Over 2,5m deep and up to 3,0m deep	m ³	50.00		
202.01.02	Up to 2,0m wide				
202.01.02.01	Up to 1,0m deep	m ³	900.00		
202.01.02.02	Over 1,0m deep and up to 1,5m deep	m ³	600.00		
202.01.02.03	Over 1,5m deep and up to 2,0m deep	m ³	550.00		
202.01.02.04	Over 2,0m deep and up to 2,5m deep	m ³	430.00		
202.01.02.05	Over 2,5m deep and up to 3,0m deep	m ³	350.00		
202.04	Hand excavations (extra over item 202.01)	m ³	2,000.00		
202.06	The backfilling of trenches (excluding backfill around the pipe barrel) with material obtained from excavation	m ³	15,325.09		
202.07	Extra over items 202.06 for using backfill material obtained -				
202.07.02	from sources provided by the contractor	m ³	650.00		
202.10	Removal of spoil material				
202.10.01	To Municipal dumping site	m ³	5,500.00		
202.12	Extra over item 202.06 for additional compaction of backfill to 93% of mod AASHTO density in road reserves	m ³	200.00		
TOTAL CARRIED FORWARD					

SCHEDULE A: ROADWORKS

SECTION 202

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT R
BROUGHT FORWARD					
202.13	Backfilling trenches with soilcrete	m ³	600		
202.15	Reinstatement of bitumen surfaced roads	m ²	500		
TOTAL CARRIED TO SUMMARY					

SCHEDULE A: ROADWORKS

SECTION 203

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT R
	SERIES 2 : EARTHWORKS				
203	MASS EARTHWORKS				
203.01	Excavation and borrow to fill				
203.01.01	Compacted to 90% of modified AASHTO density	m ³	7,140		
203.02	Extra over item 203.01 for excavating in -				
203.02.01	Intermediate material	m ³	100		
203.02.02	Hard material	m ³	50		
203.02.03	Boulder material class A	m ³	10		
203.02.04	Boulder material class B	m ³	10		
203.03	Excavate and spoil of unsuitable material from existing road				
203.03.01	Soft material	m ³	7,140		
203.03.02	Intermediate material	m ³	1,190		
203.04	Removal of oversize material	m ³			
203.05	Variations in compactive effort (applicable to sub item 203.01.03 and item 203.07)				
203.05.01	Vibratory rollers	m ² .pass	Rate Only		
203.05.02	Impact rollers	m ² .pass	Rate Only		
203.07	Three-pass roller compaction				
203.07.01	Vibratory roller	m ² .pass	Rate Only		
203.07.02	Impact roller	m ² .pass	Rate Only		

RTD 12 2022/2023: Construction of Tshwane Rapid Transit Route Line 2C: Lynnwood Road (between January Masilela Drive and Simon Vermooten Road) for a period of 18 months

203.08	Preparation and compaction of construction bed material to 90% of modified AASHTO density	m ³	1,965		
203.10	In situ treatment of the construction bed				
203.10.01	In situ treatment by ripping	m ³	200		
203.10.02	In situ treatment by blasting	m ³			
203.11	Finishing off slopes				
203.11.01	Excavation slopes	m ²	30		
203.11.02	Fill slopes	m ²	50		
203.14	Extra over item 203.01 for borrow material from sources to be supplied by the Contractor	m ³	4,000		
203.15	Extra over items 203.03 and 203.04 for disposing of spoil material to sites to be provided by the Contractor	m ³	100		
TOTAL CARRIED TO SUMMARY					

SCHEDULE A: ROADWORKS

SECTION 501

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT R
501	SERIES 5 : DRAINAGE AND EROSION PROTECTION				
	SUBSURFACE DRAINS AND DRAINAGE BLANKETS				
501.01	Crushed stone				
501.01.01	Graded crushed stone	m ³	200		
501.01.02	Single-sized crushed stone (19mm)	m ³	200		
501.02	Procuring of filter sand	m ³	100		
501.03	Placing of filter sand	m ³	100		
501.04	Geotextiles:Type Kaymat U24 or similar, Grade 3c, Bidum A2	m ²	200		
501.05	Pipes in subsurface drains				
501.05.01	Unplasticised PVC pipes and fittings, normal duty complete with couplings :				
501.05.01.01	100 mm internal dia. perforated or slotted	m	300		
B501.07	Concrete outlet structures and manholes for subsurface drains, including formwork				
B501.07.01	Outlet structures	no	2		
B501.07.02	Manholes boxes	no	2		
501.08	Concrete caps for subsurface drain pipes	no	2		
TOTAL CARRIED TO SUMMARY					

SCHEDULE A: ROADWORKS

SECTION 502

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT R
502	SERIES 5 : DRAINAGE AND EROSION PROTECTION				
502.01	PREFABRICATED CULVERTS AND STORMWATER SEWERS				
502.01	Backfilling with selected excavated material compacted to -				
502.01.01	90% of modified AASHTO density	m ³	50		
502.01.02	93% of modified AASHTO density	m ³	2,000		
502.01.03	95% of modified AASHTO density	m ³	50		
502.02	Supplying and laying of concrete pipe culverts (type SC-pipes)				
502.02.01	Class B bedding / Class 75D load				
502.02.01.01	(a) 450mm diameter	m	750		
	(b) 600mm diameter	m	125		
502.16	Manholes, catchpits, precast inlet and outlet structures and junction boxes complete				
502.16.01	Manholes (H/Duty, 2m deep)	No	60		
502.16.02	Kerb inlets				
502.16.02.01	1.5m length	No	50		
502.16.02.01	3.0m length	No	100		
502.16.03	Precast Inlets and outlets	No.	10		
502.16.04	Transitions	No.	150		
502.16.05	Junction Boxes	No.	70		
B502.16.07	Level adjustments to manhole covers of existing manholes	No.	70		
502.17	Brick work				
502.17.01	115mm thick	m ²	100		
502.17.02	230mm thick	m ²	500		
502.17.03	345mm thick	m ²	100		
TOTAL CARRIED FORWARD TO SUMMARY					

SCHEDULE A: ROADWORKS

SECTION 503

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT R
503	SERIES 5 : DRAINAGE AND EROSION PROTECTION				
503.01	KERBING AND CHANNELLING				
503.01.01	Concrete kerbing Class 20/19 concrete (See drawing STD007 - Sheet 1)				
503.01.01	Edge beams	m	6,800		
	Figure 7 semi-mountable kerb	m	3,400		
503.01.07	Dropped kerb as shown on typical drawings	m	80		
503.02	Concrete kerbing-channelling combination (See drawing CoT STD007 - Sheet 1)				
503.02.02	Semi vertical Fig. 3 with 150mm wide concrete channel (Class 20/19)	m	6,800		
503.03	Transition sections (See drawing STD007 - Sheet 2)				
503.03.01	Semi mountable kerb Fig 7 / Barrier kerb (Fib.g) to edge beam	No	20		
503.03.02	Semi mountable Fig. 7 kerb to 500mm sloping kerb	No	50		
B503.05	Cutting bituminous surfacing and pavement layers for concrete kerbing, channelling or concrete-lined drains	m	6,800		
TOTAL CARRIED FORWARD TO SUMMARY					

SCHEDULE A: ROADWORKS

SECTION 601

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT R
601	SERIES 6 : ROADS AND PARKING AREAS				
601.01	GRAVEL PAVEMENT LAYERS				
601.01	Preparation and compaction of in situ subgrade material				
601.01.01	Compacted to 90% of modified AASHTO density	m ³	5,100		
601.02	Gravel layers constructed from material obtained from borrow pits or commercial sources				
601.02.01	Lower Selected				
601.02.01.02	150mm Lower Selected G9 material Compacted to 93% of modified AASHTO density	m ³	4,794		
601.02.01	Upper Selected				
601.02.01.02	150mm Upper Selected G7 material Compacted to 95% of modified AASHTO density	m ³	4,794		
601.02	Gravel layers constructed from material obtained from commercial sources:				
601.02.02	Subbase Cycle Lane				
601.02.02.01	150mm C3 layer, G5 material compacted to 95% of modified AASHTO density	m ³	2,040		
601.02	Gravel layers constructed from material obtained from commercial sources:				
601.02.02	Subbase				
601.02.02.02	150mm C3 layer, G5 material compacted to 97% of modified AASHTO density	m ³	4,182		
601.03	Gravel layers constructed from material obtained from excavations:				
601.03.01	Upper Selected				
601.03.01.03	150mm Upper Selected G9 material Compacted to 95% of modified AASHTO density	m ³	2,244		
601.04	Extra over item 601.03 for obtaining material from -				
601.04.01	intermediate excavations	m ³	50		
601.04.02	hard excavations	m ³	50		
TOTAL CARRIED TO SUMMARY					

SCHEDULE A: ROADWORKS

SECTION 602

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT R
602	SERIES 6 : ROADS AND PARKING AREAS				
	CRUSHED-STONE PAVEMENT LAYERS				
602.01	Crushed-stone base constructed with material obtained from :				
602.01.01	Commercial sources				
602.01.01.01	150mm layer, G1 material compacted to 88% of apparent density	m ³	6,144		
602.04.01	Extra over subitem 602.01.01.01 for compaction to 88% of apparent density	m ³	614		
TOTAL CARRIED SUMMARY					

SCHEDULE A: ROADWORKS

SECTION 604

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT R
604	SERIES 6 : ROADS AND PARKING AREAS				
604.01	STABILISATION				
	Chemical stabilisation, extra over unstabilised compacted layers				
	(b) 150mm thick cement stabilised layer (C3 quality)	m ³	2,040		
604.02	Chemical stabilising agent				
604.02.05	Cement (CEM II/32,5N)	t	112		
TOTAL CARRIED FORWARD TO SUMMARY					

SCHEDULE A: ROADWORKS

SECTION 605

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT R
605	SERIES 6 : ROADS AND PARKING AREAS				
605.01	PRIME COAT				
	Prime coat				
605.01.02	MC-30 cut-back bitumen	1	26,969		
TOTAL CARRIED FORWARD TO SUMMARY					

**CONSTRUCTION OF ROADS AND STORMWATER
SCHEDULE A**

SECTION 606

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT R
606	SERIES 6 : ROADS AND PARKING AREAS				
	ASPHALT BASE AND SURFACING				
606.02.01.02	Medium grade, 40 mm thick	m2	38,528		
606.02.01.03	Fine grade, 25 mm thick using 70/100 pen bitumen	m2	11,722		
606.04	Rolled-in chips (13mm nominal size) in surfacing	t			
606.05	Tack coat of 30% stable grade emulsion	l	21,190		
606.08	Trial sections:				
TOTAL CARRIED FORWARD					

**CONSTRUCTION OF ROADS AND STORMWATER
SCHEDULE A**

SECTION 606

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT R
TOTAL BROUGHT FORWARD					
606.08.02	40 mm thickness	m ²	100		
606.08.03	25 mm thickness	m ²	100		
B606.09	100mm cores in asphalt paving	no	100		
606.10	Saw-cutting of asphalt, asphalt base or paving 40mm deep	m	2,200		
TOTAL CARRIED FORWARD TO SUMMARY					

SCHEDULE A: ROADWORKS

SECTION 609

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT R
609	SERIES 6 : ROADS AND PARKING AREAS				
609.01	SEGMENTED PAVING				
609.01	Construction of segmental block paving made from:-				
609.01.01	S-A Blocks 25 Mpa, 60mm thick laid in herringbone pattern (red)	m ²	19,000		
609.01.03	S-A Blocks 25 Mpa, 80mm thick interlocking paving blocks (grey)	m ²	1,300		
609.03	The construction of edge restraints with:				
609.03.01	Precast concrete (Fig 12 edge restraint) according to SABS 927	m	6,800		
609.04	The lifting of existing segmented paving, loading and transporting to a stockpile site as specified in the project specification.				
609.04.01	Segmented blocks	m ²	1,000		
609.04.02	Paving slabs	m ²	100		
609.06	Construction of pedestrian ramps for the disabled (See drawing STD009/TGSI 001 to 018)				
		no	84		
609/505.11	Provision and application of:				
609/505.11.01	Ant poison	PC Sum	1	30,000.00	30,000.00
609/505.11.02	Add the Contractor's charges	%	30,000		
609/505.11.03	Vegetation destroyer	PC Sum	1	20,000.00	20,000.00
609/505.11.04	Add the Contractor's charges	%	20,000		
TOTAL CARRIED TO SUMMARY					

**CONSTRUCTION OF ROADS AND STORMWATER
SCHEDULE A**

SECTION 611

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT R
611	SERIES 6 : ROADS AND PARKING AREAS				
	GUARDRAILS				
611.01	Guardrails on timber posts				
611.01.01	Galvanised	m	1,000		
611.03	Extra over items 611.01 for horizontally curved guardrails, factory bent to a radius of less than 150m	m	100		
611.04	End units				
611.04.01	End wings	no	10		
611.04.02	Terminal sections in accordance with the drawing, where single guardrail sections are used	no	10		
611.05	Additional guardrail posts				
611.05.01	Timber	no	10		
611.06	Reflector plates	no	50		
611.07	Dismantling existing guardrails and posts				
611.07.01	Dismantling guardrails	m	1,000		
611.07.02	Removing posts	no	210		
611.09	Re-erection of dismantled guardrails with new treated timber posts	m	1,000		
TOTAL CARRIED FORWARD TO SUMMARY					

SCHEDULE A: ROADWORKS

SECTION 612

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT R
612	SERIES 6 : ROADS AND PARKING AREAS				
612.01	TRAFFIC SIGNS				
612.01	Sign boards with painted background. Symbols, lettering and borders in engineering-grade retro-reflective material, where the sign board is constructed from:				
612.01.03	Sheet steel (chromadek) with an:				
	(a) Area not exceeding 2 m²	m²	100		
	(b) Area exceeding 2 m² but not 10 m²	m²	50		
	(c) Area exceeding 10 m²	m²	30		
	(d) Street name board (Refer to CoT Drawing STD018 including fixings)	No	10		
612.02	Extra over item 612.01 for using:				
612.02.02	(a) Background of retro-reflective material of:				
	(i) Engineering grade retro-reflective material (Class 1)	m²	100		
	(ii) High density grade-reflective material (Class 3)	m²	100		
	(b) Lettering, symbols, numbers, arrows, emblems and borders of retro-reflective material:				
	(i) High intensity grade (Class 3)	m²	100		
612.03	Sign supports				
612.03.02	Steel Tubing				
	(a) Steel Tubing (76mm dia x 2.0mm wall thickness)	t	5		
	(b) Steel Tubing (100mm dia x 2.0mm wall thickness)	t	5		
TOTAL CARRIED FORWARD					

SCHEDULE A: ROADWORKS

SECTION 612

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT R
BROUGHT FORWARD					
612.04	Extra over item 612.03.01 and 612.03.02 for providing:				
612.04.01	Unpainted galvanized steel members	t	8		
612.05	Excavation and backfilling for sign supports	m ³	10		
612.06	Dismantling, storing and re-erecting traffic signs with a surface area of:				
612.06.01	up to 2 m ²	No	100		
612.06.02	over 2 m ² but not exceeding 5 m ²	No	20		
612.06.03	over 5 m ² but not exceeding 10m ²	No	20		
612.06.04	over 10 m ² but not exceeding 15 m ²	No	20		
TOTAL CARRIED FORWARD TO SUMMARY					

SCHEDULE A: ROADWORKS

SECTION 613

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT R
613	SERIES 6 : ROADS AND PARKING AREAS				
613.02	TRAFFIC MARKINGS				
613.02	Retro-reflective road-marking paint				
613.02.01	White lines (broken or unbroken):				
	(a) 100 mm wide	km	1		
	(b) 150 mm wide	km	0.5		
	(c) 200 mm wide	km	0.5		
	(d) 300 mm wide	km	0.5		
613.02.02	Yellow lines (broken or unbroken)				
	(a) 100 mm wide	km	6.8		
613.02.03	White lettering and symbols	m ²	50		
613.02.04	Yellow lettering and symbols	m ²	50		
613.02.05	Traffic-island markings (any colour)	m ²	50		
613.03	Proprietary brand plastic road-marking material (Thermo Plastic Paint)				
613.03.01	White lines (broken or unbroken):				
	(a) 100 mm wide	km	21.00		
	(b) 150 mm wide	km	0.5		
	(c) 200 mm wide	km	0.50		
	(d) 300 mm wide	km	0.50		
613.03.02	Yellow lines (broken or unbroken) 200mm wide	km	6.80		
613.03.03	White lettering and symbols	m ²	50		
613.03.04	Yellow lettering and symbols	m ²	50		
613.03.05	Traffic-island markings (any colour)	m ²	100		

RTD 12 2022/2023: Construction of Tshwane Rapid Transit Route Line 2C: Lynnwood Road (between January Masilela Drive and Simon Vermooten Road) for a period of 18 months

613.04	Variation in the rate of application				
613.04.01	White paint	<i>l</i>	10		
613.04.02	Yellow paint	<i>l</i>	10		
613.04.03	Glass beads	kg	200		
613.04.04	Proprietary brand plastic paints	<i>l</i>	10		
613.04.05	Red paint	<i>l</i>	10		
613.05	Road Studs (SANS approved)				
613.05.01	Single sided road stud	No.	20		
613.05.02	Double sided road stud	No.	200		
613.05.03	Non-reflective road stud	No.	10		
TOTAL CARRIED FORWARD					

SCHEDULE A: ROADWORKS

SECTION 613

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT R
TOTAL BROUGHT FORWARD					
613.06	Setting out and the pre-marking of lines (excluding traffic-island markings, lettering and symbols)	km	10.00		
TOTAL CARRIED TO SUMMARY					

SCHEDULE A: ROADWORKS

ITEM	DESCRIPTION	UNIT	QTY	RATE	
903	SERIES 9 : QUALITY CONTROL TESTING				
903.06	Other special tests required by the Engineer				
903.06.01	Cost of testing	PC Sum	1	1,500,000.00	
903.06.02	Charge on prime sum	%	1,500,000		
TOTAL CARRIED TO SUMMARY					

**TSHWANE BUS RAPID TRANSIT (BRT) INFRASTRUCTURE ON LINE 2C WP2: LYNNWOOD ROAD
BETWEEN JANUARY MASILELA DRIVE AND SIMON VERMOOTEN**

PRICING SCHEDULE : ELECTRICAL WORKS

SECTION 1 : PRELIMINARY AND GENERAL

Item	Description	Unit	Qty	Rate
1.1	GENERAL			
1.1.1	Allow for complying with all clauses as per tender documentation, including all Special and General conditions of Contract and Labour requirements, and for providing all works and services for which no specific items are listed in the Bills of Quantities	L/Sum	1	
1.2	STORAGE			
1.2.1	Provide for storage of plant, materials and equipment on site including protection thereof	L/Sum	1	
1.2.2	Tidying up of site and removal of redundant material	L/Sum	1	
1.3	AS-BUILT DRAWINGS AND CATALOGUES			
1.3.1	Supply five full sets of as-built drawings to show the exact positions of cables, cable joints road crossings, etc. as well as instruction manuals & spare parts catalogues to spec. These as-built drawings must be handed to the Engineer on completion of the contract	L/Sum	1	
1.4	SWITCHING COST			
1.4.1	Liaising with Tshwane for isolation and disconnections, from supply points. Connection and reconnection to Tshwane supply points	L/Sum	1	
1.5	TESTING AND COMMISSIONING			
1.5.1	Test and commission complete installation, with three copies of test results and certificates	L/Sum	1	
1.6	MANUFACTURER'S WORKSHOP DRAWINGS			
1.6.1	Provision of manufacturer's workshop drawings and technical information including data sheets and lighting distribution drawings for approval by the Engineer before ordering	L/Sum	1	
1.7	CERTIFICATES OF COMPLIANCE			
1.7.1	Final commissioning and testing in the presence of the Electrical Engineer, and provision of Certificates of Compliance	L/Sum	1	
TOTAL FOR SECTION 1 CARRIED FORWARD TO SUMMARY PAGE				

TSHWANE BUS RAPID TRANSIT (BRT) INFRASTRUCTURE ON LINE 2C WP2: LYNNWOOD ROAD BETWEEN JANUARY MASILELA DRIVE AND SIMON VERMOOTEN				
PRICING SCHEDULE : ELECTRICAL WORKS				
SECTION 2 : RETICULATION SYSTEM				
Item	Description	Unit	Qty	Rate
2.1	RETICULATION SYSTEM Supply 12 Way LV kiosk as per CoT specifications, complete with plinth and electronic access control system as per City of Tshwane specifications			
2.1.1	Supply	No	4	
2.1.2	Install	No	4	
2.2	LOW VOLTAGE CABLES 600/1000V PVC/ECC Aluminium cable laid in open trenches, drawn in sleeves as necessary. Cable terminations to include glands, shrouds, lugs, connections and commissioning per cable end NOTE: Notwithstanding the fact that the lengths of cables as given in the Bill of Quantities have been measured from scaled drawings, the contractor shall check such lengths on site before ordering the cable as he/she will not be paid for excess cable after the completion of the service. Any allowance for off-cuts shall be made in the unit rates. The final measurements shall be based on the nett route length of the cable concerned.			
2.2.1	25 mm² PVC AL LV 4 Core ECC Armoured Cable			
2.2.1.1	Supply	m	10500	
2.2.1.2	Install	m	10500	
2.2.1.3	Termination	No	742	
2.2.1.4	Through Joint	No		Rate Only
2.2.2	70mm² PVC AL LV 4 Core ECC Armoured Cable			
2.2.2.1	Supply	m	370	
2.2.2.2	Install	m	370	
2.2.2.3	Termination	No	10	
2.2.2.4	Through Joint	No		Rate Only
2.2.3	120mm² PVC AL LV 4 Core ECC Armoured Cable			
2.2.3.1	Supply	m	300	
2.2.3.2	Install	m	300	
2.2.3.3	Termination	No	8	
2.2.3.4	Through Joint	No		Rate Only
2.3	ENCASING LV CABLE IN SOILCRETE Encasing electrical cabling and other services in a 200mm X300mm trench using 20MPa soilcrete			
	Supply	m	9150	
	Install	m	9150	

2.4	EXCAVATIONS Excavations for cable and sleeve trench including temporary support of sides, keeping excavation dry, bedding material, backfilling, soilcrete and compacting as specified. Where required, the removal of excess material from site shall be included in the rates below			
2.4.1	Excavation in soft material	m	9000	
2.4.2	Excavation in intermediate material	m	100	
2.4.3	Excavation in hard rock	m	50	
2.4.4	Extra over for using backfill material obtained from sources provided by the Contractor	m³	50	
2.4.5	Bedding under and filling around cables comprising sifted sand and soilcrete	m³	9200	
2.5	SLEEVE PIPES Supply and install cable sleeves and associated accessories and manholes as specified			
2.5.1	150mmø Flexible uPVC underground sleeves suitable for electrical cables to be cast into concrete encasement			
2.5.1.1	Supply	m	1000	
2.5.1.2	Install	m	1000	
2.5.2	PVC Warning Tape Supply and install PVC electrical danger tape in trench above cables or sleeves	m	11242	
2.5.3	Draw Wire Supply and install draw wire or 6 mm diameter nylon draw cord in sleeve & sleeve end as required	m	1000	
2.6	MANHOLES			
2.6.1	Provide 600X600X600 Deep cable sleeves manhole, complete with steel covers.	No	85	
2.6.2	Provide 1000x1000x1000 deep cable Electrical sleeves manhole, complete with covers	No	12	
TOTAL FOR SECTION 2 CARRIED FORWARD TO SUMMARY PAGE				

TSHWANE BUS RAPID TRANSIT (BRT) INFRASTRUCTURE ON LINE 2C WP2: LYNNWOOD ROAD BETWEEN JANUARY MASILELA DRIVE AND SIMON VERMOOTEN				
PRICING SCHEDULE : ELECTRICAL WORKS				
SECTION 3: STREET LIGHTING INSTALLATION				
Item	Description	Unit	Qty	Rate
3.1	LIGHT FITTINGS			
3.1.1	LED 48/162W (N5248A1G7D)			
3.1.1.1	Supply	No	310	
3.1.1.2	Install	No	310	
3.1.2	LED 16/54W N5244A1G7D			
3.1.2.1	Supply	No	190	
3.2.2.2	Install	No	190	
3.2	STREET LIGHT POLES All street light poles are to comply with the CoT specifications. The cost of the street light poles, mounting flange, spigots, wiring and all other accessories, band strapping of access holes, trenching and backfilling required for the planting of the street light poles are all inclusive in the below rates			
3.2.1	TAMPER PROOF TORX TOOL M6			
3.2.2	10.5m FLANGE GALVANISED STEEL POLE			
3.2.2.1	Supply	No	285	
3.2.2.2	Install	No	285	
3.2.3	1.5m STUBBY			
3.2.3.1	Supply	No	285	
3.2.3.2	Install	No	285	
3.2.4	SINGLE SPIGOT 500mm x 42			
3.2.4.1	Supply	No	95	
3.2.4.2	Install	No	95	
3.2.5	DOUBLE SPIGOT			
3.2.5.1	Supply	No	310	
3.2.5.2	Install	No	310	
3.2.6	PEDESTRIAN SIDE SPIGOT 500mm x 42			
3.2.6.1	Supply	No	95	
3.2.6.2	Install	No	95	
3.3	EXISTING STREET LIGHTING			
3.3.1	Pre- arrangements & Isolation of the power supply, disconnection of cables, removal of the luminaire, outreach arm and pole complete. Pole length: 11,0m Outreach 3m	L/Sum	1	
3.3.2	Remove old existing luminaires complete (including,protecting and transport to Tshwane depot)	L/Sum	1	
3.3.3	Temporarily store the removed poles, luminaires and outreach arms complete, in a secured area	L/Sum	1	
TOTAL FOR SECTION 3 CARRIED OVER TO SUMMARY PAGE				

**TSHWANE BUS RAPID TRANSIT (BRT) INFRASTRUCTURE ON LINE 2C WP2: LYNNWOOD ROAD
BETWEEN JANUARY MASILELA DRIVE AND SIMON VERMOOTEN**

PRICING SCHEDULE : ELECTRICAL RETICULATION WORKS

SECTION 4 : TELE-MANAGEMENT SYSTEM

Item	Description	Unit	Qty	Rate
4.1	Tele-management System			
4.1.1	Supply and Install tele-management units in each luminaire	ea	500	
4.1.2	Supply and Install tele-management Sector controllers	ea	1	
4.1.3	Supply and install GSM modems with all accessories required for full operation of the tele-management system as indicated	ea	1	
4.1.4	Supply and install at the City of Tshwane Electrical Department a new PC, as specified, complete with all software and hardware required, to ensure full functionality of the Tele-management System	Item	1	
4.1.5	Program and commission and hand-over in full operating condition the specified Tele-management installation and system	L/Sum	1	
4.1.6	Provide complete training, with training material and training manuals to City of Tshwane Electrical Department personnel in respect of the operation and maintenance of the Tele-management System and Installation. (Minimum three persons)	L/Sum	1	
TOTAL FOR SECTION 4 CARRIED OVER TO SUMMARY PAGE				

**TSHWANE BUS RAPID TRANSIT (BRT) INFRASTRUCTURE ON LINE 2C WP2: LYNNWOOD ROAD
BETWEEN JANUARY MASILELA DRIVE AND SIMON VERMOOTEN**

PRICING SCHEDULE : ELECTRICAL WORKS

SECTION 5 : PROVISIONAL AMOUNTS

Item	Description	Unit	Qty	Labour
5.1	Tshwane Costs			
5.1.1	Relocation of existing Electrical Services and connecting into the existing supply	PC Sum	1	300,000.00
5.1.2	Profit and Handling on item 5.1.1 above (State % in Labour Rate Column)	%		
5.1.3	Additional pipe crossings required by Tshwane	PC Sum	1	50,000.00
5.1.4	Profit and Handling on item 5.1.3 above (State % in Labour Rate Column)	%		
TOTAL FOR SECTION 5 CARRIED FORWARD TO SUMMARY PAGE				

SUMMARY OF SECTIONS

SERIES	DESCRIPTION	AMOUNT R
SERIES 0	GENERAL	
001	GENERAL REQUIREMENTS AND CHARGES	
002	ENGINEER'S ACCOMMODATION	
SERIES 1	ANCILLARY WORKS	
101	SITE CLEARANCE	
102	ACCOMMODATION OF TRAFFIC	
103	OVERHAUL	
106	SERVICE DUCTS	
B107	DAYWORKS	
SERIES 2	EARTHWORKS	
202	TRENCHING	
203	MASS EARTHWORKS	
SERIES 5	DRAINAGE AND EROSION PROTECTION	
501	SUBSURFACE DRAINS AND DRAINAGE BLANKETS	
502	PRERABRICATED CULVERT AND STORMWATER SEWERS	
503	KERBING AND CHANNELLING	
SERIES 6	ROADS AND PARKING AREAS	
601	GRAVEL PAVEMENT LAYERS	
602	CRUSHED-STONE PAVEMENT LAYERS	
604	STABILISATION	
605	PRIME COAT	
606	ASPHALT BASE AND SURFACING	
609	SEGMENTED PAVING	
611	GUARDRAILS	
612	TRAFFIC SIGNS	
613	TRAFFIC MARKINGS	
TOTAL CARRIED FORWARD		

SUMMARY OF SECTIONS

SERIES	DESCRIPTION	AMOUNT R
TOTAL CARRIED FORWARD		
SERIES 9	QUALITY CONTROL	
903	TESTING	
Elec	Electrical Works	
	TOTAL	

CALCULATION OF THE TENDER SUM	
TOTAL OF SCHEDULED PRICES	
ADD 10% FOR CONTINGENCIES	
SUBTOTAL	
ADD 15% VAT	
CONTRACT PRICE CARRIED FORWARD TO FORM OF OFFER	