

THEMBISILE HANI LOCAL MUNICIPALITY
SCHEDULE: ROUTINE ROAD MAINTENANCE
PART A: MANAGEMENT SECTION

SCHEDULE M0200

ITEM NO	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
M0200	<u>GENERAL REQUIREMENTS AND PROVISION</u>				
M020.01	Information sign boards				
M020.01(a)	Type 1 (large)	No	1,00		
M020.01(b)	Type 2 (small)	No	1,00		
M020.02	Compensation to landowners				
M020.02(a)	Compensation to landowners	Prov Sum			
M020.02(b)	The Contractor's overhead charges and profit in respect of sub-item M020.02 (a) above	%			
M020.04	Stakeholder and Community Liaison and Social Facilitation				
M020.04(a)	Cost of Liaison, Social Facilitation and PLC Support	Prov Sum			
M020.04(b)	Handling cost and profit in respect of sub-item M020.04(a)	%			
M020.05	Target Group Participation				
M020.05(a)	Contract Participation Performance Bonus	Prov Sum			
M020.06	Training, coaching, guidance, mentoring and assistance				
M020.06(a)	Training Costs:				
M020.06(a)(i)	Accredited generic skills training	Prime cost			
M020.06(a)(ii)	Community skills training	Prime cost			
M020.06(a)(iii)	Handling cost and profit in respect of subitems M020.06(a)(i) and (ii)	%			
M020.06(b)	Other costs during training				
M020.06(c)	Training Venue	Lump sum			
M020.07	Wellness Program				
M020.07(a)	Office Facilities for Wellness Champion	Month	1,00		
M020.07(b)	Wellness Champion	Prov Sum			
M020.07(c)	Venue for ACT process	Prov Sum			
M020.07(d)	Transport for workers and their immediate families for ACT process	Prov Sum			
M020.07(e)	Remuneration for workers during ACT process	Prov Sum			
M020.07(f)	The Contractor's overhead charges and profit in respect of sub-item M020.07 (b) to (e)	%			
M020.08	Transport for Wellness Champion				
M020.08(a)	Transport for Wellness Champion	Prov Sum			
M020.08(b)	The Contractor's overhead charges and profit in respect of sub-item M020.08 (a)	%			
M020.09	Provision of Security Services				
M020.09(a)	Provision of Grade C Security Guards				
M020.09(b)	Provision of armed Security Guards	person/day	1,00		
M020.09(c)	Provision of response vehicle	person/day	1,00		
M020.10	Provision of security services	hour	1,00		
M020.10(a)	Provision of armed security services on National Route	Prov sum			
M020.10(b)	The Contractors overhead charges and profit in respect of sub-item M020.10(a)	%			
M0200	TOTAL CARRIED TO SUMMARY				

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PART A: MANAGEMENT SECTION

SECTION M0300

ITEM NO	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
M0300	<u>CONTRACTOR'S ESTABLISHMENT ON SITE AND GENERAL OBLIGATIONS</u>				
M030.01	Fixed obligations	Lump sum			
M030.02	Value related obligations	Lump sum			
M030.03	Time-related obligations				
M030.03(a)	General obligations	Month	1,00		
M030.03(b)	Occupational health and safety obligation	Month	1,00		
M030.03(c)	Environmental obligations	Month	1,00		
M030.03(d)	Reporting obligations	Month	1,00		
M030.04	Additional costs for subcontractors				
M030.04(a)	Establishment on site and general obligations of subcontracts	Prov sum			
M030.04(b)	Fluctuation between the main contractor's rates and the tendered rates of the subcontractors	lump sum			
M030.05	Tenders Process for Targeted Enterprises				
M030.05(a)	Contractor's charge for the management and execution of the Targeted Enterprise procurement process:				
M030.05	Tenders Process for Targeted Enterprises				
M030.05(a)	Contractor's charge for the management and execution of the Targeted Enterprise procurement process:	No	1,00		
M030.05(a)(i)	Procurement process for the totality of all tenders concluded for the appointment of Targeted Enterprise subcontractors	No	1,00		
M030.05(a)(ii)	Procurement process for the totality of all tenders concluded for the appointment of Targeted Enterprise subcontractors	No	1,00		
M030.05(a)(iii)	Procurement process for the totality of all tenders concluded for the appointment of Targeted Enterprise	No	1,00		
M030.06	Responsibilities of the Contractor towards Targeted Enterprises				
M030.06(a)	Contractor's establishment, management, management support, assistance, coaching, guidance, mentoring and supervision of Targeted Enterprises	Month	1,00		
M030.07	Construction Works by Targeted Enterprises				
M030.07(a)	Payments associated with the construction works carried out by Targeted Enterprise subcontractors	Prime cost			
M030.07(b)	Handling costs and profit in respect of payment associated with subitem M030.07(a)	%			
M030.08	Preparing and maintaining a Portfolio of Evidence for each subcontractors				
M030.08(a)	Preparing and maintaining a Portfolio of Evidence for each subcontractors	Prov Sum			
M030.08(b)	The Contractors overhead charges and profit in respect of sub-item M030.08 (a)	%			
M0300	TOTAL CARRIED FORWARD TO SUMMARY				

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PART B: OPERATIONAL SECTION

ITEM NO	DESCRIPTION	UNIT	QUANTITY	RATE	BILL C3.2 AMOUNT
C3.2	<u>CULVERTS</u>				
C3.2.1	Excavation for culvert structures:				
C3.2.1.1	Excavating in all material situated within the following depth ranges below the surface level:				
	(a) 0 m to 1,5 m	m ³	1		
	(b) Exceeding 1,5 m and up to 3,0 m	m ³	1		
	(c) Etc, in increments of 1,5 m	m ³	1		
C3.2.1.2	Excavating soft material 0 m to 1,5 m below the surface level using labour enhanced construction methods, or instructed by hand under Clause A3.2.7.2d):	m ³	1		
C3.2.1.3	Excavating intermediate material 0 m to 1,5 m below the surface level using	m ³	1		
C3.2.1.4	Extra over sub-item C3.2.1.1 for excavation in hard or boulder material, irrespective of depth	m ³	1		
C3.2.1.5	Extra over sub-item C3.2.1.1 for excavation in stabilised existing road layers,	m ³	1		
C3.2.2	Backfilling:				
C3.2.2.1	Using the excavated material	m ³	1		
C3.2.2.2	Using imported selected material:	m ³	1		
	(a) From commercial sources	m ³	1		
	(b) From sources on site	m ³	1		
C3.2.2.3	Extra over sub-items C3.2.2.1 and C3.2.2.2 for soil cement backfilling				
	(a) With wet mixture of 3 % cement	m ³	1		
	(b) With dry mixture of 3 % cement	m ³	1		
	(c) Variation in cement	kg	1		
C3.2.2.4	Extra over sub-items C3.2.2.1 and C3.2.2.2 for screed layers (class of concrete indicated)	m ³	1		
C3.2.3	Concrete pipe culverts: <i>Fit and supply</i>				
C3.2.3.1	On Class A bedding				
	(i) 900 mm dia. Class 100D	m	1		
	(ii) 600 mm dia. Class 100D	m	1		
	(iii) 450mm dia. Class 100D	m	1		
C3.2.3.2	On Class B bedding				
	(i) 900 mm dia. Class 100D	m	1		
	(ii) 600 mm dia. Class 100D	m	1		
	(iii) 450mm dia. Class 100D	m	1		
C3.2.3.3	On Class C bedding				
	(i) 900 mm dia. Class 100D	m	1		
	(ii) 600 mm dia. Class 100D	m	1		
	(iii) 450mm dia. Class 100D	m	1		
C3.2.3.4	On Class D bedding				
	(i) 900 mm dia. Class 100D	m	1		
	(ii) 600 mm dia. Class 100D	m	1		
	(iii) 450mm dia. Class 100D	m	1		
C3.2	TOTAL CARRIED FORWARD				

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PART B: OPERATIONAL SECTION

ITEM NO	DESCRIPTION	UNIT	QUANTITY	RATE	BILL C3.2 AMOUNT
C3.2	TOTAL BROUGHT FORWARD				
C3.2.3.5	Provision of skew ends of pipe culvert				
	(i) 900 mm dia. Class 100D	No	1		
	(ii) 600 mm dia. Class 100D	No	1		
	(iii) 450mm dia. Class 100D	No	1		
C3.2.5	Rectangular culverts with prefabricated elements				
C3.2.5.1	Prefabricated portal culverts; wall and roof combination				
	(i) 600x 450 mm Class 200 (SANS 986)	m	1		
	(II) 600 x 600 mm Class 200 (SANS 986)	m	1		
	(iii) 750 x600 mm Class 175 S (SANS 986)	m	1		
	(iv) 750X750 mm Class 175 S (SANS 986)	m	1		
	(v) 900X450 mm Class 175 S (SANS 986)	m	1		
	(vi) 900X600 mm Class 175 S (SANS 986)	m	1		
	(vii) 900 x 900mm Class 175 S (SANS 986)	m	1		
C3.2.5.2	Prefabricated floor slabs				
	(i) 450x640 mm	m	1		
	(ii) 600x800 mm	m	1		
	(iii) 900x1150	m	1		
	(iv) 1,2 x 1,2 m	m	1		
C3.2.5.3	Prefabricated roof slabs				
	(i) 450x640 mm	m	1		
	(ii) 600x800 mm	m	1		
	(iii) 900x1150	m	1		
	(iv) 1,2 x 1,2 m	m	1		
C3.2.6	Extra over items C3.2.3 for constructing inclined culverts	m	1		
C3.2	TOTAL CARRIED FORWARD				

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PART B: OPERATIONAL SECTION

ITEM NO	DESCRIPTION	UNIT	QUANTITY	RATE	BILL C3.2 AMOUNT
C3.2	TOTAL BROUGHT FORWARD				
C3.2.7	Cast in situ concrete and formwork:				
C3.2.7.1	In Class A bedding, screeds, concrete backfill and the encasing for pipes, including formwork,				
	(i) 15Mpa/19mm	m ³	1		
	(ii) 35Mpa/19mm	m ³	1		
C3.2.7.2	In complete in situ floor slabs for rectangular culverts, manholes and catchpits including formwork, joints and Class U2 surface finish (class of concrete indicated) (installed at a standard depth of 1,0 m)	m ³	1		
C3.2.7.3	In walls, excluding formwork but including Class U2 surface finish (class of				
	(i) 15Mpa/19mm	m ³	1		
	(ii) 35Mpa/19mm	m ³	1		
C3.2.7.4	In roof slabs for rectangular culverts, excluding formwork but including Class U2 surfacing finish and joints	m ³	1		
	(i) 15Mpa/19mm	m ³	1		
	(ii) 35Mpa/19mm	m ³	1		
C3.2.7.5	In inlet and outlet structures including kerbs, chutes and downpipes, skewed				
	(i) 15Mpa/19mm	m ³	1		
	(ii) 35Mpa/19mm	m ³	1		
C3.2.7.6	Formwork of concrete under items C3.2.7.3 to 5 above	m ²	1		
C3.2.7.7	Concrete linings for the inverts of metal culverts, including formwork and Class U2 surface finish	m ³	1		
	(i) 15Mpa/19mm				
	(ii) 35Mpa/19mm				
C3.2.8	Concrete backfill or encasement for culverts	m ³	1		
C3.2.9	Prefabricated concrete inlets and outlets to culverts (size and type indicated)				
C3.2.10	Reinforcement:				
C3.2.10.1	Mild steel bars	t	1		
C3.2.10.2	High-tensile steel bars	t	1		
C3.2.10.3	Welded steel fabric	t	1		
C3.2.12	Demolition of concrete members or elements:	m	1		
C3.2.12.1	Full member or element	m	1		
C3.2.12.2	Partial member or element	m	1		
C3.2.13	Removing and re-laying existing culverts:	m	1		
C3.2.13.1	Removing and stacking existing culverts for re-use				
	(i) 900 mm dia. Class 100D	m	1		
	(ii) 600 mm dia. Class 100D	m	1		
	(iii) 450mm dia. Class 100D	m	1		
	(iv) 600x 450 mm Class 200 (SANS 986)	m	1		
	(v) 600 x 600 mm Class 200 (SANS 986)	m	1		
	(vi) 750 x600 mm Class 175 S (SANS 986)	m	1		
	(vii) 750X750 mm Class 175 S (SANS 986)	m	1		
	(viii) 900X450 mm Class 175 S (SANS 986)	m	1		
	(ix) 900X600 mm Class 175 S (SANS 986)	m	1		
	(x) 900 x 900mm Class 175 S (SANS 986)	m	1		
3.2	TOTAL CARRIED FORWARD				

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PART B: OPERATIONAL SECTION

ITEM NO	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
	TOTAL BROUGHT FORWARD				
C3.2.13.2	Removing and re-laying existing culverts without stacking				
	(a) 900 mm dia. Class 100D				
	(i) On Class A bedding	m	1		
	(ii) On Class B bedding	m	1		
	(iii) On Class C bedding	m	1		
	(iv) On Class D bedding	m	1		
	(b) 600 mm dia Class 100D				
	(i) On Class A bedding	m	1		
	(ii) On Class B bedding	m	1		
	(iii) On Class C bedding	m	1		
	(iv) On Class D bedding	m	1		
	(c) 450mm dia. Class 100D				
	(i) On Class A bedding	m	1		
	(ii) On Class B bedding	m	1		
	(iii) On Class C bedding	m	1		
	(iv) On Class D bedding	m	1		
	(d) 600x 450 mm Class 200 (SANS 986)	m	1		
	(e) 600 x 600 mm Class 200 (SANS 986)	m	1		
	(f) 750 x600 mm Class 175 S (SANS 986)	m	1		
	(g) 750X750 mm Class 175 S (SANS 986)	m	1		
	(h) 900X450 mm Class 175 S (SANS 986)	m	1		
	(i) 900X600 mm Class 175 S (SANS 986)	m	1		
	(j) 900 x 900mm Class 175 S (SANS 986)	m	1		
	TOTAL CARRIED FORWARD				

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ITEM NO	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
	TOTAL BROUGHT FORWARD				
C3.2.13.3	Re-laying existing culverts from stacking				
	(a) 900 mm dia. Class 100D				
	(i) On Class A bedding	m	1		
	(ii) On Class B bedding	m	1		
	(iii) On Class C bedding	m	1		
	(iv) On Class D bedding	m	1		
	(b) 600 mm dia. Class 100D				
	(i) On Class A bedding	m	1		
	(ii) On Class B bedding	m	1		
	(iii) On Class C bedding	m	1		
	(iv) On Class D bedding	m	1		
	(c) 450mm dia. Class 100D				
	(i) On Class A bedding	m	1		
	(ii) On Class B bedding	m	1		
	(iii) On Class C bedding	m	1		
	(iv) On Class D bedding	m	1		
	(d) 600x 450 mm Class 200 (SANS 986)	m	1		
	(e) 600 x 600 mm Class 200 (SANS 986)	m	1		
	(f) 750 x600 mm Class 175 S (SANS 986)	m	1		
	(g) 750X750 mm Class 175 S (SANS 986)	m	1		
	(h) 900X450 mm Class 175 S (SANS 986)	m	1		
	(i) 900X600 mm Class 175 S (SANS 986)	m	1		
	(j) 900 x 900mm Class 175 S (SANS 986)	m	1		
C3.2.16	Brickwork (Engineering bricks):				
C3.2.16.1	115 mm thick	m ²	1		
C3.2.16.2	230 mm thick	m ²	1		
C3.2.16.3	345 mm thick	m ²	1		
C3.2.17	Plaster	m ²	1		
C3.2.18	Benching	m ²	1		
C3.2	TOTAL CARRIED TO SUMMARY				

THEMBISILE HANI LOCAL MUNICIPALITY
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PART B: OPERATIONAL

					BILL C4.1 AMOUNT
ITEM NO	DESCRIPTION	UNIT	QUANTITY	RATE	
C4.1	<u>BORROW MATERIALS</u>				
C4.1.1	Compiling and implementing M&U plans				
C4.1.1.1	For borrow pits	No	1		
C4.1.1.2	For quarries	No	1		
C4.1.2	Additional material investigations during the supplementary exploration				
C4.1.2.1	Cost of additional trial pits and/or drilling and laboratory testing	Prov Sum			
C4.1.2.2	Handling costs and profit in respect of item C4.1.2.1	%			
C4.1.3	Construction and maintenance of temporary haul and access roads				
C4.1.3.1	Temporary unsealed roads	km	1		
C4.1.3.2	Cost to repair existing public roads or streets	Prov sum			
C4.1.3.3	Handling cost and profit in respect of item C4.1.3.2	%			
C4.1.4	Removing of the overburden				
C4.1.4.1	In borrow pits	m ³	1		
C4.1.4.2	In quarries:				
	a)Soft material	m ³	1		
	(b)Hard material (by blasting)	m ³	1		
C4.1.5	Excavating of materials in the borrow pits and quarries, material obtained from				
C4.1.5.1	Soft excavation	m ³	1		
C4.1.5.2	Boulder excavation class A	m ³	1		
C4.1.5.3	Boulder excavation class B	m ³	1		
C4.1.5.4	Hard excavation (other than by blasting)	m ³	1		
C4.1.5.5	Hard excavation (by blasting)	m ³	1		
C4.1.6	Providing crushing, screening and related plants				
C4.1.6.1	Single-stage crushing plant	No	1		
C4.1.6.2	Two-stage crushing plant	No	1		
C4.1.6.3	Multiple-stage crushing and screening plant	No	1		
C4.1.6.4	Screening plant	No	1		
C4.1.6.5	Etc, for other plants (as stated by the Engineer and/or the Contractor)	No	1		
C4.1.7	Producing the material by				
C4.1.7.1	Single-stage crushing	m ³	1		
C4.1.7.2	Two-stage crushing	m ³	1		
C4.1.7.3	Multiple-stage crushing including screening	m ³	1		
C4.1.7.4	Screening only	m ³	1		
C4.1.7.5	Etc, for other plants (as stated by the Engineer and/or the Contractor)	m ³	1		
C4.1	TOTAL CARRIED FOWARD				

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					BILL C4.1
ITEM NO	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
	TOTAL BROUGHT FORWARD				
C4.1.8	Moving and re-erecting the crushing, screening and related plants on the site				
C4.1.8.1	Single-stage crushing plant	No.	1		
C4.1.8.2	Two-stage crushing plant	No.	1		
C4.1.8.3	Multiple-stage crushing and screening plant	No.	1		
C4.1.8.4	Screening plant	No	1		
C4.1.8.5	Etc, for other plants (as stated by the Engineer and/or the Contractor)	No	1		
C4.1.9	Breaking down oversize material	m ³	1		
C4.1.10	Compacting the floor of the stockpile sites				
C4.1.11	Constructing a platform for the stockpile site	m ³	1		
C4.1.12	Stockpiling the material				
C4.1.12.1	Material from a producing plant	m ³	1		
C4.1.12.2	Material directly from the excavation	m ³	1		
C4.1.13	Removing surplus material from the stockpile	m ³	1		
C4.1.14	Removing the fill platform and temporary banks at the stockpile sites upon				
C4.1.14.1	Fill platform	m ³	1		
C4.1.14.2	Temporary banks	m ³	1		
C4.1.15	Shaping and finishing the borrow pit and quarry areas, and the stockpile sites				
C4.1.15.1	Shaping and finishing the borrow pit and quarry areas, and the stockpile sites:				
	a)Borrow pits	ha	1		
	(b)Quarries	ha	1		
	(c)Stockpile sites	ha	1		
C4.1.15.2	Finishing of the borrow pit and quarry areas, and the stockpile sites using				
	a)Borrow pits	ha	1		
	(b)Quarries	ha	1		
	(c)Stockpile sites	ha	1		
C4.1.16	Personnel				
C4.1.16.1	Materials manager	month	1		
C4.1.16.2	Excavation controller	month	1		
C4.1.16.3	Stockpile controller	month	1		
C4.1	TOTAL CARRIED TO SUMMARY				

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					BILL C4.2
ITEM NO	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
C4.2	<u>CUT MATERIALS</u>				
C4.2.1	Compiling and implementing M&U plans for the cuttings				
C4.2.1.1	Cuttings exceeding 5 000 m ³ up to 10 000 m ³	No	1		
C4.2.1.1	Cuttings exceeding 10 000 m ³ up to 20 000 m ³	No	1		
C4.2.1.1	Cuttings exceeding 20 000 m ³ up to 50 000 m ³	No	1		
C4.2.1.1	Cuttings exceeding 50 000 m ³ up to 100 000 m ³	No	1		
C4.2.1.1	Cuttings larger than 100 000 m ³	No	1		
C4.2.2	Additional material investigations during the supplementary exploration				
C4.2.2.1	Cost of additional trial pits and/or drilling and laboratory testing	Prov Sum			
C4.2.2.2	Handling costs and profit in respect of item C4.2.2.1	%			
C4.2.3	Excavating of materials in cuttings, material obtained from				
C4.2.3.1	Soft excavation	m ³	1		
C4.2.3.2	Boulder excavation class A	m ³	1		
C4.2.3.3	Boulder excavation class B	m ³	1		
C4.2.3.4	Hard excavation (other than by blasting)	m ³	1		
C4.2.3.5	Hard excavation (by blasting)	m ³	1		
C4.2.4	Excavating of materials in box cuts, material obtained from				
C4.2.4.1	Soft excavation	m ³	1		
C4.2.4.2	Boulder excavation class A	m ³	1		
C4.2.4.3	Boulder excavation class B	m ³	1		
C4.2.4.4	Hard excavation (other than by blasting)	m ³	1		
C4.2.4.5	Hard excavation (by blasting)	m ³	1		
C4.2.5	Excavating of materials in designated excavations, material obtained from				
C4.2.5.1	Soft excavation	m ³	1		
C4.2.5.2	Boulder excavation class A	m ³	1		
C4.2.5.3	Boulder excavation class B	m ³	1		
C4.2.5.4	Hard excavation (other than by blasting)	m ³	1		
C4.2.5.5	Hard excavation (by blasting)	m ³	1		
C4.2.6	Widening of existing cuttings				
C4.2.6.1	Soft excavation	m ³	1		
C4.2.6.2	Boulder excavation class A	m ³	1		
C4.2.6.3	Boulder excavation class B	m ³	1		
C4.2.6.4	Hard excavation (other than by blasting)	m ³	1		
C4.2.6.5	Hard excavation (by blasting)	m ³	1		
TOTAL CARRIED FOWARD					

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					BILL C4.2 AMOUNT
ITEM NO	DESCRIPTION	UNIT	QUANTITY	RATE	
	TOTAL BROUGHT FORWARD				
C4.2.7	Removal of unsuitable stable cut material to spoil				
C4.2.7.1	In layer thicknesses of 200 mm and less	m ³	1		
C4.2.7.2	In layer thicknesses exceeding 200 mm	m ³	1		
C4.2.8	Excavate material to spoil in sites designated by the Employer, material				
C4.2.8.1	Soft excavation	m ³	1		
C4.2.8.2	Boulder excavation class A	m ³	1		
C4.2.8.3	Boulder excavation class B	m ³	1		
C4.2.8.4	Hard excavation (other than by blasting)	m ³	1		
C4.2.8.5	Hard excavation (by blasting)	m ³	1		
C4.2.9	Excavate material to spoil in sites designated by the Contractor, material obtained from				
C4.2.9.1	Soft excavation	m ³	1		
C4.2.9.2	Boulder excavation class A	m ³	1		
C4.2.9.3	Boulder excavation class B	m ³	1		
C4.2.9.4	Hard excavation (other than by blasting)	m ³	1		
C4.2.9.5	Hard excavation (by blasting)	m ³	1		
C4.2.10	Backfilling of the unavoidable overbreak in hard and boulder excavation				
C4.2.10.1	Compliant gravel material	m ³	1		
C4.2.10.2	Soil cement (stiff mix with 3 % cement)	m ³	1		
C4.2.10.3	Soil cement (wet mix with 5 % cement)	m ³	1		
C4.2.10.4	Concrete class 15 MPa	m ³	1		
C4.2.11	Breaking down oversize material	m ³	1		
C4.2.12	Finishing the side slopes				
C4.2.12.1	Cuttings				
	(a) In soft material	m ²	1		
	(b) In boulder material class A and B	m ²	1		
	(c) In hard material	m ²	1		
	(d) In soft material using labour enhanced method	m ²	1		
C4.2.12.2	Designated excavations	m ²	1		
C4.2.12.3	Designated excavations using labour enhanced methods of construction	m ²	1		
C4.2	TOTAL CARRIED TO SUMMARY				

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BILL C4.4

ITEM NO	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
C4.4	COMMERCIAL MATERIALS				
C4.4.1	Commercial materials identified by the Employer from commercial, private or other non-commercial suppliers (specify the source(s))				
C4.4.1.1	Pavement layer material:				
	(a)Type G1 material	m ³	1		
	(b)Type G2 material	m ³	1		
	(c) - (i) Etc, for other Type G3 to G9 materials	m ³	1		
	(m)Sand for the base and shoulder layers	m ³	1		
	(n)Sand for a subbase layer	m ³	1		
	(o)Sand for a selected layer	m ³	1		
	(p)Natural or crushed gravel material for an unsealed shoulder layer	m ³	1		
	(q)Natural or crushed gravel material for the wearing course of an unsealed road	m ³	1		
C4.4.1.2	Macadam material:				
	(a)Coarse aggregate	m ³	1		
	(b)Fine aggregate	m ³	1		
C4.4.1.3	Drainage blanket layer material	m ³	1		
C4.4.1.4	Soil cement material (pre-blended by the supplier)	m ³	1		
C4.4.1.5	Fill material in the earthworks:				
	(a)Normal or coarse fill	m ³	1		
	(b)Rock fill	m ³	1		
	(c)Sand	m ³	1		
C4.4.1.6	Pioneer material	m ³	1		
C4.4.2	Commercial materials identified by the Contractor from commercial, private or other non-commercial suppliers				
C4.4.2.1	Pavement layer material:				
	(a)Type G1 material	m ³	1		
	(b)Type G2 material	m ³	1		
	(c) - (i) Etc, for other Type G3 to G9 materials	m ³	1		
	(m)Sand for the base and shoulder layers	m ³	1		
	(n)Sand for a subbase layer	m ³	1		
	(o)Sand for a selected layer	m ³	1		
	(p)Natural or crushed gravel material for an unsealed shoulder layer	m ³	1		
	(q)Natural or crushed gravel material for the wearing course of an unsealed road	m ³	1		
C4.4.2.2	Macadam material:				
	(a)Coarse aggregate	m ³	1		
	(b)Fine aggregate	m ³	1		
C4.4.2.3	Drainage blanket layer material	m ³	1		
C4.4.2.4	Soil cement material (pre-blended by the supplier)	m ³	1		
C4.4	TOTAL CARRIED FOWARD				

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BILL C4.4

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BILL C4.5

ITEM NO	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
C4.5	<u>ALTERNATIVE MATERIALS</u>				
C4.5.1	Additional material investigations				
C4.5.1.1	Cost of sampling and laboratory testing	Prov sum			
C4.5.1.2	Handling cost and profit in respect of item C4.5.1.1	%			
C4.5.2	Removing unwanted material from alternative materials identified by the Employer				
C4.5.2.1	Contaminant material	Prov sum			
C4.5.2.2	Handling cost and profit in respect of item C4.5.2.1	%			
C4.5.2.3	Hazardous material	Prov sum			
C4.5.2.4	Handling cost and profit in respect of item C4.5.2.3	%			
	Cost to procure alternative materials identified by the Employer				
C4.5.3.1	Cost of procuring	Prov sum			
C4.5.3.2	Handling cost and profit in respect of item C4.5.3.1	%			
C4.5	TOTAL CARRIED TO SUMMARY				

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BILL 204

ITEM NO	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
204	<u>REGRAVELLING EARTHWORKS</u>				
204,01	Roadway excavations (a) Removal of rocks	m ³	1,00		
204,09	Embankment construction (a) Rehabilitation of barrow pits	m ³	1,00		
M170,04	Extra over items 20401(a) & 20409(a) for Overhaul on material hauled in excess of 1,0km	m ³ -km	1,00		
204	TOTAL CARRIED FORWARD TO SUMMARY				

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BILL M0500

ITEM NO	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
M0500	ACCOMMODATION OF TRAFFIC				
PM0500,01	Provision of temporary traffic control facilities				
	(a) Portable STOP/GO signs 750mm	No	1,00		
	(b) Road signs: R and TR-series				
	(i) 1200mm	No	1,00		
	(ii) 900mm	No	1,00		
	(c) Road signs: TW-Series				
	(i) 1500mm	No	1,00		
	(ii) 1200mm	No	1,00		
	(d) Rectangular road signs: TGS-, TIN- and TW-series (excluding delineators and barricades)	m ³	1,00		
	(e) Delineators				
	(i) 1000mm X 250mm	No	1,00		
	(ii) 800mm X 200mm	No	1,00		
	(f) Barricades				
	(i) 2400mm X 400mm	No	1,00		
	(ii) 1800mm X 300mm	No	1,00		
	(g) Traffic cones: 750mm	No	1,00		
PM050,02	Accommodation of traffic and maintaining temporary deviations				
	(a) General provisions	Month	1,00		
	(b) Work undertaken by contractor	Month	1,00		
	(c) Work undertaken by sub-contractor	Prov Sun			
M0500	TOTAL CARRIED FORWARD TO SUMMARY				

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BILL M0600[illegible]

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BILL M1100

ITEM NO	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
M1100	<u>PAVEMENT LAYERS REPAIR</u>				
M110.02	Milling out material from existing pavements				
M110.02(a)	Not exceeding 30 mm	m ³	1		
M110.02(b)	Exceeding 30mm but not 60mm	m ³	1		
M110.02(c)	Exceeding 60mm but not exceeding 150mm	m ³	1		
M110.02(d)	Exceeding 150mm but not exceeding 250mm	m ³	1		
M110.02(e)	Exceeding 250mm but not exceeding 350mm	m ³	1		
M110.02(f)	Establishing of milling machine on site	No	1		
M110.02(g)	Moving the milling machine on site for distance exceeding 5,0 km	No	1		
M110.03	Backfilling of base layer for surface failures with (98% of modified AASHTO density):				
M110.03(a)	Chemically stabilised gravel excavated from the existing pavement				
M110.03(a)(i)	Areas up to 50m ²	m ³	1		
M110.03(a)(ii)	Areas exceeding 50m ² up to 100m ²	m ³	1		
M110.03(a)(iii)	Areas exceeding 100m ²	m ³	1		
M110.03(a)(iv)	Extra over sub-item (a)(i), (ii) and (iii) for procuring and importing gravel material	m ³	1		
M110.03(b)	Emulsion-treated crushed stone pavement				
M110.03(b)(i)	Areas up to 50m ²	m ³	1		
M110.03(b)(ii)	Areas exceeding 50m ² up to 100m ²	m ³	1		
M110.03(b)(iii)	Areas exceeding 100m ²	m ³	1		
M110.03(b)(iv)	Extra over sub-item (a)(i), (ii) and (iii) for importing crushed stone	m ³	1		
M110.03(c)	Asphalt base (hot mix– continuously graded 28mm max.)				
M110.03(c)(i)	Areas up to 50m ²	ton	1		
M110.03(c)(ii)	Areas exceeding 50m ² up to 100m ²	ton	1		
M110.03(c)(iii)	Areas exceeding 100m ²	ton	1		
M110.04	Surfacing of base layer repairs with:				
M110.04(a)	Asphalt surfacing (hot mix - continuously graded medium)				
M110.04(a)(i)	Areas up to 50m ²	ton	1		
M110.04(a)(ii)	Areas exceeding 50m ² up to 100m ²	ton	1		
M110.04(a)(iii)	Areas exceeding 100m ²	ton	1		
M110.04(b)	Cold premixed asphalt mixture (cold mix)				
M110.04(b)(i)	Areas up to 50m ²	ton	1		
M110.04(b)(ii)	Areas exceeding 50m ² up to 100m ²	ton	1		
M110.04(b)(iii)	Areas exceeding 100m ²	ton	1		
M110.05	Establishment and moving of asphalt paver on site				
M110.05(a)	Establishment of asphalt paver	No	1		
M110.05(b)	Moving the paver on site for distance exceeding 5,0 km	No	1		
M1100	TOTAL CARRIED FORWARD				

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BILL M1100

ITEM NO	DESCRIPTION	UNIT		RATE	AMOUNT
	TOTAL BROUGHT FORWARD				
M110.06	Backfilling of pavement layers				
M110.06(a)	Subbase layer				
M110.06(a)(i)	Areas up to 50m ²	m ³	1		
M110.06(a)(ii)	Areas exceeding 50m ² up to 100m ²	m ³	1		
M110.06(a)(iii)	Areas exceeding 100m ²	m ³	1		
M110.06(b)	Selected layer				
M110.06(b)(i)	Areas up to 50m ²	m ³	1		
M110.06(b)(ii)	Areas exceeding 50m ² up to 100m ²	m ³	1		
M110.06(b)(iii)	Areas exceeding 100m ²	m ³	1		
M110.06(c)	Fill layer				
M110.06(c)(i)	Areas up to 50m ²	m ³	1		
M110.06(c)(ii)	Areas exceeding 50m ² up to 100m ²	m ³	1		
M110.06(c)(iii)	Areas exceeding 100m ²	m ³	1		
M110.07	Binder Variation				
M110.07(a)	Penetration grade bitumen	ton	1		
M110.07(b)	Anionic bitumen emulsion	litre	1		
M110.07(c)	Cationic bitumen emulsion	litre	1		
M110.07(d)	Invert bitumen emulsion	litre	1		
M110.08	Variation in active filler content				
M110.08(a)	Cement	ton	1		
M110.08(b)	Lime	ton	1		
M110.09	Overhaul of material hauled in excess of 1,0 km	m ³ -km	1		
M1100	TOTAL CARRIED TO SUMMARY				

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BILL 1200

ITEM NO	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
M1200	<u>REPAIR OF POTHOLES</u>				
PM120,01	Pothole,edge breaks and surface failure repairs to road network as ordered by the Engineer				
PM120,02	Pothole repair (<0,5m ²) using:				
	(a) Cold mix	No	1		
	(b) Hot mix continuously graded asphalt	No	1		
M1210	REPAIR OF EDGE BREAKS				
PM121,01	Repairing edge breaks using hot mix continuously graded asphalt				
	(a) Cold mix	m	1		
	(b) Hot mix continuously graded asphalt	m	1		
M1220	REPAIR OF SURFACE FAILURES				
PM122,01	Surface failure repair using hot mix continuously graded asphalt				
	(a) Cold mix	m	1		
	(b) Hot mix continuously graded asphalt	m	1		
M1230	TEMPORARY REPAIR OF POTHOLES				
M123,01	(a) Cold mix from commercial sources	No	1		
	(b) Mixed on site as per specified	No	1		
M1200	TOTAL CARRIED FOWARD TO SUMMARY				

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BILL 1300

ITEM NO	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
M1300	<u>CRACK SEALING</u>				
M130.01	Cleaning and sealing the cracks				
M130.01(a)	Cleaning cracks per metre with:				
M130.01(a)(i)	Cold compressed air	m	1		
M130.01(b)	Cleaning cracks per area with:				
M130.01(b)(i)	Cold compressed air	m ²	1		
M130.01(c)	Applying herbicides for sealing cracks	litre	1		
M130.01(d)	Priming of cracks	m	1		
M130.01(e)	Sealing the cracks with:				
M130.01(e)(i)	C-E1 modified binder	m	1		
M130.01(e)(ii)	CC-E1 modified binder	m	1		
M130.01(e)(iii)	C-R1 modified binder	m	1		
M130.01(f)	Extra over M130.01(e) for filling wide cracks with fine sand to underside of base layer as specified	m	1		
M130.01(g)	Heating of surface before rolling	m	1		
M130.01(h)	Rolling the cracks	m	1		
M130.02	Geotextile crack sealing				
M130.02(a)	Sealing cracks with 200mm wide geotextile "bandage" using:				
M130.02(a)(i)	65% Cationic bitumen emulsion (solvents omitted)	m	1		
M130.02(a)(ii)	SC-E1 modified emulsion (solvents omitted)	m	1		
M130.02(a)(iii)	Other appropriate product	m	1		
M130.02(b)	Sealing "crocodile" cracks with geotextile over areas using:				
M130.02(b)(i)	65% Cationic bitumen emulsion (solvents omitted)	m ²	1		
M130.02(b)(ii)	SC-E1 modified emulsion (solvents omitted)	m ²	1		
M130.03	Prefabricated road patch for crack sealing				
M130.03(a)	Sealing "crocodile" cracks with pre-fabricated road patch over areas using:				
M130.03(a)(i)	10mm nominal size aggregate (single seal)	m ²	1		
M130.03(a)(ii)	14mm nominal size aggregate (single seal)	m ²	1		
M1300	TOTAL CARRIED TO SUMMARY				

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BILL M1400

ITEM NO	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
M1400	<u>BLEEDING REPAIR</u>				
M140,01	Correction of bleeding (Method 1) using the following aggregates sizes				
	(a) 13,2mm	m ²	1		
	(b) 9,5mm	m ²	1		
	(c) 6,7mm	m ²	1		
M140,02	Correction of bleeding (Method 2) using the following aggregates sizes				
	(a) 13,2mm	m ²	1		
	(b) 9,5mm	m ²	1		
	(c) 6,7mm	m ²	1		
M140,03	Pre-coating of aggregate	m ³	1		
M140,04	Aggregates variations				
	(a) 13,2mm	m ²	1		
	(b) 9,5mm	m ²	1		
	(c) 6,7mm	m ²	1		
M140,05	Bituminous binder variations (specify)				
	(a) Natural sand	m ³	1		
	(b) Crusher sand	m ³	1		
M1400	TOTAL CARRIED TO SUMMARY				

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BILL 1600

ITEM NO	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
M1600	<u>SURFACE TREATMENT - TEXTURE CORRECTION</u>				
M160.01	Application of slurry mixed on site				
M160.01(a)	Tack coating using 30 % stable grade bitumen emulsion	Litre	1		
M160.01(b)	Slurry applied for texture treatment (Fine Slurry Fine Grade with 60% stable-grade anionic bitumen emulsion)				
M160.01(b)(i)	Applied by hand	m ³	1		
M160.01(b)(ii)	Applied by spreader box	m ³	1		
M160.01(d)	Slurry applied for texture treatment (Fine Slurry Fine Grade, 60% stable-grade anionic bitumen emulsion + 3% Latex)				
M160.01(d)(i)	Applied by hand	m ³	1		
M160.01(d)(ii)	Applied by spreader box	m ³	1		
M160.02	Application of slurry from commercial sources				
M160.02(a)	Tack coating using 30 % stable grade bitumen emulsion	Litre	1		
M160.02(b)	Slurry applied for texture treatment (Fine Slurry Fine Grade with 60% stable-grade anionic bitumen emulsion)				
M160.02(b)(i)	Applied by hand	m ³	1		
M160.02(b)(ii)	Applied by spreader box	m ³	1		
M1610	<u>SURFACE TREATMENT -RUT FILLING</u>				
M161.01	Application of slurry for rut filling mixed on site				
M161.01(a)	Tack coating using 30 % stable grade bitumen emulsion	Litre	1		
M161.01(b)	Slurry applied by spreader box with rigid squeegees in one application for rut filling (Fine Slurry Medium Grade, Modified Cationic Bitumen Emulsion AC-E1)	m ³	1		
M161.01(i)	Slurry applied by spreader box with rigid squeegees in two applications for rut filling (Fine Slurry Coarse Grade, Modified Cationic Bitumen Emulsion AC-E2)	m ³	1		
M161.02	Application of slurry for rut filling from commercial sources				
M161.02(a)	Tack coat using 30% bitumen emulsion	Litre	1		
M161.02(h)	Slurry applied by spreader box with rigid squeegees in one application for rut filling (Fine Slurry Coarse Grade, Modified Cationic Bitumen Emulsion AC-E2)	m ³	1		
M161.02(i)	Slurry applied by spreader box with rigid squeegees in two applications for rut filling (Fine Slurry Coarse Grade, Modified Cationic Bitumen Emulsion AC-E2)	m ³	1		
M1600	TOTAL CARRIED TO SUMMARY				

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BILL 1700					
ITEM NO	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
M1700	REPAIR OF SLOPE FAILURES AND WASHAWAYS				
M170,01	Reconstruction of slope failures and wash-aways-mass earthworks				
	(a) Excavationx and removing excavated material to spoil or stockpile				
	(i) Soft Material	m ³	1		
	(ii) Intermediate material	m ³	1		
	(iii) Hard and boulder class material	m ³	1		
	(b) Drying excavated material suitable for re-use	m ³	1		
	(c) Roadbed compaction to 90% of MOD AASTHO density	m ³	1		
	(d) Backfilling of excavation with excavated material	m ³	1		
	(i) Fill embankments of 93% of MOD ASSTHO density	m ³	1		
	(ii) Cut embankments of 93% of MOD ASSTHO density	m ³	1		
M170,04	Overhaul on material hauled in excess of 1,0km	m ³ -km	1		
M1700	TOTAL CARRIED FORWARD TO SUMMARY				

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BILL M2100

ITEM NO	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
M2100	REPAIR AND MAINTENANCE OF INLET AND OUTLET STRUCTURES				
M210,01	Excavation	m ³	1		
M210,02	Backfilling	m ³	1		
	(a) Using the excavated material stabilised	m ³	1		
	(b) Using the excavated material stabilised (2,5% cement)	m ³	1		
M210,03	Reconstruction of inlet & outlet structures	m ³	1		
	(a) Concete (Class 25/19)				
	(b) Brickwork				
M210,04	Accessories				
	(a) Accessories	Prov. Sum			
	(b) The contractor's overhead charges and profit in respect of sub-items M210,04 (a)	%			
M210,05	Demolition of existnf structures				
	(a) Plain concrete	m ³	1		
	(b) Reinforced concrete	m ³	1		
	(c) Brickwork	m ³	1		
	(d) Stone masonry	m ³	1		
M210,06	Repairing of existing structures				
	(a) Concrete (Class 25/19)	m ³	1		
	(b) Bricks	m ³	1		
	(c) Stone masonry with rock material obtained from:	m ³	1		
	(i) Natural sources	m ³	1		
	(ii) Commercial sources	m ³	1		
	(d) Plastering	m ²	1		
M210,07	Steel reinforcement				
	(a) Mild steel bars	t	1		
	(b) Hight tensile steel	t	1		
	(c) Welded steel mesh	kg	1		
M210,08	Overhaul on material hauled in excess of 1,0km				
	(a) Excavated material to spoil	m ³ -km	1		
	(b) Existing structures demolished	m ³ -km	1		
M2100	TOTAL CARRIED TO SUMMARY				

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BILL M2200

ITEM NO	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
M2200	SUBSOIL DRAIN INSTALLATION AND MAINTENANCE				
M220,1	Excavation				
	(a) Excavation in soft material	m ³	1		
	(b) Excavation in hard material	m ³	1		
M220,02	Impermeable backfilling	m ³	1		
M220,03	Natural permeable material	m ³	1		
	(a) Crushed stone from commercial sources				
	(i) Coarse grade	m ³	1		
	(ii) Fine grade	m ³	1		
	(b) Sand obtained from approved source on site				
	(i) Coarse grade	m ³	1		
	(ii) Fine grade	m ³	1		
	(c) Sand obtained from approved source on site				
	(i) Coarse grade	m ³	1		
	(ii) Fine grade	m ³	1		
M220,04	Pipes				
	(a) Un-plasticized PVC pipes & fittings, normal duty complete (150mm diameter, slotted)	m	1		
	(b) High density tyoe polyethylene pressure pipes complete with couplings (150mm diameter, slotted)	m	1		
M220,05	Polyethylene sheeting 0,25mm thick	m ²	1		
M220,06	Synthetic fibre filter fabric	m ²	1		
M220,07	Composite in-place drainage system	m	1		
M220,08	Inlet & outlet structures				
	(a) Rodding eye	No	1		
	(b) Outlet structures	No	1		
M220,09	Exposing of existing drains	m ³	1		
M220,10	Clearing of subsoil drains	m	1		
	Overhaul on material hauled in excess of 1,0km				
	(a) Spoil materail	m ³ -km	1		
	TOTAL CARRIED FORWARD TO SUMMARY				

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BILL M2400

ITEM NO	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
M2400	CLEANING OF PREFABRICATED CULVERTS				
PM240,01	Cleaning of prefabricated culverts and inlet and outlet areas				
	(a) Prefabricated concrete pipes and portal culverts				
	(i) Up to 500mm	m ³	1		
	(II) 501mm - 750mm	m ³	1		
	(iii) 751mm - 1250mm	m ³	1		
	(iv) 1251mm - 1500mm	m ³	1		
	(vi) 1501mm - 2100mm	m ³	1		
M2400	TOTAL CARRIED FORWARD TO SUMMARY				

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BILL M2500

ITEM NO	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
M2500	CLEANING OF CONCRETE DRAINS AND CHANNELS				
PM250,01	Clearing of concrete drainage channels				
	(a) Remove material spread and dispose of adjacent to channels where cannot be washed back into the channel				
	(i) Channels in kerbing-channelling combinations side drains in cuts and median drains	m	1		
	(ii) Stone pitched drains	m	1		
PM250,02	Extra over PM250,01 for sweeping of concrete drainage channels				
	(a) Hand cleaning	m	1		
	(b) Machine cleaning	m	1		
M2500	TOTAL CARRIED FORWARD TO SUMMARY				

**THEMBISILE HANI LOCAL MUNICIPALITY
SCHEDULE: ROUTINE ROAD MAINTENANCE
PART B: OPERATIONAL SECTION**

BILL M2600[illegible]

**THEMBISILE HANI LOCAL MUNICIPALITY
SCHEDULE: ROUTINE ROAD MAINTENANCE
PART B: OPERATIONAL SECTION**

BILL M2700

ITEM NO	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
M2700	EDGE BUILD-UP REMOVAL				
PM270,01	Removal of edge build ups (a) Removal of edge build-up (i) Removal material and dispose of adjacent to road by hand (ii) Remove material and dispose of adjacent to road by machine	m m	1 1		
M2700	TOTAL CARRIED FORWARD TO SUMMARY				

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ITEM NO	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
M2800	CONCRETE CHANNEL MAINTENANCE OF EXISTING CHANNELS				
M280,01	Excavation				
	(a) Open drains	m ³	1		
	(i) Soft material	m ³	1		
	(ii) Hand material	m ³	1		
	(b) For chutes, kerb-channel combination				
	(i) Soft material	m ³	1		
	(ii) Hand material	m ³	1		
M280,02	Cast in situ concrete				
	(a) Linings (Class 30/19)	m ³	1		
	(b) Chutes (class 30/19)	m ³	1		
	(c) Channels for kerb and channel (Type 7 mountable kerb-refer drawing N-01-V1)	m ³	1		
	(d) Concrete berms (Class 30/19)	m ³	1		
M280,03	Concrete screed or backfill below chutes (class 30/19)	m ³	1		
M280,04	Precast concrete kerbing and chutes				
	(a) Kerbing	m	1		
	(b) Chutes(500m)	m	1		
M280,05	Steel reinforcement				
	(a) Mild steel bars	ton	1		
	(b) High tensile steel bars	ton	1		
	(c) Welded steel mesh	kg	1		
M280,07	Demolition and removal of damaged existing structures				
	(a) Plain concrete	m ³	1		
	(b) Reinforced concrete	m ³	1		
	(c) Kerbing and channelling	m ³	1		
M280,09	Overhaul on material hauled in excess of 1,0km				
	(a) Excavated material to spoil	m ³ -km	1		
	(b) Existing structures demolished	m ³ -km	1		
M2800	TOTAL CARRIED TO SUMMARY				

THEMBISILE HANI LOCAL MUNICIPALITY
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PART B: OPERATIONAL SECTION

BILL M3100

ITEM NO	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
M3100	<u>FENCING</u>				
M310.01	Clearing fence line				
M310.01(a)	2 m wide for new fences	km	1		
M310.01(b)	1 m wide alongside existing fences	km	1		
M310.02	Repair of existing fences of less than 100 m lengths:				
M310.02(a)	Stock-proof fences	m	1		
M310.02(b)	Vermin-proof fences	m	1		
M310.02(c)	Pedestrian fences	m	1		
M310.02(d)	Security fences	m	1		
M310.02(f)	Concrete palisade fence				
M310.02(f)(i)	1.2m high	m	1		
M310.02(f)(ii)	1.4m high	m	1		
M310.02(f)(iii)	1.8m high	m	1		
M310.02(f)(iv)	2,1m high	m	1		
M310.02(f)(v)	2,4m high	m	1		
M310.02(h)	Flat wrap barbed wire fencing	m	1		
M310.03	Repair of existing fence of greater than 100 m lengths:				
M310.03(a)	Stock-proof fences	m	1		
M310.03(b)	Vermin-proof fences	m	1		
M310.03(c)	Pedestrian fences	m	1		
M310.03(d)	Security fences	m	1		
M310.03(f)	Concrete palisade fences				
M310.03(f)(i)	1.2m high	m	1		
M310.03(f)(ii)	1.4m high	m	1		
M310.03(f)(iii)	1.8m high	m	1		
M310.03(f)(iv)	2,1m high	m	1		
M310.03(f)(v)	2,4m high	m	1		
M310.03(h)	Flat wrap barbed wire fencing	m	1		
M310.04	Erection of new fences of less than 1 km lengths:				
M310.04(a)	Stock-proof fences	m	1		
M310.04(b)	Vermin-proof fences	m	1		
M310.04(c)	Pedestrian fences	m	1		
M310.04(d)	Security fences	m	1		
M310.04(f)	Concrete palisade fences				
M310.04(f)(i)	1.2m high	m	1		
M310.04(f)(ii)	1.4m high	m	1		
M310.04(f)(iii)	1.8m high	m	1		
M310.04(f)(iv)	2,1m high	m	1		
M3100	TOTAL CARRIED FORWARD				

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BILL M3100

ITEM NO	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
	TOTAL BROUGHT FORWARD				
M310.04(f)(v)	2,4m high	m	1		
M310.04(h)	Flat wrap barbed wire fencing	m	1		
M310.06	New gates				
M310.06(a)	Single leaf (4.8m wide x 1.2m high)				
M310.06(a)(i)	Stock-proof fences	No	1		
M310.06(a)(ii)	Vermin-proof fences	No	1		
M310.06(a)(iii)	Pedestrian fence	No	1		
M310.06(a)(iv)	Security fences	No	1		
M310.06(b)	Double leaf (2No x 2.4m wide x 1.2m high)				
M310.06(b)(i)	Stock-proof fences	No	1		
M310.06(b)(ii)	Vermin-proof fences	No	1		
M310.07	Moving of existing fences and gates				
M310.07(a)(vi)	Concrete palisade fences	m	1		
M310.08	Dismantling of existing and damaged fences	m	1		
M310.09	Drilling and blasting holes for posts and anchors	No	1		
M3100	TOTAL CARRIED TO SUMMARY				

**THEMBISILE HANI LOCAL MUNICIPALITY
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BILL M3200

ITEM NO	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
M3200	<u>COLLECTION AND REMOVAL OF DEBRIS AND LITTER</u>				
PM320,01	Cleaning of the road reserve	m ³	1		
M3200	TOTAL CARRIED TO SUMMARY				

THEMBISILE HANI LOCAL MUNICIPALITY
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ITEM NO	DESCRIPTION	UNIT	QUANTITY	RATE	M3300 AMOUNT
M3300	<u>SHOULDER REPAIRS</u>				
M330.01	Reinstating gravel shoulder				
M330.01(a)	Ripping, watering, mixing, placing and compacting existing shoulders to 93 % of Mod AASHTO density	m3			
M330.01(b)	Extra over sub-item M330.01 (a) for adding extra material				
M330.01(b)(ii)	Commercial sources	m3			
M330.01(c)	Extra over for sub-item M330.01 (a) for stabilising material	m3			
M330.01(d)	Extra over for sub-item M330.01 (a) for adding chemical stabilising agent				
M330.01(d)(i)	Ordinary Portland cement	ton			
M330.02	Blading of gravel shoulders				
M330.02(a)	Blading of gravel shoulders	km			
M330.02(b)	Cutting of mitre drains	m			
M330.04	Overhaul on material in excess of the free-haul distance of 1,0km	m3 - km			
	TOTAL CARRIED FORWARD				

THEMBISILE HANI LOCAL MUNICIPALITY
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BILL M3500

ITEM NO	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
M3500	<u>STABILASATION OF CUTTINGS</u>				
M350,01	Barring down of rock surfaced				
	(a) Height up to 5m	m ²	1		
	(b) Height exceeding 5m up to 10m	m ²	1		
M350,02	Disposal of rock debris	m ³	1		
PM350,03	Overhaul on material in excess of 1,0km	m ³ -km	1		
M350.04	Stabilisation of cuttings by specialist				
	(a) Stabilisation of cutting slopes by specialist	Prov Sum			
	(b) The contractor's overhead charges and profit in respect of subitem M350.04(a)	%			
M3500	TOTAL CARRIED FORWARD				

THEMBISILE HANI LOCAL MUNICIPALITY
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BILL M4100

ITEM NO	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
M4100	<u>ERECTION AND REPAIR OF PERMANENT ROAD TRAFFIC SIGNS</u>				
M410.01	Erection or re-erection of road sign boards				
M410.01(a)	Area not exceeding 2 m ²	m ²	1		
M410.01(b)	Area exceeding 2 m ² but not 10 m ²	m ²	1		
M410.01(c)	Area exceeding 10 m ²	m ²	1		
M410.01(d)	Overhead road sign boards	m ²	1		
M410.02	Hazard plates				
M410.02(a)	Hazard plate and post (W401/402)				
M410.02(a)(i)	600 mm x 150 mm	No	1		
M410.02(a)(ii)	800 mm x 150 mm	No	1		
M410.02(a)(iii)	1200 mm x 300 mm	No	1		
M410.02(b)	Hazard Plate (W401/402)				
M410.02(b)(i)	600 mm x 150 mm	No	1		
M410.02(b)(ii)	800 mm x 150 mm	No	1		
M410.02(b)(iii)	1200 mm x 300 mm	No	1		
M410.02(c)	Hazard plate and post (W405/406)				
M410.02(c)(i)	450mmx450mm	No	1		
M410.02(c)(ii)	600mmx600mm	No	1		
M410.02(c)(iii)	900mmx900mm	No	1		
M410.02(d)	Hazard Plate (W405/406)				
M410.02(d)(i)	450mmx450mm	No	1		
M410.02(d)(ii)	600mmx600mm	No	1		
M410.02(d)(iii)	900mmx900mm	No	1		
M410.03	Reference marker boards				
M410.03(a)	Reference marker board and post				
M410.03(a)(i)	km Triangular board	No	1		
M410.03(a)(ii)	Board Drawing No SP-S-1-3/3	No	1		
M410.03(b)	Reference marker boards				
M410.03(b)(i)	km Triangular board	No	1		
M410.03(b)(ii)	Board Drawing No SP-S-1-3/3	No	1		
M410.04	Road sign supports				
M410.04(a)	Steel tubing (75mm D-Section 2mm wall thickness)	m	1		
M410.04(b)	Timber				
M410.04(b)(i)	100 - 125 mm	m	1		
M410.04(b)(ii)	125 - 150 mm	m	1		
M410.04(b)(iii)	150 - 175 mm	m	1		
M410.04(b)(iv)	175 - 200 mm	m	1		
M410.04(b)(v)	200 - 225 mm	m	1		
	BALANCE CARRIED FORWARD				

THEMBISILE HANI LOCAL MUNICIPALITY
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BILL M4100

ITEM NO	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
	BALANCE BROUGHT FORWARD				
M410.05	Excavation and backfilling for road sign supports				
M410.05(a)	Excavation and Backfilling	m ³	1		
M410.05(b)	Extra over subitem M410.05(a) for rock excavation	m ³	1		
M410.05(c)	Extra over subitem M410.05(a) for soilcrete backfill	m ³	1		
M410.06	Dismantling, storing and re-erecting road sign boards				
M410.06(a)	Up to 2 m ²	No	1		
M410.06(b)	Exceeding 2 m ² but not 10 m ²	No	1		
M410.06(c)	Exceeding 10 m ²	No	1		
M410.07	Dismantling and storing road sign boards				
M410.07(a)	Up to 2 m ²	No	1		
M410.07(b)	Exceeding 2 m ² but not 10 m ²	No	1		
M410.07(c)	Exceeding 10 m ²	No	1		
M410.08	Removal of road sign supports	No	1		
M410.09	Repair of road sign faces	m ²	1		
M410.10	Attachment of overlays to existing road signs (type indicated)				
M410.10(a)	Retroreflective material (prism grade)				
M410.10(a)(i)	SABS 1519 ClassII material	m ²	1		
M410.10(a)(ii)	SABS 1519 ClassIII material	m ²	1		
M410.10(a)(iii)	SABS 1519 ClassIV material	m ²	1		
M410.10(a)(iv)	1mm thick chromadek plate only	m ²	1		
M410.10(a)(v)	1.4 mm thick Chromadek or approved plate as per SANS 1519-2	m ²	1		
M410.11	Gravel drainage layer below road sign footings	m ³	1		
M410.14	Supply of Road Signs				
M410.14(a)	Road signs:R - and TR- series				
M410.14(a)(i)	900mm	No	1		
M410.14(a)(ii)	1200mm	No	1		
M410.14(b)	Road signs: W- series				
M410.14(b)(i)	1200mm	No	1		
M410.14(b)(ii)	1500mm	No	1		
M410.14(c)	Road signs: TW- series				
M410.14(c)(i)	1200mm	No	1		
M410.14(c)(ii)	1500mm	No	1		
M4100	TOTAL CARRIED TO SUMMARY				

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BILL M4200

ITEM NO	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
M4200	<u>ROAD SIGN CLEANING</u>				
M420.01	Road sign cleaning				
	(a) Cleaning of guard rail reflectors (all types)				
	(i) Cleaning of guard rail reflectors	No	1		
	(ii) Re-taping of standard guard rail reflectors - Type V Diamond Grade	No	1		
	(b) Cleaning of road signs				
	(i) Area up to 2 m ²	No	1		
	(ii) Area exceeding 2 m ² up to 10 m ²	No	1		
	(iii) Area exceeding 10 m ²	No	1		
	(c) Cleaning of overhead road signs (all sizes)				
	(d) Cleaning of danger plates				
	(i) W401/402	No	1		
	(ii) W405/W406	No	1		
M420.02	Removal of graffiti				
	(a) From road signs	m ²	1		
	(b) From structures	m ²	1		
M420.03	Painting of metal road sign elements				
	(a) Road sign supports	Litres	1		
	(b) Road sign frames	Litres	1		
M4210	REMOVAL OF ILLEGAL SIGNS				
M421.01	Removal of illegal signs				
	(a) Signs within the road reserve:				
	(i) Area exceeding 0,5 m ² up to 2 m ²	No	1		
	(ii) Area exceeding 2 m ² up to 10 m ²	No	1		
	(iii) Area exceeding 10 m ²	No	1		
	(b) Signs outside the road reserve:				
	(i) Signs outside the road reserve (Any size)	Prov Sum			
	(ii) The Contractor's overhead charges and profit in respect with item M421.01(b)(i)	%			
M4200	TOTAL CARRIED TO SUMMARY				

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BILL M4300

ITEM NO	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
M4300	<u>ROADSTUDS</u>				
M430.01	Procurement and Installation of roadstuds				
	(a)Procurement and Installation of roadstuds	ProvSum			
	(b)The Contractor's overhead charges and profit in respect of sub-item M430.01(a)	%			
M430.02	Removal of damaged roadstuds				
	(a)Surface type				
	(i)Bituminous pavements	No	1		
	(ii)Concrete pavements	No	1		
	(b)Embedded type				
	(i)Bituminous pavements	No	1		
	(ii)Concrete pavements	No	1		
M4300	TOTAL CARRIED TO SUMMARY				

THEMBISILE HANI LOCAL MUNICIPALITY
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					M4400
ITEM NO	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
M4400	<u>GUARD-RAILS ERECTION</u>				
M440.01	Supply and erection of new galvanised guard rails				
	(a)3,81 m guardrail	m	1		
M440.02	Supply and erection of new galvanised curved guard rails factory bent to a radius of less than 45,0 m				
	(a)3,81 m guardrail	m	1		
M440.03	Extra over for erection of guard rail posts				
	(a)Additional timber posts for payment item M440.01, M440.02	No	1		
	(i)Timber Post	No	1		
	(ii)Steel post				
	(b)Excavation in hard material				
	(i)Timber Post	No	1		
	(c)Backfilling guard-rail post with soilcrete				
	(i)Timber Post	No	1		
	(d)Timber Post				
	(i)Timber Post	No	1		
	(ii)Steel post	No	1		
M440.04	End units				
	(a)End wings	No	1		
	(i)3,81 m guardrail	No	1		
	(b) Terminal sections in accordance with the drawings where single guard rail sections are used				
	(i)3,81 m guardrail	No	1		
	(c)Terminal sections in accordance with the drawings where double guard rail sections are used				
	(i)3,81 m guardrail	No	1		
	(d)Bull nose end units				
	(i)3,81 m guardrail	No	1		
	(e)End unit connecting to Bridge barrier	No	1		
M440.05	Guard rail reflectors	No	1		
M440.06	Removal of damaged guard rails and re-erection of guard rails with new material				
	(a)Guard rails				
	(i)3,81 m guardrail	No	1		
	(b)End wings				
	(i)3,81 m guardrail	No	1		
	(c)Terminal sections with single guard rails				
	(i)3,81 m guardrail	No	1		
	(d)Terminal sections with double guard rails				
	(i)3,81 m guardrail	No	1		
M4400	TOTAL CARRIED FORWARD				

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ITEM NO	DESCRIPTION	UNIT	QUANTITY	RATE	M4400 AMOUNT
	TOTAL BROUGHT FORWARD				
M440.07	(e)Extra over for providing additional guard-rail posts				
	(i)Timber post	No	1		
	(ii)Steel Post (75mm D-Section 2mm wall thickness)	No	1		
	Providing of new material required for the re-erection of gaurdrails				
	(a)Supply of new guardrails	m	1		
	(b)Supply of new curved guardrails	m	1		
	(c)Timber posts	No	1		
	(d)Spacer blocks	No	1		
	(e)Steel posts	No	1		
	(f)Guardrail reflectors				
	(i)Type D1 (A)	No	1		
	(ii)Type D1 (B)	No	1		
	(iii)Type V	No	1		
	(g)End Units				
	(i)End wings	No	1		
	(ii)Terminal sections with single guardrails	No	1		
M440.08	(iii)Terminal sections with double guardrails	No	1		
	(iv)Bull nose end units	No	1		
M440.09	Drilling and blasting holes for guardrail posts	No	1		
M440.10	Reinstatement of concrete to guard rail posts (class 20/19)	m3	1		
M440.11	Re-alignment of guard rails				
	(l)3,81 m guardrail	m	1		
	Painting of guardrails	m	1		
M4400	TOTAL CARRIED TO SUMMARY				

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BILL M4600

ITEM NO	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
M4600	<u>ROAD MARKINGD PAINT</u>				
M460.02	Retro-reflective road-marking paint:				
	(a)White lines (broken or unbroken)				
	(i)100mm wide	km	1		
	(ii)150mm wide	km	1		
	(b)Yellow lines (broken or unbroken)				
	(i)100mm wide	km	1		
	(ii)150mm wide	km	1		
	(c)Red lines (broken or unbroken)				
	(i)100mm wide	km	1		
	(ii)150mm wide	km	1		
	(d)White lettering and symbols	m ²	1		
	(e)Red lettering and symbols	m ²	1		
	(f)Transverse lines, painted island and arrestor bed markings (any colour)	m ²	1		
M460.04	Setting out and pre-marking the lines (excluding traffic- island markings, lettering and symbols)	km	1		
M460.05	Removal of existing, temporary or permanent road markings by:				
	(a)Sandblasting	m ²	1		
	(b)Overpainting as temporary measure	m ²	1		
M460.06	Road markings:				
	(a)Road markings:	Provsum			
	(b)The Contractor's overhead charges and profit in respect of sub-item M460.06(a)	%			
M4600	TOTAL CARRIED TO THE SUMMARY				

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BILL M5100

ITEM NO	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
M5100	<u>GENERAL EROSION PROTECTION</u>				
M510.01	Stone pitching				
M510.01(a)	Plain pitching				
M510.01(a)(i)	Method 1	m2			
M510.01(a)(ii)	Method 2	m2			
M510.01(c)	Wired-and-grouted pitching	m2			
M510.01(d)	Grouted pitching on a concrete bed (Grade 20/19 100mm thickness)	m2			
M510.02	Riprap				
M510.02(a)	Packed riprap (2kg to 3kg mass stone)	m3			
M510.02(b)	Dumped riprap (2kg to 3kg mass stone)	m3			
M510.02(c)	Filter backing				
M510.02(c)(i)	Crushed stone	m3			
M510.02(c)(ii)	Filter sand	m3			
M510.02(d)	Synthetic-fibre filter fabric (drainage grade geotextile)	m2			
M5100	TOTAL CARRIED TO SUMMARY				

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BILL M5200

ITEM NO	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
M5200	<u>GABION PROTECTION</u>				
M520.01	Foundation trench excavation and backfilling				
M520.01(a)	In solid rock (material which requires blasting)	m ³	1		
M520.01(b)	In all other classes of material	m ³	1		
M520.02	Surface preparation for bedding the gabions	m ²	1		
M520.03	Gabions				
M520.03(a)	Gabion baskets (2m x 1m x 1m uncoated mesh, 100mm x 120mm x 2.7mm)	m ³	1		
M520.03(b)	PVC-coated gabion baskets (specify size of basket and mesh)	m ³	1		
M520.03(c)	Gabion mattresses (300mm, 6m x 2m uncoated mesh, 80mm x 10mm x 2.7mm)	m ³	1		
M520.03(d)	PVC-coated gabion mattresses (specify depth of mattres, mesh size and spacing of diaphragm)	m ³	1		
M520.04	Synthetic fibre filter fabric (grade 2)	m ²	1		
M5200	TOTAL CARRIED TO SUMMARY				

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BILL M6100[illegible]

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BILL M8100

ITEM NO	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
M8100	<u>SMALL REPAIRS OF STRUCTURES</u>				
M810.01	Minor repairs of structures				
	(a)Minor repairs to structures	Prov Sum			
	(b)The Contractor's overhead charges and profit in respect of sub-item M810.01 (a)	%			
M8100	TOTAL CARRIED TO SUMMARY				

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ITEM NO	DESCRIPTION	UNIT	QUANTITY	RATE	M9100 AMOUNT
M9100	<u>DAYWORKS SCHEDULE</u>				
M910.01	Labour during normal working hours				
	(a)Unskilled	hour	1		
	(b)Semi-skilled	hour	1		
	(c)Skilled	hour	1		
	(d)Team Leader (Ganger)	hour	1		
	(e)Flagmen	hour	1		
	(f) Qualified and experienced land Surveyor	hour	1		
M910.02	Outside normal working hours and sundays				
	(i)Unskilled	hour	1		
	(ii)Semi-skilled	hour	1		
	(iii)Skilled	hour	1		
	(iv)Team Leader (Ganger)	hour	1		
	(v)Flagmen	hour	1		
	(b)Subdays and Public holidays				
	(i)Unskilled	hour	1		
	(ii)Semi-skilled	hour	1		
	(iii)Skilled	hour	1		
	(iv)Team Leader (Ganger)	hour	1		
	(v)Flagmen	hour	1		
M910.03	Equipment and Transport				
	(a)Tipper Trucks	hour	1		
	(i)3 to 5 ton capacity	hour	1		
	(ii)More than 5 ton capacity	hour	1		
	(b)Loader (0,5 m3) bucket	hour	1		
	(c)Grader(CAT 140G or similar)	hour	1		
	(d) Compactor (Bomag BW 90)	hour	1		
	(e) Water truck (5 000 l)	hour	1		
	(f)Mechanical broom	hour	1		
	(g)Tractor-trailer combination (43 kW, 3 ton min.)	hour	1		
	(h) Suitable truck/bus for transporting labourers (40 seater)	hour	1		
	(i) Safety vehicle for pre-marking purposes	hour	1		
	(j) Compressor (air) including hoses and tools (up to 10m3/ min)	hour	1		
	(k) Dewatering pump including generators and accessories (500lt/ min)	hour	1		
	(l) Mobile electric welding sets and accessories (up to 10kw: 50-190 amp)	hour	1		
	(m) Cutting torch with mobile electric & oxy acetylene installation	hour	1		
	(n) Mobile concrete mixers (150lt)	hour	1		
M9100	TOTAL CARRIED FORWARD				

THEMBISILE HANI LOCAL MUNICIPALITY
SCHEDULE: ROUTINE ROAD MAINTENANCE
PART B: OPERATIONAL SECTION

BILL M9100

ITEM NO	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
M9100	TOTAL BROUGHT FORWARD				
	(o) Flat bed truck (specify size)				
	(i) 6 ton	hour	1		
	(ii) 10 ton	hour	1		
	(p)Light delivery vehicle (LDV)	hour	1		
	(q)Centremount cranes (20t)	hour	1		
	(r)Portable generator set (6.5 KVa)	hour	1		
	(s)TLB	hour	1		
	(t)Bobcat(3 ton)	hour	1		
	(v)Excavator (18-22 ton tracked)	hour	1		
	(x)Establishment of loader (bucket 0,5 cubic metre) to site	No	1		
	(y)Establishment of grader (CAT 140 G or similar)	No	1		
	(z)Establishment of Excavator (18-22 ton tracked)	No	1		
	Other machinery				
	(i) Vibratory roller	hour	1		
	(ii) Pneumatiic roller	hour	1		
	(iii) Asphalt milling machine(6 ton)	hour	1		
	(iv)Deisel bowser trailer(5000l)	hour	1		
	(v) Tar sprayer (10kl lt)/Paver	hour	1		
M910.04	Procurement of materials				
	(a)Procurement of materials	No	1		
	(b)The Contractor's overhead charges and profit in respect of sub-item M910.04 (a)	No	1		
M910.05	Extra over item M910.03 for establishment, within 24 hours of				
	(a)Tipper trucks				
	(i)3 to 5 ton capacity	No	1		
	(ii)More than 5 ton capacity	No	1		
	(b)Dewatering pump including generators and accessories (1000 l/min)	No	1		
	(c)Water truck (5 000 l)	No	1		
	(d)TLB	No	1		
	(e)Bobcat	No	1		
M910,06	Repairs to the road network				
	(a)Repairs to the road network	Prov Sum			
	(b)The Contractor's overhead charges and profit in respect of sub-item M910.06(a)	%			
M910.07	Minor road infrastructure				
	(a)Minor Infrastructure	Prov Sum			
	(b)The Contractors overhead charges and profit in respect of subitem M910.07(a)	%			
M9100	TOTAL CARRIED FORWARD				

THEMBISILE HANI LOCAL MUNICIPALITY
SCHEDULE: ROUTINE ROAD MAINTENANCE
PART B: OPERATIONAL SECTION

BILL C14.1

ITEM NO	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
C14.1	<u>ACCESS FOR BRIDGE</u>				
C14.1.1	Temporary access structures and work platforms:				
BC14.1.1.1	Access and platforms to locations as described as well as dismantling and removal at completion (heights assessed by Contractor):				
	a) Access to all structural steel elements to be refurbished	lump sum			
	b) Access scaffolding for piers and abutments	lump sum			
	c) Diverting of river to gain access to Piers	lump sum			
C14.1.2	Mobile access units				
C14.1.2.1	Establishment of mobile access unit on site	lump sum			
C14.1.2.2	Setting up of mobile access unit at each structure location and removal after completion	No	1		
C14.1.2.3	Operation of mobile access unit during repair work at each location (structure)	days	1		
C14.1.2.4	Operation of mobile access unit during inspections by the Engineer	Hrs	1		
C14.1.2.5	De-establishing and removal of mobile access unit from site after completion of work	lump sum			
C14.1.3	Access at end of defects liability period (Piers, Abutments, Deck & Soffit, Joints)	lump sum			
C14.1.5	Provision of designs and drawings of access structures and platforms by an ECSA Registered Professional Engineer or Technologist (For all members applicable under item above)	lump sum			
C14.1.6	Provision of a safety gantry with warning system (description of type of gantry, size and location)	No.	1		
C14.1.7	Accommodation of Vehicular and Pedestrian Traffic at Access Structures	lump sum			
C14.1	TOTAL CARRIED TO SUMMARY				

THEMBISILE HANI LOCAL MUNICIPALITY
SCHEDULE: ROUTINE ROAD MAINTENANCE
PART D: OPERATIONAL SECTION

BILL C14.3

ITEM NO	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
C14.3	<u>DEMOLITION AND REMOVAL OF STRUCTURAL CONCRETE AND STEELWORK</u>				
C14.3.1	Demolition of concrete members or elements:				
C14.3.1.1	Full member or element	m ³	1		
C14.3.1.2	Partial member or element	m ³	1		
C14.3.2	Demolition of concrete members or elements by labour enhanced				
C14.3.2.1	Full member or element	m ³	1		
C14.3.2.2	Partial member or element	m ³	1		
C14.3.3	Demolition of structural steel structures, members or elements				
C14.3.3.1	Full member or element	ton	1		
C14.3.3.2	Partial member or element	ton	1		
C14.3.4	Demolition of structural steel structures, members or elements by labour optimised construction				
C14.3.4.1	Full member or element	ton	1		
C14.3.4.2	Partial member or element	ton	1		
C14.3.5	Removal of metal sections embedded in concrete	No.	1		
C14.3.6	Establishment on site for hydro-demolition equipment	lump sum			
C14.3	TOTAL CARRIED TO SUMMARY				

THEMBISILE HANI LOCAL MUNICIPALITY
SCHEDULE: ROUTINE ROAD MAINTENANCE
PART D: OPERATIONAL SECTION

BILL C14.4

ITEM NO	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
C14.4	<u>SURFACE AND STRUCTURAL REPAIR OF CONCRETE MEMBERS</u>				
C14.4.1	Cementitious mortar or concrete (specified class) to (description)	litres	1		
C14.4.2	Epoxy mortar	litres	1		
C14.4.3	Proprietary cementitious repair system (Class and generic description) in positions as indicated				
C14.4.3.1	Class R4- Repairs		1		
	(a) Slabs/decks				
	(i) Supplying the cementitious repair compound according to specification	litres	1		
	(ii) Installation of repair compound according to suppliers guidelines	litres	1		
	(b) Peirs and Columns				
	(i) Supplying the cementitious repair compound according to specification	litres	1		
	(ii) Installation of repair compound according to suppliers guidelines	litres	1		
C14.4.3.2	Class R3-Repairs				
	(a) Slabs/decks				
	(i) Supplying the cementitious repair compound according to specification	litres	1		
	(ii) Installation of repair compound according to suppliers guidelines	litres	1		
	(b) Peirs and Columns				
	(i) Supplying the cementitious repair compound according to specification	litres	1		
	(ii) Installation of repair compound according to suppliers guidelines	litres	1		
C14.4.3.3	Class R2-Repairs				
	(a) Slabs/decks				
	(i) Supplying the cementitious repair compound according to specification	litres	1		
	(ii) Installation of repair compound according to suppliers guidelines	litres	1		
	(b) Peirs and Columns				
	(i) Supplying the cementitious repair compound according to specification	litres	1		
	(ii) Installation of repair compound according to suppliers guidelines	litres	1		
C14.4.3.4	Class R1-Repairs				
	(i) Supplying the cementitious repair compound according to specification	litres	1		
	(ii) Installation of repair compound according to suppliers guidelines	litres	1		
	(b) Peirs and Columns				
	(i) Supplying the cementitious repair compound according to specification	litres	1		
	(ii) Installation of repair compound according to suppliers guidelines	litres	1		
C14.4.4	Curing of repair surfaces				
C14.4.4.1	By coating the surface with SIKA antisol (or similar approved) curring compound to repaired areas		1		
	(i) Supplying SIKA Antisol (or Similar approved) Curring compound	m ²	1		
	(ii) Applying curing compound according to suppliers guidelines	m ²	1		
C14.1	TOTAL CARRIED TO SUMMARY				

THEMBISILE HANI LOCAL MUNICIPALITY
SCHEDULE: ROUTINE ROAD MAINTENANCE
PART B: OPERATIONAL SECTION

BILL C14.5

ITEM NO	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
C14.5	<u>ANCHORING OF REINFORCEMENT, GROUTING AND CRACK INJECTION</u>				
C14.5.1	Anchoring of reinforcing steel:				
C14.5.1.1	Reinforcing into formed holes				
	(a)Mild steel bars				
	(i)12mm	No.	1		
	(ii)16mm	No.	1		
	(iii)20mm	No.	1		
	(iv)25mm	No.	1		
	(v)32mm	No.	1		
	(b)High tensile steel				
	(i)12mm	No.	1		
	(ii)16mm	No.	1		
	(iii)20mm	No.	1		
	(iv)25mm	No.	1		
	(v)32mm	No.	1		
C14.5.1.2	Reinforcing into pockets				
	(a)Mild steel bars				
	(i)12mm	No.	1		
	(ii)16mm	No.	1		
	(iii)20mm	No.	1		
	(iv)25mm	No.	1		
	(v)32mm	No.	1		
	(b)High tensile steel				
	(i)12mm	No.	1		
	(ii)16mm	No.	1		
	(iii)20mm	No.	1		
	(iv)25mm	No.	1		
	(v)32mm	No.	1		
C14.5.2	Preparation of contact surfaces for grouting				
C14.5.3.1	Grouting for:				
C14.5.3.2	Gap filling	litre	1		
C14.5.4	Establishment on site for crack injection	lump sum			
C14.5.5	Surface preparation and surface sealing for crack injection	m	1		
C14.5.6	Crack injection adhesive	litre	1		
C14.5.7	Crack filling				
C14.5.7.1	Repair system	m	1		
C14.5.8	Site and core tests				
C14.5.8.1	Drilling of cores	m			
C14.5.8.2	Site testing and testing of cores	Prov sum			
C14.5.8.3	Percentage on provisional sum for charges and profit	%			
C14.5	TOTAL CARRIED TO SUMMARY				

**THEMBISILE HANI LOCAL MUNICIPALITY
SCHEDULE: ROUTINE ROAD MAINTENANCE
PART B: OPERATIONAL SECTION**

BILL C14.7

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**THEMBISILE HANI LOCAL MUNICIPALITY
SCHEDULE: ROUTINE ROAD MAINTENANCE
PART B: OPERATIONAL SECTION**

BILL C14.9

ITEM NO	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
C14.9	<u>REPAIR AND REPLACEMENT OF ANCILLARY STRUCTURAL ELEMENTS</u>				
C14.9.1	Removal of debris from expansion gaps	m			
C14.9.3	Service and repair of existing joint system:				
BC14.9.3.1	Service and repair of bridge joints (7 x Thormajoint (300mm x 50mm))	m			
BC14.9.6	Repair of handrails (50mm dia. x 4.0mm Circular Hollow Section Steel railings	m			
C14.9.14	Bridge number plates:				
C14.9.14.2	New number plate	m			
BC14.9.18	Removal and disposal of existing steel railings and damaged brackets	m			
C14.9	TOTAL CARRIED TO SUMMARY				

**THEMBISILE HANI LOCAL MUNICIPALITY
SCHEDULE: ROUTINE ROAD MAINTENANCE
PART B: OPERATIONAL SECTION**

BILL C14.10

ITEM NO	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
C14.10	JACKING OF BRIDGE STRUCTURES				
C14.10.1	Temporary support and foundations				
C14.10.1.1	Design, construct and erect temporary supports for the jacking of (bridge deck)	lump sum			
C14.10.1.2	Dismantle and remove from site	Lump sum			
C14.10.2	Jacking equipment				
C14.10.2.1	Design, supply and install equipment for the jacking of (bridge deck)	lump sum			
C14.10.2.2	Dismantle and remove all jacking equipment from site	lump sum			
C14.10.3	Vertical jacking of the bridge deck	No.	1		
C14.10	TOTAL CARRIED TO SUMMARY				

**THEMBISILE HANI LOCAL MUNICIPALITY
SCHEDULE: ROUTINE ROAD MAINTENANCE
PART B: OPERATIONAL SECTION**

BILL C14.11

ITEM NO	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
C14.11	<u>REPAIR OF STEEL ELEMENTS</u>				
BC14.11.1	Refurbishment of Structural Steelwork				
	(a) Sprayed-on metal:				
	(1) Apply 2 layers Sikagard-63N corrosion protection or similar	m ²	1		
	2) Sand blast or Wet grid blasting for preparation of steel for corrosion protection	m ³	1		
C14.11.2	Replacement of rivets or bolts with HSFG bolts	No.	1		
C14.11	TOTAL CARRIED TO SUMMARY				

SUMMARY OF THE BILL OF QUANTITIES

CONTRACT:

SCHEDULE: ROUTINE ROUTE MAINTENACE

**SUMMARY
AMOUNT**

SECTION	DESCRIPTION	SUMMARY AMOUNT
	PART A : MANAGEMENT SECTION	
M0200	GENERAL REQUIREMENTS AND PROVISIONS	
M0300	CONTRACTOR'S ESTABLISHMENT ON SITE AND GENERAL OBLIGATION	
	SUB-TOTAL PART A : MANAGEMENT SECTION	
	PART B : OPERATIONAL SECTION	
C3.2	CULVERTS	
C4.1	BORROW MATERIALS	
C4.2	CUT MATERIALS	
C4.3	COMMERCIAL MATERIALS	
C4.5	ALTERNATIVE MATERIALS	
M0500	ACCOMMODATION OF TRAFFIC	
M0600	SKILLSDEVELOPMENT	
M1100	PAVEMENT LAYERS REPAIR	
M1200	REPAIR OF POTHOLES, EDGE BREAKS AND SURFACE FAILURES	
M1300	CRACK SEALING	
M1400	BLEEDING REPAIR	
M1500	CRACK AND JOINT SEALING OF CONCRETE PAVEMENTS	
M1600	SURFACE TREATMENT OF SURFACED ROADS	
M1700	REPAIR OF SLOPE FAILURES AND WASHAWAYS	
M2100	REPAIR AND MAINTENANCE OF INLET AND OUTLET STRUCTURES	
M2200	SUBSOIL DRAIN INSTALLATION AND MAINTENANCE	
M2300	CLEANING OF WATERWAY STRUCTURES	
M2400	CLEANING OF PREFABRICATED CULVERTS	
M2500	CLEANING OF CONCRETE DRAINS AND CHANNELS	
M2600	CLEANING AND MAINTENANCE OF EXISTING EARTH CHANNELS	
M2700	EDGE BUILD-UP REMOVAL	
M2800	CONCRETE CHANNEL CONSTRUCTION AND MAINT. OF EXISTING CHANNELS	
M3100	FENCING	
M3200	COLLECTION AND REMOVAL OF DEBRIS AND LITTER	
M3300	SHOULDER REPAIRS	
M3500	STABILISATION OF CUTTINGS	
M4100	ERECTION AND REPAIR OF PERMANENT ROAD TRAFFIC SIGNS	
M4200	ROAD SIGN CLEANING AND REMOVAL OF ILLEGAL SIGNS	
M4300	ROADSTUDS	
M4400	GUARDRAIL ERECTION AND MAINTENANCE	
M4600	ROAD MARKINGS	
M5100	GENERAL EROSION PROTECTION	
M5200	GABION PROTECTION	
M6100	CONTROLLING VEGETATION GROWTH: MOWING AND CUTTING	
M8100	MINOR REPAIRS TO STRUCTURES	
M9100	DAYWORKS SCHEDULE	
C14.1	ACCESS FOR BRIDGE	
C14.3	DEMOLITION AND REMOVAL OF STRUCTURAL CONCRETE AND STEELWORK	
C14.4	SURFACE AND STRUCTURAL REPAIR OF CONCRETE MEMBERS	
C14.5	ANCHORING OF REINFORCEMENT, GROUTING AND CRACK INJECTION	
C14.7	PROTECTIVE COATINGS AND TREATMENTS FOR CONCRETE	
C14.9	REPAIR AND REPLACEMENT OF ANCILLARY STRUCTURAL ELEMENTS	
C14.10	JACKING OF BRIDGE STRUCTURES	
C14.11	REPAIR OF STEEL ELEMENTS	
	SUB-TOTAL PART B: OPERATIONAL SECTION	

DESCRIPTION	AMOUNT
SCHEDULE / ROUTINE ROAD MAINTENANCE	
SUB -TOTAL PART A: MANAGEMENT SECTION	
SUB-TOTAL PART B: OPERATIONAL SECTION	
SUB-TOTAL PART A+ PART B	
VAT AT 15%	
CONTIGENCIES AT 10%	
TENDER AMOUNT CARRIED FORWARD TO C1.1	