

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
	CHAPTER 1: GENERAL				
C1.2	GENERAL REQUIREMENTS AND PROVISIONS				
C1.2.1	Environmental Management:				
C1.2.1.1	Monitoring of compliance with and reporting on the EMP	Month	1		
C1.2.1.2	Dedicated environmental officer (if specified in the Contract Documentation)	Month	1		
C1.2.2	Programming and Reporting:				
C1.2.2.1	Submission of a Scheme 1 Programme	L/Sum	1		
C1.2.2.2	Reviewing and updating a Scheme 1 Programme	Month	1		
C1.2.2.6	Preparation and submission of all information and reports specified in the Contract Documentation	Month	1		
C1.2.4	Stakeholder liaison	Month	1		
C1.2.5	Safety:				
C1.2.5.1	Health and safety plan	L/Sum	1		
C1.2.5.2	Implementation of health and safety plan	Month	1		
C1.2.8	Dayworks:				
C1.2.8.1	Personnel:				
	(a) Unskilled labourer	h	1		
	(b) Semi-skilled labourer	h	1		
	(c) Skilled labourer	h	1		
	(d) Gang leader	h	1		
	(e) Foreman	h	1		
	(f) Skilled Artisan	h	1		
C1.2.8.2	Construction equipment :				
	(a) Motor grader (140 H or similar)	h	1		
	(b) Vibratory heavy roller (15t)	h	1		
	(c) Pneumatic roller	h	1		
	(d) Front end loader (1m3 bucket or similar)	h	1		
Total Carried Forward					

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
Brought Forward					
C1.2.8.3	(e) Tractor loader backhoe	h	1		
	(f) Excavator - 25 Ton	h	1		
	(g) Compressor	h	1		
	(h) Tipper truck 10 m³	h	1		
	Vehicles:				
C1.2.8.4	(a) Light delivery vehicle	km	1		
	(b) Flatbed truck 10 tonne	km	1		
	Materials:				
PC1.2.9	(a) Procurement of materials	Prov Sum	1		
	(b) Contractor's handling costs, profit and all other charges in respect of item C1.2.8.4(a)	%			
	Social Facilitation				
	(a) Direct payment of ISD Consultant (to be appointed by the Client)	Prov.Sum	1	R 15 000,00	R 15 000,00
	(b) Contractor's handling costs, profit and all other charges in respect of item PC1.2.9(a)	%	15000		
PC1.2.10	(c) Project Liaison Officer	Prov.Sum	1	R 6 500,00	R 6 500,00
	(b) Contractor's handling costs, profit and all other charges in respect of item PC1.2.9 (c)	%	6500		
	(d) Project Steering Committee members attending 1 PSC/month	Prov.Sum	1	R 2 400,00	R 2 400,00
	(e) Contractor's handling costs, profit and all other charges in respect of item PC1.2.9 (d)	%	2400		
	Environmental Control Officer				
PC1.2.11	(a) Direct payment of ECO Agent	Prov.Sum	1	R 15 000,00	R 15 000,00
	(b) Contractor's handling costs, profit and all other charges in respect of item PC1.2.10(a)	%	15000		
	Occupational Health and Safety				
PC1.2.11	(a) Direct payment of OHS Agent	Prov. Sum	1	R 15 000,00	R 15 000,00
	(b) Contractor's handling costs, profit and all other charges in respect of item PC1.2.11(a)	%	15000		

Total Carried Forward To Summary	
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ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
	CHAPTER 1: GENERAL				
C1.3	CONTRACTOR'S SITE ESTABLISHMENT AND GENERAL OBLIGATIONS				
C1.3.1	The Contractor's general obligations:				
C1.3.1.1	Fixed obligations	L/Sum	1		
C1.3.1.2	Value-related obligations	L/Sum	1		
C1.3.1.3	Time-related obligations	Month	1		
C1.3.2	Contract Sign Boards (as per the contract drawings)	m ²	1		
Total Carried Forward To Summary					

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
	CHAPTER 1: GENERAL				
C1.4	FACILITIES FOR THE ENGINEER				
C1.4.1	Site accommodation:				
C1.4.1.1	Offices and conference room	m²	1		
C1.4.1.6	Car ports	No.	1		
C1.4.1.7	Ablution unit (toilet and wash hand basin)	No.	2		
C1.4.1.13	Rented housing paid for by the Contractor	Prov Sum	1	R 2 000,00	R 2 000,00
C1.4.1.14	Contractor's handling costs, profit and all other charges in respect of item C1.4.1.13	%	2000,00		
C1.4.2	Items measured by Area				
C1.4.2.9	White boards	m²	1		
C1.4.3	Items measured by number				
C1.4.3.1	Office swivel chair	No.	1		
C1.4.3.2	Office chair	No.	1		
C1.4.3.5	Office desk with 3 drawers (at least one lockable drawer)	No.	1		
C1.4.3.8	Conference table (20 seater)	No.	1		
C1.4.3.10	Filing cabinet	No.	1		
C1.4.3.11	General purpose steel cabinet with shelves	No.	1		
C1.4.3.13	220/250 volt power outlet plug point	No.	1		
C1.4.3.15	Single 1500m, 58 watt fluorescent tube ceiling light	No.	1		
C1.4.3.16	Single 1500mm, 22 watt LED tube ceiling light	No.	1		
C1.4.3.19	Wash-hand basin	No.	1		
C1.4.3.23	Fire extinguisher 9,0 kg, dry powder type	No.	1		
C1.4.3.24	Air-conditioning unit (2.2kW min. capacity)	No.	1		
C1.4.3.25	Heater	No.	1		
C1.4.3.29	A3 / A4 colour printer, copier, scanner	No.	1		
C1.4.3.30	A4 colour printer, copier, scanner	No.	1		
C1.4.3.31	Rain gauge	No.	1		
C1.4.3.36	Measuring wheel	No.	1		
C1.4.3.37	First aid kit	No.	1		
Total Carried Forward					

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
Brought Forward					
C1.4.4	Prime cost items:				
C1.4.4.1	Cell phones costs, including pro-rata rentals, for calls made in connection with contract administration	PC Sum	1	R 2 000,00	R 2 000,00
C1.4.4.2	Handling costs and profit in respect of item C1.4.4.1	%	2000,00		
C1.4.4.5	The provision of internet connectivity and WiFi data for Engineer's site staff	PC Sum	1	R 2 000,00	R 2 000,00
C1.4.4.6	Handling costs and profit in respect of item C1.4.4.5	%	2000,00		
C1.4.4.7	The provision of paper and ink for a combination colour printer/copier/scanner	PC Sum	1	R50 000,00	R 50 000,00
C1.4.4.8	Handling costs and profit in respect of item C1.4.4.7	%	50000,00		
C1.4.4.9	The provision of a complete 220/250 volt single phase electrical power installation, including all poles, insulators, wiring, switchboards, mains connections, meters etc.	PC Sum	1	R 2 000,00	R 2 000,00
C1.4.4.10	Handling costs and profit in respect of item C1.4.4.9	%	2000,00		
C1.4.5	Services at site offices, laboratories and site accommodation				
C1.4.5.1	Fixed costs	L/Sum	1		
C1.4.5.2	Running costs	Month	1		
C1.4.8	Site security for the Engineers facilities				
C1.4.8.1	supply and installation of all required security measures at the engineers site offices and laboratories	L/Sum			
C1.4.8.2	provision of security guards or watchman and an armed response service at the engineers site offices and laboratories	Month	1		

Total Carried Forward To Summary	
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ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
	CHAPTER 1: GENERAL				
C1.5	ACCOMMODATION OF TRAFFIC				
C1.5.1	Accommodation of pedestrian and non-motorised traffic:				
C.1.5.1.1	Accommodation of pedestrian and non-motorised traffic	Month	1		
C1.5.2	Accommodation of vehicular traffic	Month	1		
C1.5.3	Liaison with traffic authorities	Month	1		
C1.5.5	Maintenance of temporary deviations:				
C1 5.5.2	Drain cleaning	m	1		
C1.5.5.3	Cleaning out culverts	m³	1		
C1.5.5.5	Base patching using crushed stone material stabilised with bitumen emulsion and cement	m³	1		
C1.5.5.9	Grading of temporary deviations and existing roads used as detours	km	1		
C1.5.5.10	Watering of temporary deviations and existing roads used as detours	kℓ	1		
C1.5.5.11	Other road maintenance work ordered by the Engineer	Prov Sum	1	R 5 000,00	R 5 000,00
C1.5.5.12	Handling cost, profit and all other charges in respect of item C1.5.5.11	%	5000		
C1.5.6	Removal of traffic control facilities:	km	1		
C1.5.7	Temporary traffic control facilities:				
C1.5.7.1	Delineators including mounting bases and ballast:				
	(b) Double sided, reversible left or right	No	1		
C1.5.7.2	Traffic cones, minimum height 750 mm	No	1		
C1.5.7.3	Flagmen	Man-Shift	1		
C.1.5.7.5	(c) Eliminated road signs TR315	No	1		
	(d) TW 302	No	1		
	(e) TW 308, TW 305, TW 306, TW 307, TW 310, TW 311, TW 312, TW 336, TW 337, TW 338, TW 342, TW 343	No	1		
C1.5.8	Traffic safety officer	Man-Month	1		
C1.5.11	Provision of safety equipment for visitors				
C1.5.11.1	Provision of reflective safety vests for visitors	No	1		

Total Carried Forward To Summary	
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ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
	CHAPTER 1: GENERAL				
C1.6	CLEARING AND GRUBBING				
C1.6.1	Clearing:				
C1.6.1.1	Clearing with machines and some hand labour where necessary	ha	1		
C1.6.2	Grubbing				
C1.6.2.1	Grubbing with machines and some hand labour where necessary	ha	1		
C1.6.3	Removal and grubbing of large trees and tree stumps:				
C1.6.3.1	Girth equal to or exceeding 1,0 m up to and including 2,0 m	No.	1		
C1.6.3.2	Girth exceeding 2,0 m up to and including 3,0 m	No.	1		
C1.6.3.3	Girth exceeding 3,0 m	No.	1		
C1.6.3.4	Removal of trees in forests and plantations	ha	1		
C1.6.9	Conservation of topsoil:				
C1.6.9.1	Stockpiling topsoil	m³	1		
C1.6.9.2	Windrowing top soil	m³	1		
C1.6.10	Disposal of hazardous waste material				
C1.6.10.1	Disposal of hazardous waste material at an approved hazardous waste material facilities.	Prov. Sum	1	R10 000,00	R 10 000,00
C1.6.10.2	Handling cost, profit and all other charges in respect of item C1.6.10.1	%	R10 000,00		

Total Carried Forward To Summary	
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ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
	CHAPTER 1: GENERAL				
C1.7	LOADING AND HAULING				
C1.7.1	Loading				
C.1.7.1.1	Loading from stockpile using machines and some hand labour where necessary	m ³	1		
C.1.7.1.2	Loading from heaps or windrows using machines and/some hand labour where necessary	m ³	1		
C.1.7.1.3	Loading by hand only from stockpile or heaps when labour enhancement work is specified or it is not possible to use machines	m ³	1		
C1.7.2	Hauling				
C1.7.2.1	Hauling material for use in the Works and off-loading it on the site of the Works:				
	(a) Soil, gravel, crushed stone and pavement layer material	m ³ -km	1		
	(b) Boulders and hard material	m ³ -km	1		
C1.7.2.2	Hauling material to spoil and off-loading it at a designated spoil or stockpile area				
	(a) Cleared and grubbed material (organic matter and all other unsuitable or waste material)	m ³ -km	1		
	(b) Soil and gravel material	m ³ -km	1		
	(c) Boulders, hard material and concrete	m ³ -km	1		

Total Carried Forward To Summary	
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ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
	CHAPTER 2: SERVICES				
C2.1	GENERAL REQUIREMENTS AND TRENCHING FOR SERVICES				
C2.1.1	Location, identification, protection and relocation of existing services:				
C2.1.1.1	Contractor's obligations	L/Sum	1		
C2.1.1.2	Permanent services relocation or protection work by others	PC Sum	1	R20 000,00	R 20 000,00
C2.1.1.3	Handling costs and profit in respect of item C2.1.1.2 above	%	#####		
C2.1.1.4	Permanent services relocation or protection work by the Contractor	Prov. Sum	1	R15 000,00	R 15 000,00
C2.1.2	Existing services location, detection and verification:				
C2.1.2.5	Using hand excavation to locate, expose and verify services	m³	1		
C2.1.2.4	Provision of record drawings and applicable data	L/Sum	1		
C2.1.6	Trench excavation (in soft material):				
C2.1.6.1	Trenches up to 1,0 m wide:				
	(a) Up to 1,0 m deep	m³	1		
	(b) Over 1,0 m and up to 2,0 m deep	m³	1		
	(c) Over 2,0 m deep, etc. to be inserted, increased by additional 1,0 m depths as required	m³	1		
C2.1.7	Extra over items C2.1.6 for excavating in:				
C2.1.7.1	Hard material irrespective of depth	m³	1		
C2.1.9	Trench excavation using labour enhanced construction methods:				
C2.1.9.1	Trenches up to 1,0 m wide (in soft material):				
	(a) Up to 1,0 m deep	m³	1		
Total Carried Forward					

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
Brought Forward					
C2.1.11	Backfilling of trenches:				
C2.1.11.1	Backfill compacted to 93 % (100 % for sand) of MDD (areas subject to traffic loads) using material:				
	(a) From the excavated trench material	m³	1		
	(b) From other excavations on Site	m³	1		
C2.1.11.2	Backfill compacted to 90 % (100 % for sand) of MDD or complying with the DCP requirements of Clause A2.1.8.2c) (areas not subject to traffic loads) using material:				
	(a) From the excavated trench material	m³	1		
	(b) From other excavations on Site	m³	1		
	(e) From commercial sources (G6 material)	m³	1		
C2.1.17	Removal and disposal of spoil material from trench excavations:				
C2.1.17.1	To spoil sites provided by the Employer as indicated in the Contract Documentation or as instructed by the Engineer	m³	1		
C2.1.19	Dealing with water during services work:				
C2.1.19.1	Dealing with surface water	L/Sum	1		
C2.1.19.2	Dealing with subsurface water	L/Sum	1		
C2.1.21	Supply and installation of sandbags in trenches				
C2.1.21.1	Biodegradable bags (50 kg)	No	1		
C2.1.21.2	Geofabric bags (50 kg)	No	1		
C2.1.23	Reinstatement of trenches in existing surfaced roads using:				
C2.1.23.1	Selected material (G6 from borrow pits, compacted in 150mm layers) compacted to 90 % of MDD	m³	1		
C2.1.25	Removal of existing services:				
C2.1.25.1	150mm diameter vitrified clay pipes	m	1		
C2.1.26	Disposal of existing service materials:				
C2.1.26.1	150mm diameter vitrified clay pipes disposed of	m	1		
C2.1.27	Demolition of existing manholes, access chambers and other service structures consisting of:				
C2.1.27.1	Unreinforced concrete	m³	1		
C2.1.27.2	Reinforced concrete	m³	1		
C2.1.27.3	Masonry	m³	1		

Total Carried Forward To Summary						

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
	CHAPTER 3: DRAINAGE				
C3.1	DRAINS				
C3.1.1	Excavation for open drains:				
C3.1.1.1	Excavating all material situated within the following depth ranges below the surface level using conventional methods:				
	(a) 0m to 1,5m	m³	1		
	(b) Exceeding 1,5m and up to 3,0m	m³	1		
C3.1.1.2	Extra over sub-item C3.1.1.1 for excavation in hard and boulder material, irrespective of depth	m³	1		
C3.1.1.3	Extra over sub-item C3.1.1.1 for excavation in stabilised existing road layers, irrespective of depth	m³	1		
C3.1.2	Clearing, shaping and disposal of accumulated sediment in existing unlined open drains				
C3.1.2.1	Using conventional methods	m³	1		
C3.1.2.2	Using labour enhanced construction methods	m³	1		
C3.1.4.1	Excavation and disposal of material for subsoil drainage systems:				
C3.1.4.1	Excavating in all material situated within the following depth ranges below the surface:				
	(a) 0m to 1,5m	m³	1		
	(b) Exceeding 1,5m and up to 3,0m	m³	1		
C3.1.4.2	Excavating soft material situated within 0m to 1,5m below the surface level using labour enhanced construction methods	m³	1		
C3.1.4.3	Excavating intermediate material situated within 0m to 1,5m below the surface level using labour enhanced construction methods	m³	1		
C3.1.4.4	Extra over sub-item C3.1.4.1 for excavation in hard and boulder material, irrespective of depth	m³	1		
C3.1.4.5	Extra over sub-item C3.1.4.1 for excavation through stabilised existing road layers	m³	1		
C3.1.5	Impermeable backfilling to subsoil drainage systems				
C3.1.5.1	Un-stabilised natural gravel obtained from approved sources on the site	m³	1		
C3.1.5.2	G5 material obtained from commercial sources	m³	1		
C3.1.5.3	Extra over items C3.1.5.1 and C3.1.5.2 for stabilisation with 4,0% CEM II (32.5) cement	m³	1		
Total Carried Forward					

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
Brought Forward					
C3.1.6	Construction of banks and dykes:				
C3.1.6.1	Banks and dykes using conventional methods	m ³	1		
C3.1.6.2	Banks and dykes using labour enhanced construction methods	m ³	1		
C3.1.7	Natural permeable material in subsoil drainage systems (approved crushed stone):				
C3.1.7.2	Crushed stone obtained from commercial sources (coarse grade, 19 mm stone)	m ³	1		
C3.1.8	Natural permeable material in subsoil drainage systems (approved natural sand):				
C3.1.8.2	Natural sand from commercial sources (coarse grade, 19 mm stone)	m ³	1		
C3.1.9	Pipes in subsoil drainage systems:				
C3.1.9.1	U-PVC pipes and fittings, normal duty, complete with couplings (state size and whether or not perforated or slotted)				
	(a) 110 mm internal diameter perforated	m	1		
	(b) 150 mm internal diameter non-perforated	m	1		
	(c) 110 mm internal diameter non-perforated	m	1		
C3.1.10	Polymer film sheeting or similar approved material, for lining subsoil drainage systems:				
C3.1.10.1	0,15mm thick	m ²	1		
C3.1.11	Geotextiles (Synthetic fibre, Grade 2)	m ²	1		
C3.1.13	Concrete outlet structures, manhole boxes, junction boxes and cleaning eyes for subsoil drainage systems:				
C3.1.13.1	Outlet structures	No.	1		
C3.1.13.2	Inspection boxes	No.	1		
C3.1.13.3	Junction boxes	No.	1		
C3.1.13.4	Cleaning eyes	No.	1		
C3.1.14	Caps for subsoil drain pipes:				
C3.1.14.1	Concrete caps	No.	1		
C3.1.14.3	U-PVC caps	No.	1		
C3.1.16	Loading and hauling of material in excess of 1,0 km	m ³ -km	1		
C3.1.17	Backfilling existing eroded side drains	m ³	1		

Total Carried Forward	
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ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
Brought Forward					
C3.1.18	Backfilling of drains with selected material compacted to 93% of MDD prior to construction of concrete lining and/or stone pitching lining	m ³	1		
C3.1.22	Test flushing of subsoil drain pipe systems	No.	1		
C3.1.23	Subsoil drain outlet marker	No.	1		
C3.1.24	Submission of as built drawings by the Contractor	Prov Sum	1	R 2 000,00	R 2 000,00
C3.1.25	Removal of existing subsoil drains	m	1		
Total Carried Forward To Summary					

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
	CHAPTER 3: DRAINAGE				
C3.2	CULVERTS				
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		
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 labour enhanced construction methods, or instructed by hand under Clause A3.2.7.2d)	m ³	1		
C3.2.2	Backfilling:				
C3.2.2.1	Using the excavated material	m ³	1		
C3.2.2.1	Using imported selected material:	m ³	1		
	(a) From commercial sources (G6)	m ³	1		
	(b) From sources on site (G6)	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 6 % cement content	m ³	1		
C3.2.3	Concrete pipe culverts:				
C3.2.3.2	On Class B bedding (type 100 D and 600mm diameter)	m	1		
C3.2.3.2	On Class B bedding (type 100 D and 750mm diameter)	m	1		
C3.2.3.2	On Class B bedding (type 100 D and 900mm diameter)	m	1		
C3.2.3.2	On Class B bedding (type 100 D and 1200mm diameter)	m	1		
C3.2.5	Rectangular culverts with prefabricated elements:				
C3.2.5.1	(a) Prefabricated portal culverts; wall and roof combination (size 1800mm x 1800mm, Class 75S)	m	1		
C3.2.5.1	(b) Prefabricated portal culverts; wall and roof combination (size 2000mm x 2000mm, Class 75S)	m	1		
C3.2.5.1	(c) Prefabricated portal culverts; wall and roof combination (size 2400mm x 2400mm, Class 75S)	m	1		

C3.2.5.1	(d) Prefabricated portal culverts; wall and roof combination (size 3000mm x 3000mm, Class 75S)	m	1		
Total Carried Forward					

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
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, (15 MPa)	m³	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 (30 MPa) (installed at a standard depth of 1,0 m)	m³	1		
C3.2.7.3	In walls, excluding formwork but including Class U2 surface finish (30 MPa)	m³	1		
C3.2.7.4	In roof slabs for rectangular culverts, excluding formwork but including Class U2 surfacing finish and joints (30MPa)	m³	1		
C3.2.7.5	In inlet and outlet structures including kerbs, chutes and downpipes, skewed ends, catchpits, manholes, thrust and anchor blocks, excluding formwork but including Class U2 surfacing finish (30 MPa)	m³	1		
C3.2.7.6	Formwork of concrete under items C3.2.7.3 to 5 above (Class U2 surfacing finish)	m²	1		
C3.2.8	Concrete backfill or encasement for culverts (20Mpa concrete)	m³	1		
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	kg	1		
C3.2.12	Demolition of concrete members or elements:				
C3.2.12.1	Full member or element	m³	1		
C3.2.13	Removing and re-laying existing culverts:				
C3.2.13.1	Removing and stacking existing culverts for re-use (All types)	m	1		
C3.2.13.2	Removing and re-laying existing culverts without stacking (All Types)	m	1		
C3.2.16	Brickwork (engineering bricks):				
C3.2.16.2	230 mm thick	m²	1		
C3.2.17	Plaster (Class 1)	m²	1		
C3.2.18	Benching (Class 15/19 with Steel trowel finish)	m³	1		
Total Carried Forward					

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
Brought Forward					
C3.2.24	Compaction of bedding for inlets, outlets, manholes and catchpits:				
C3.2.24.1	Preparation and compaction of in-situ bedding material to 90 % of MDD (200mm deep)	m³	1		
Total Carried Forward To Summary					

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
	CHAPTER 3: DRAINAGE				
C3.3	CONCRETE KERBING AND CHANNELING, ASPHALT BERMS, CHUTES, DOWNPIPES, CONCRETE, STONE PITCHED AND GABION LININGS FOR OPEN DRAINS				
C3.3.8	Linings for open drains:				
C3.3.8.1	Cast-in-situ concrete lining (25MPa for ditch drains)	m ³	1		
C3.3.8.2	Class U2 surface finish to cast-in-situ concrete	m ²	1		
C3.3.8.3	Stone pitched lining (200 mm thickness):				
	(b) Grouted stone pitching on a concrete bed class 15MPa concrete and open drain	m ²	1		
C3.3.9	Formwork to cast-in-situ concrete lining for open drains (Class F2 surface finish):				
C3.3.9.2	To sides with formwork on both internal and external faces	m ²	1		
C3.3.9.3	To ends of slabs	m ²	1		
C3.3.10	Sealed joints in concrete and stone pitched linings of open	m	1		
C3.3.12	Reinforcement:				
C3.3.12.3	Welded steel fabric	kg	1		
C3.3.15	Energy dissipaters in outlet structures:				
C3.3.15.2	Stones set in outlet structures	m ²	1		
Total Carried Forward To Summary					

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
	CHAPTER 4: EARTHWORKS AND PAVEMENT LAYERS: MATERIALS				
C4.1	BORROW MATERIALS				
C4.1.1	Compiling and implementing M&U plans:	No.	1		
C4.1.1.1	For borrow pit as identified	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	1	R 10 000,00	R 10 000,00
C4.1.2.2	Handling costs and profit in respect of item C4.1.2.1	%	10 000,00		
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	1	R 100 000,00	#####
C4.1.3.3	Handling cost and profit in respect of item C4.1.3.2	%	100 000,00		
C4.1.4	Removing of the overburden:				
C4.1.4.1	In borrow pits	m³	1		
C4.1.5	Excavating of materials in the borrow pits and quarries, material obtained from:				
C4.1.5.1	Soft excavation	m³	1		
C4.1.9	Breaking down oversized material	m³	1		
C4.1.12	Stockpiling the material:				
C4.1.12.2	Material directly from the excavation	m³	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 (as identified)	ha	1		

Total Carried Forward To Summary	
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ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
	CHAPTER 5: EARTHWORKS AND PAVEMENT LAYERS:CONSTRUCTION				
C5.1	ROADBED				
C5.1.1	Roadbed construction and compaction:				
C5.1.1.2	Compaction of in-situ material to 93 % of MDD	m ³	1		
C5.1.1.4	Compaction of imported material to 93 % of MDD	m ³	1		
C5.1.2	Excavate material to spoil sites designated by the Employer				
C5.1.2.1	Excavate material to spoil from roadbed construction, material obtained from:				
	(a) Soft excavation	m ³	1		
	(b) Boulder excavation Class A	m ³	1		
	(c) Boulder excavation Class B	m ³	1		
	(d) Hard excavation	m ³	1		
	(e) Hard excavation (by blasting)	m ³	1		
C5.1.4	Removal of unsuitable material to spoil				
C5.1.4.1	In layer thicknesses of 200 mm and less:				
	(a) Stable material	m ³	1		
	(b) Unstable material	m ³	1		
C5.1.5	In-situ treatment of roadbed in hard material:				
C5.1.5.1	In-situ treatment by ripping	m ³	1		
C5.1.8	Construction of roadbed in collapsing soil	m ³	1		
C5.1.9	Construction of roadbed comprising normal and inactive clay				
C5.1.9.1	By material modification	m ³	1		
C5.1.9.2	By lime modification	m ³	1		
C5.1.9.3	By removal of material	m ³	1		
C5.1.10	Construction of roadbed comprising active clay				
C5.1.10.1	Roadbed construction using lime	m ³	1		
C5.1.10.2	Roadbed construction by removal of active clay				
C5.1.13	Construction of a levelling layer				
C5.1.13.1	Over roabed treatment in hard material, compacted to 90% Mod AASHTO	m ³	1		

Total Carried Forward To Summary	
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ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
	CHAPTER 5: EARTHWORKS AND PAVEMENT LAYERS:CONSTRUCTION				
C5.2	FILL				
C5.2.2	Fill construction:				
C5.2.2.1	Normal fill material in compacted layer thicknesses of 200 mm and less:				
	(b) Compacted to 93 % of MDD	m ³	1		
	Coarse fill material in compacted layer thicknesses exceeding 200 mm: but less than 500 mm				
C5.2.2.2	(b) Compacted to 93 % of MDD	m ³	1		
C5.2.2.4	Rock fill material all as per Clause A5.2.7.6	m ³	1		
C5.2.9	Removal of oversize material	m ³	1		

Total Carried Forward To Summary	
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ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
	CHAPTER 5: EARTHWORKS AND PAVEMENT LAYERS:CONSTRUCTION				
C5.3	ROAD PAVEMENT LAYERS				
C5.3.1	Compiling and implementing M&U plans for the construction of all the pavement layers	No	1		
C5.3.2	Construction of pavement layers:				
C5.3.2.1	Construction of layers using conventional construction methods:				
	(g) Gravel wearing course layer (G7, 150mm compacted to 95 % of MDD)	m³	1		
C5.3.5	Breaking down oversize gravel layer material on the road				
C5.3.5.1	By additional normal grid rolling as per clause A5.3.7.3b)	m2 - pass	1		

Total Carried Forward To Summary	
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ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
	CHAPTER 6: CONCRETE LAYERS				
C6.1	PAVER LAID CONCRETE LAYERS				
C6.1.2	Construction of jointed concrete pavement (JCP) (Excluding texturing and curing)				
C6.1.2.2	JCP with dowels:				
	(b) Labour enhanced construction (150mm thickness)	m ²	1		
C6.1.4	Texturing and curing the concrete pavement				
C6.1.4.1	Burlap-dragged and grooved texture:				
	(b) Labour enhanced construction	m ²	1		
C6.1.4.2	Burlap-dragged and broom finish only	m ²	1		
C6.1.4.2	Curing:				
	(b) Labour enhanced construction	m ²	1		
C6.1.6	Joints				
C6.1.6.1	Expansion joints complete (excluding dowels)	m	1		
C6.1.6.2	Longitudinal hinge joints:				
	(a) Sealed hinge joints	m	1		
	(b) Unsealed hinge joints	m	1		
C6.1.6.3	Sealed transverse contraction joints sawn in two separate operations	m	1		
C6.1.6.4	Dowel bars: mild steel inserted in new concrete				
	(a) Inserted by mechanical dowel bar inserter	No.	1		
	(b) Pre-installed on approved frame	No.	1		
C6.1.6.5	Tie-bars: installed in new concrete				
	(a) Mild steel	No.	1		
	(b) High tensile steel	No.	1		
Total Carried Forward					

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
Brought Forward					
C6.1.7	Steel reinforcement in concrete pavements				
C6.1.7.1	Mild steel bars	t	1		
C6.1.7.2	High tensile steel bars	t	1		
C6.1.7.3	Welded steel fabric	kg	1		
C6.1.8	Drilling of testing of cores				
C6.1.8.1	100 mm cores drilled from pavement for testing of compressive strength	No.	1		
C6.1.8.2	150 mm cores drilled from pavement for testing of compressive strength	No.	1		
Total Carried Forward To Summary					

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
	CHAPTER 11: ANCILLARY ROAD WORKS				
C11.1	PITCHING, STONEMWORK, CAST IN SITU CONCRETE FOR PROTECTION AGAINST EROSION				
C11.1.2	Stone pitching				
C11.1.2.2	Grouted stone pitching with mortar	m ²	1		
C11.1.2.3	Grouted stone pitching on a concrete bed	m ²	1		
Total Carried Forward To Summary					

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
	CHAPTER 11: ANCILLARY ROAD WORKS				
C11.2	NON-STRUCTURAL GABIONS				
C11.2.1	Foundation trench excavation:				
C11.2.1.1	Excavating all material situated within the following depth ranges below the surface level				
	(a) 0m to 1,5m	m ³	1		
	(b) Exceeding 1,5m and up to 3,0m	m ³	1		
	(c) Exceeding 3,0m and up to 4,5m	m ³	1		
C11.2.1.2	Extra over sub-item C11.2.1.1 for excavation in hard material, irrespective of depth	m ³	1		
C11.2.1.3	Excavating soft material within 1,5m below the surface level using labour enhanced construction methods	m ³	1		
C11.2.1.4	Excavating intermediate material within 1,5m below the surface level using labour enhanced construction methods	m ³	1		
C11.2.2	Surface preparation for bedding the gabion boxes and mattresses	m ³	1		
C11.2.3	Gabion boxes and mattresses:				
C11.2.3.1	Galvanized gabion boxes (2.0 x 1.0 x 1.0 with 2.7mm dia mesh wire and 80 x 80 mm mesh size)	m ³	1		
C11.2.3.2	PVC coated gabion boxes (2.0 x 1.0 x 1.0 with 2.7mm dia mesh wire and 80 x 80 mm mesh size)	m ³	1		
C11.2.3.3	Galvanised gabion mattresses (2.0 x 1.0 x 0.3 m with 2.7 mm dia. mesh wire and 80 x 80 mm mesh size)	m ³	1		
C11.2.3.4	PVC-coated gabion mattresses (2.0 x 1.0 x 0.3 m with 2.7 mm dia. mesh wire and 80 x 80 mm mesh size)	m ³	1		
C11.2.4	Geotextile (Grade A4, needle punch non- woven geofabric)	m ²	1		

Total Carried Forward To Summary						

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
	CHAPTER 11: ANCILLARY ROAD WORKS				
C11.4	ROAD RESTRAINT SYSTEMS				
C11.4.1	Erecting of guardrails at 3,81 m spacing				
C11.4.1.1	Complete galvanized system compliant to SANS 1350:				
	(a) On timber posts	m	1		
	(b) On steel posts used at specific locations	m	1		
	(d) Extra over C11.4.1.1(a) and C11.4.1.1(b) for excavating holes of posts using labour enhanced methods (soft and intermediate)	m	1		
C11.4.1.2	Terminal sections for 3,81 guardrails comprising of:				
	(a) End wings to SANS 1350	No.	1		
	(b) Bullnoses to SANS 1350	No.	1		
	(c) Bridge adapters to SANS 1350	No.	1		
	(d) End treatments where single guardrail sections are specified	No.	1		
	(e) End treatments where double guardrail sections are specified	No.	1		
	(g) Extra over C11.4.1.2(d) and C11.4.1.2(e) for excavating holes for posts using labour enhanced methods (soft and intermediate)	No.	1		

Total Carried Forward To Summary	
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ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
	CHAPTER 11: ANCILLARY ROAD WORKS				
C11.6	ROAD SIGNS				
C11.6.1	Road signboards with painted or coloured semi-matt background. Symbols, lettering and borders in semi- matt black or in Class I retro-reflective material, where the sign board is constructed from:				
C11.6.1.7	Regulatory signs, permanent:				
	(a) 600 mm diameter (Type of sign indicated)	No	1		
C11.6.1.9	Warning signs, permanent:				
	(a) 600 mm (Type of sign indicated)	No	1		
C11.6.3	Road sign supports (overhead road sign structures excluded):				
C11.6.3.2	Timber (diameter and type indicated)				
	(a) 125 mm dia.	m	1		
	(b) 150 mm dia.	m	1		
	(c) 175 mm dia.	m	1		
	(d) 200 mm dia.	m	1		
C11.6.5	Excavation and backfilling for road sign supports (not applicable to kilometre posts):				
C11.6.5.1	Excavating soft material and backfilling	m ³	1		
C11.6.5.2	Excavating soft or intermediate material and backfilling using labour enhanced construction methods	m ³	1		
C11.6.5.3	Extra over item C11.6.5.1 and C11.6.5.2 for cement-treated soil backfill	m ³	1		
C11.6.5.4	Extra over item C11.6.5.1 for hard material excavation	m ³	1		
C11.6.5.5	Imported backfill material from commercial sources	m ³	1		
C11.6.8	Danger plates at culverts / structures				
C11.6.8.1	Size 150 x 600 mm (1,4 Chromadek W401 & W402)	No	1		

Total Carried Forward To Summary	
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ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
	CHAPTER 11: ANCILLARY ROAD WORKS				
C11.9	FINISHING THE ROAD RESERVE AND TREATING OLD ROADS				
C11.9.1	Finishing the road and road reserve:				
C11.9.1.1	Dual carriageway road	km	1		
C11.9.1.2	Single carriageway road	km	1		
C11.9.2.1	Treatment of old roads and temporary deviations				
C11.9.2.1	Conventional construction methods	km	1		

Total Carried Forward To Summary	
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ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
	CHAPTER 13: STRUCTURES				
C13.1	FOUNDATIONS				
C13.1.1	Provision of designs and drawings of temporary works by an ECSA-registered Professional Engineer or Technologist or Geotechnical Engineer (description of works to which applicable):	Lump Sum	1		
C13.1.2	Additional foundation investigations:				
C13.1.2.1	Provisional sum allowed for additional foundation investigations	Prov Sum	1	R20 000,00	R 20 000,00
C13.1.2.2	Handling costs and profit in respect of item C13.1.2.1	%	R 20 000,00		
C13.1.3	Excavation:				
C13.1.3.1	Excavating soft material situated within the following successive depth ranges				
	(a) 0m up to 1.5m	m³	1		
	(a) >1.5m and <3.0m	m³	1		
	(c) >3.0m and <4.5m	m³	1		
C13.1.3.2	extra over subitem C13.1.3.1 for excavation in hard material irrespective of depth	m³	1		
C13.1.3.3	extra over subitem C13.1.3.1 for additional excavation required by the engineer after the excavation is complete	m³	1		
C13.1.3.4	extra over subitem C13.1.3.1 for excavation by hand	m³	1		
C13.1.6	Access and drainage:				
C13.1.6.1	Access	L/Sum	1		
C13.1.6.2	Drainage	L/Sum	1		
C13.1.7	Backfill to excavations utilising:				
C13.1.7.1	Material from the Excavation	m³	1		
C13.1.7.2	Imported Material	m³	1		
C13.1.8	Backfill to excavation using labour				
C13.1.8.1	Material from the Excavation	m³	1		
C13.1.8.2	Imported Material	m³	1		
C13.1.10	Haul in excess of 1,0 km on excavated material and on material imported for backfill, foundation fill and fill for caissons	m³-km	1		
C13.1.12	Overbreak in excavation in hard material	m²	1		
C13.1.14	Foundation fill consisting of:				
C13.1.14.1	Rock fill	m³	1		
C13.1.14.2	Crushed-stone fill	m³	1		
Total Carried Forward					

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
Brought Forward					
C13.1.14.3	Compacted granular material	m ³	1		
C13.1.14.4	Mass concrete (class indicated)	m ³	1		
C13.1.14.5	Concrete blinding (15Mpa/19mm)	m ³	1		
C13.1.15	Foundation fill by labour enhanced methods consisting of:				
C13.1.15.1	Rock fill	m ³	1		
C13.1.15.2	Crushed-stone fill	m ³	1		
C13.1.15.3	Compacted granular material	m ³	1		
C13.1.15.4	Mass concrete (class indicated)	m ³	1		
C13.1.1.5	Concrete blinding (15Mpa/19mm)	m ³	1		
C13.1.20	Dowel bars:				
C13.1.20.1	Drilling and preparation of holes (diameter and length indicated)	m	1		
C13.1.20.2	Supply and installation of dowel bars	kg	1		
C 13.1.23	Lateral Support for excvations				
C 13.1.23.1	Excavation or fill				
	(a) 0 to 2,5 m depth	m ³			
	(b) 2,5 to 5,0 m depth	m ³			
	(c) Etc. at other locations	m ³			
Total Carried Forward To Summary					

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
	CHAPTER 13: STRUCTURES				
C13.2	FALSEWORK, FORMWORK AND CONCRETE FINISH				
C13.2.2	Vertical formwork to provide (F1 / F2 / F3 / board) surface finish				
	(a) Abutments, Pillars and Wingwalls	m ²	1		
	(b) Deck and bases	m ²	1		
	(c) Bollards	m ²	1		
C13.2.3	Horizontal formwork to provide (F1 / F2 / F3 / board) surface finish to (describe)				
	(a) Deck and bases	m ²	1		
C13.2.4	Inclined formwork to provide (F1 / F2 / F3 / board) surface finish to (describe)				
	(a) Wingwalls	m ²	1		

Total Carried Forward To Summary	
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ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
	CHAPTER 13: STRUCTURES				
C13.3	STEEL REINFORCEMENT				
C13.3.1	Reinforcement for:				
	(a) Mild-steel bars (type and list applicable members)	t	1		
	(b) High-yield-stress-steel bars (type and list applicable members)	t	1		
	(c) Welded Steel Fabric (type, list applicable members)	kg	1		

Total Carried Forward To Summary	
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ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
	CHAPTER 13: STRUCTURES				
C13.4	CONCRETE				
C13.4.1	Cast in situ concrete (Class of concrete and use or position in structure stated):				
C13.4.1.1	Strength concrete (class C):				
	(a) strength/characteristic compressive cube strength and nominal aggregate size e.g. Blinding C12/15-20 Class 15/19	m ³	1		
	(i) Base blinding	m ³	1		
	(b) Class 30/19				
	(i) Base slab	m ³	1		
	(ii) Deck slab	m ³	1		
	(iii) Abutmentwalls and screen walls	m ³	1		
C13.4.1.2	Durable concrete (class D):				
	(a) strength/characteristic compressive cube strength, environmental exposure and service life and nominal aggregate size e.g. Deck slab D35/45-XS1(100)-20 Class 15/19	m ³	1		
	(i) Base blinding	m ³	1		
	(b) Class 30/19				
	(i) Base slab	m ³	1		
	(ii) Deck slab	m ³	1		
	(iii) Abutmentwalls and screen walls	m ³	1		
C13.4.3	Extra over item C13.4.1 for the protection of concrete from adverse environmental conditions, if required				
C13.4.3.1	Strength concrete (class C):				
	(a) strength/characteristic compressive cube strength and nominal aggregate size e.g. Blinding C12/15-20 Class 15/19	m ³	1		
	(i) Base blinding	m ³	1		
	(b) Class 30/19				
	(i) Base slab	m ³	1		
	(ii) Deck slab	m ³	1		

	(iii) Abutmentwalls and Screen walls	m ³	1		
C13.4.3.2	Durable concrete (class D):				
	(a) strength/characteristic compressive cube strength, environmental exposure and service life and nominal aggregate size e.g. Deck slab D35/45-XS1(100)-20	m ³	1		
	Class 15/19				
	(i) Base blinding	m ³	1		
	(b) Class 30/19				
	(i) Base slab	m ³	1		
	(ii) Deck slab	m ³	1		
	(iii) Abutmentwalls and Screen walls	m ³	1		
C13.4.5	Curing and surface protection of cast in situ concrete, as and where specifically required:				
C13.4.5.1	(i) Base slab	m ²	1		
	(ii) Deck slab	m ²	1		
	(iii) Abutmentwalls and Screen walls	m ²	1		
C13.4.13	Complete demolition and disposal of existing structural concrete elements or parts existing				
C13.4.13.1	(i) Base slab	m ³	1		
	(ii) Deck slab	m ³	1		
	(iii) Abutmentwalls and Screen walls	m ³	1		
Total Carried Forward To Summary					

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
	CHAPTER 13: STRUCTURES				
C13.7	JOINTS				
C13.7.2	Filled Joints				
C13.7.2.1	Joint type 1 complete , with closed cell joint filler and polysulphide sealant	m	1		
C13.7.3	Unfilled Joints				
C13.7.3.1	Joint type 1	m	1		
C13.7.4	Sealing joints with:				
C13.7.4.1	polysulphide sealant	m	1		
Total Carried Forward To Summary					

SUMMARY OF SECTIONS

SECTION	DESCRIPTION	AMOUNT
C1.2	GENERAL REQUIREMENTS AND PROVISIONS	R -
C1.3	CONTRACTOR'S SITE ESTABLISHMENT AND GENERAL OBLIGATIONS	R -
C1.4	FACILITIES FOR THE ENGINEER	R -
C1.5	ACCOMMODATION OF TRAFFIC	R -
C1.6	CLEARING AND GRUBBING	R -
C1.7	LOADING AND HAULING	R -
C2.1	GENERAL REQUIREMENTS AND TRENCHING	R -
C2.3	WET SERVICES	
C3.1	DRAINS	R -
C3.2	CULVERTS	R -
C3.3	CONCRETE KERBING AND CHANNELING, ASPHALT BERMS, CHUTES, DOWNPIPES, CONCRETE, STONE PITCHED AND GABION LININGS	R -
C4.1	BORROW MATERIALS	R -
C5.1	ROADBED	R -
C5.2	FILL	R -
C5.3	ROAD PAVEMENT LAYERS	R -
C6.1	CONCRETE LAYERS	R -
C11.1	PITCHING, STONEMWORK, CAST IN SITU CONCRETE FOR PROTECTION AGAINST EROSION	R -
C11.2	NONE-STRUCTURAL GABIONS	R -
C11.4	ROAD RESTRAINT SYSTEMS	R -
C11.6	ROAD SIGNS	R -
C11.9	FINISHING THE ROAD RESERVE AND TREATING OLD ROADS	R -
C13.1	FOUNDATIONS	R -
C13.2	FALSEWORK, FORMWORK AND CONCRETE FINISH	R -
C13.3	STEEL REINFORCEMENT	R -
C13.4	CONCRETE	R -
C13.7	JOINTS	R -
	SUB TOTAL-A	R -
	Add 10% CONTIGENIES	R -
	CPA at 5%	
	SUB TOTAL-B	R -
	Add 15% VAT	R -
Total Carried Forward To FORM OF OFFER		R -