GA-MAKGOBA(MATHABATHA) REGRAVELLING AND STORMWATER PROJECT

| ITEM | LI | DESCRIPTION | UNIT | QUANTITY | RATE | AMOUNT R |
|--------|----|---|-----------------|-----------------|--------------------|----------------------------|
| 1200 | | GENERAL REQUIREMENTS AND PROVISIONS | | | | |
| B12.01 | | EXCAVATIONS OF MATERIAL WITHIN THE FOLLOWING DEPTH RANGES BELOW AROUND LEVELS FOR EXPOSING OR SEARCHING EXISTING SERVICES | | | | |
| | | a) Depth between 0 and 2,0m (i) LI soft material (ii) Intermediate material | m³ m³ | 35 10 | 50.00 60.00 | , |
| B12.03 | | (1) RELOCATION OR PROTECTION OF SERVICES AS ORDERED BY ENGINEER | | | | |
| | | (a) Cost of work | Prov sum | 1 | R 10,000.00 | R 10,000.00 |
| | | (b) Handling Costs and Profit in respect of item (a) above | % | R10,000.00 | 10% | R 1,000.00 |
| B12.04 | | PROVISION FOR COMMUNITY LIAISON OFFICER | | | | |
| | | a) Payment of the Community Liaison Officer | Prov sum | 1 | R 18,000.00 | R 18,000.00 |
| | | b) Contractor's handling cost and profit in respect of item B12.04 (a) | % | 18000.00 | 10% | R 1,800.00 |
| B12.05 | | CONSTRUCTION HEALTH AND SAFETY OBLIGATIONS | | | | |
| | | a) Mine Health and Safety obligations b) Safety file | Month PC Sum | 4 1 | 15000.00 | R 60,000.00 R 20,000.00 |
| | | c) Provision of Security Guards d) Handling Cost and Profit of item b and c above | PC Sum % | 1 80000.00 | 10% | R 60,000.00 R 8,000.00 |
| B12.06 | | COMPENSATION OF LANDOWNERS | | | | |
| | | a) Prime Cost Sum b) Handling Cost and Profit of item B12.06(a) above | PC Sum % | 1 20000.00 | 20000.00 10% | , |
| B12.07 | | SURVEYORS WORK, SETTING OUT AND PROTECTION OF BEACO (contractor to provide charted surveyor for all surveyings) | Prov Sum | 1 R90,000.00 | R 90,000.00 10% | R 90,000.00 R 9,000.00 |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| 1200 | | TOTAL CARRIED FORWARD TO SUMMARY | | | | |
| 1200 | | TOTAL CAMMED FORWARD TO SUIVINIALL | | | | |

| ITEM | LI | DESCRIPTION | UNIT | QUANTITY | RATE | AMOUNT R |
|--------|----------|--|----------------|----------|--------------|--------------|
| | | CONTRACTOR'S ESTABLISHMENT ON SITE AND GENERAL | | | | |
| 1300 | | OBLIGATIONS | | | | |
| B13.01 | | The contractor's general obligations: | | | | |
| | | (a) Fixed obligations | L/Sum | 1 | R 150,000.00 | R 150,000.00 |
| | | (b) Value-related obligations | L/Sum | 1 | R 10,000.00 | R 10,000.00 |
| | | (c) Time-related obligations | Month | 4 | R 60,000.00 | R 240,000.00 |
| 1300 | | TOTAL CARRIED FORWARD TO SUMMARY | | | | |
| ITEM | LI | DESCRIPTION | UNIT | QUANTITY | RATF | AMOUNT R |
| 1500 | <u> </u> | ACCOMMODATION OF TRAFFIC | 5 | ζο/ | | Autoca i |
| B15.01 | | Accommodating traffic and maintaining deviations incl road signs | km | 2 | | R - |
| B15.02 | | Earthworks for deviations | | | | |
| | | (a) Shaping of deviations | km | 2 | | R - |
| | | (b) Cut and borrow to fill | m ³ | | | |
| | | (c) Cut to spoil | m ³ | | | |
| B15.02 | | Temporary traffic-control facilities: | | | | |
| | | (a) LI Flag persons | man-day | 60 | | R - |
| | | (b) LI Portable STOP and GO-RY signs | No. | 2 | | R - |
| | | (d) LI Amber Flicker lights | No. | | | |
| | | (e) LI Road signs, R- and TR- series; | | | | |
| | | (i) LI 1200mm | No. | 4 | | R - |
| | | (ii) LI 1500mm | No. | 4 | | R - |
| | | (f) LI Road signs, TW- series | | | | |
| | | (i) Ll 1500mm | No. | 4 | | R - |
| | | (ii) LI 2400mm x 400mm | No. | 4 | | R - |
| | | (g) LI Road signs, STW-, DTG-, TGS- and TG-Series excluding delineators and barricades | | | | |
| | | (i) LI 1600mm x 1200mm | m ² | 4 | | R - |
| | | (ii) LI 2400mm x 1800mm | m ² | 4 | | R - |
| | | (h) LI Delineators DTG50J, size indicated: | | | | |
| | | (i) Single | No. | 15 | | R - |
| | | (ii) Mounted back to back | No. | 20 | | R - |
| | | LI Movable barricade/road sign combination with an affective width of 6m. | No. | 4 | | R - |
| 1500 | | TOTAL CARRIED FORWARD | | | | |

| ITEM | LI | DESCRIPTION | UNIT | QUANTITY | RATE | AMOUNT R |
|--------------|----|--|-------|------------|------|-----------|
| 1800 | | DAYWORK AND HIRE OF CONSTRUCTION PLANT | | | | |
| B18.01 | | Labour: | | | | |
| | | (a) Normal working hours: | | | | |
| | | (i) Team Leader X 2 | hour | Rate Only | | Rate Only |
| | | (ii) Semi-skilled labourer X10 | hour | Rate Only | | Rate Only |
| | | (iv) Labourer X 20 | hour | Rate Only | | Rate Only |
| | | (b) Overtime and Saturdays: | | | | |
| | | (I) Team Leader | hour | Rate Only | | Rate Only |
| | | (ii) Semi-skilled labourer | hour | Rate Only | | Rate Only |
| | | (iv) Labourer | hour | Rate Only | | Rate Only |
| B18.02 | | Hire of construction equipment: | | | | |
| | | 1) Bulldozer with ripper: | | | | |
| | | (i) 70kW - 170kW | hour | Rate Only | | Rate Only |
| | | 2) Self-propelled grader (100 to 200kW) | hour | Rate Only | | Rate Only |
| | | 3) Front-end loader with 2 to 3 m3 capacity | hour | Rate Only | | Rate Only |
| | | 4) Tip truck or dumper with: | | | | |
| | | (i) 5 m ³ capacity | hour | Rate Only | | Rate Only |
| | | (ii) 10 m ³ capacity | hour | Rate Only | | Rate Only |
| | | 5) Air compressor with: | | | | |
| | | (i) 6 m3/min. capacity with two pneumatic drills | hour | Rate Only | | Rate Only |
| | | 6) Flat wheel roller (steel drums) with 10 to 20 tons capacity | hour | Rate Only | | Rate Only |
| | | 7) Pneumatic-tyred roller with 10 to 25 tons capacity | hour | Rate Only | | Rate Only |
| | | 8) Vibratory roller of 8 tons capacity | hour | Rate Only | | Rate Only |
| | | 9) TLB (tractor/loader/backhoe) | hour | Rate Only | | Rate Only |
| 1800 ITEM | LI | TOTAL CARRIED FORWARD DESCRIPTION | UNIT | QUANTITY | DATE | AMOUNT R |
| ITEIVI | Ц | | | DUGHT FORW | | AWOONTR |
| | | 10) 13 500 litre water tanker | hour | Rate Only | | Rate Only |
| | | 11) 1800 litre water tanker | hour | Rate Only | | Rate Only |
| | | 12) Bomag 65 | Daily | Rate Only | | |
| | | 13) Bomag 90 | Daily | Rate Only | | Rate Only |
| | | 14) Excavator 25 tons | hour | Rate Only | | |
| | | 15) Excavator 30 tons | hour | Rate Only | | Rate Only |
| | | 16) Generator | Daily | Rate Only | | Rate Only |
| | | 17) Waterpump | Daily | Rate Only | | |
| | | 18) Concrete saw cutter | Daily | Rate Only | | Rate Only |
| | | 19) Flatbed truck | hour | Rate Only | | Rate Only |
| | | 20) Lowbed | hour | Rate Only | | Rate Only |
| 1800 | | TOTAL CARRIED FORWARD TO SUMMARY | | Í | | |

| ITEM | LI | DESCRIPTION | UNIT | QUANTITY | RATE | AMOUNT R |
|-------|----|---|----------------|------------|-------|-----------|
| 2100 | | DRAINS | | | | |
| 21.01 | | Excavation for open drains: | | | | |
| | | (a) Excavating soft materials situated | | | | |
| | | within the following depth ranges below | | | | |
| | | the surface level: | | | | |
| | | (i) 0 m up to 1,5m | m ³ | 6000 | | R - |
| | | (ii) Exceeding 1,5m and up to 3,0m | m ³ | 0 | | R - |
| | | (b) Extra over sub item 21.01(a) for excavation in hard | | | | |
| | | material, irrespective of | 3 | | | |
| | | depth | m ³ | 300 | | |
| | | | | | · | |
| ITEM | LI | DESCRIPTION | UNIT | QUANTITY | RATE | AMOUNT R |
| | | | BRO | DUGHT FORW | ARD | |
| 22.05 | | Portal and rectangular culverts (b) without prefabricated floor slabs | | | | |
| | | (size and type indicated) | | | | |
| | | (i) 900mm x 450mm | m | 186 | | R - |
| | | (ii) 900mm x 600mm | m | | | Rate Only |
| | | (iii) 1800mm x 1800mm | m | | | Rate Only |
| | | (iv) 2400mm x 1800mm | m | | | Rate Only |
| | | (v) 2400mm x 2400mm | m | | | Rate Only |
| | | (vi) 3000mm x 2400mm | m | | | Rate Only |
| 22.07 | | Cast in-situ concrete and formwork: | | | | |
| | | (a) In class A bedding, screeds and the | | | | |
| | | encasing for pipes, including formwork (class 15/19) | m ³ | | | |
| | | (b) In floor slabs for portal or rectangular | | | | |
| | | culverts, including formwork and Class U2 surface finish: | | | | |
| | | (i) Class 25/19 concrete | m^3 | 50 | | R - |
| | | (c) In inlet and outlet structures, | | | | |
| | | catchpits, manholes, thrust blocks and anchor blocks, ex- | | | | |
| | | cluding formwork but including | | | | |
| | | Class U2 surface finish | | | | |
| | | (i) Class 25/19 concrete | m³ | 15 | | R - |
| | | (d) Formwork of concrete under sub item 22.07 (c) above | | | | |
| | | (i) Class F1 surface finish | m^2 | 163 | | R - |
| | | (ii) Class F2 surface finish | m^2 | 244 | | R - |
| | | (iii) Class F3 surface finish | m^2 | 74 | | R - |
| 2200 | | TOTAL CARRIED FORWARD | | | | |
| | | | | | | |

| ITEM | LI | DESCRIPTION | UNIT | QUANTITY | | AMOUNT R | |
|---------------|----|---|----------------|-----------|-----|-----------|-----------|
| 22.08 | | Concrete backfill for culverts, class 15/19 | m ³ | 63 | IRD | R | 0.00 - |
| 22.10 | | Steel reinforcement: | | | | | |
| | | (a) Mild steel bars | t | 0.21 | | R | - |
| | | (b) High tensile steel bars | t | 0.5 | | R | - |
| | | (c) Welded steel fabric | kg | 1680 | | R | - |
| 22.12 | | Removing Existing Concrete: | | | | | |
| | | (a) Plain Concrete | m^3 | 2 | | R | - |
| | | (b) Reinforced Concrete | m^3 | 2 | | R | - |
| 22.13 | | Removing and re-laying of existing pipes | | | | | |
| | | (a) On class B bedding | | | | | |
| | | (i) 600 mm dia. | m | Rate Only | | Rate Only | |
| | | (ii) 750 mm dia. | m | Rate Only | | Rate Only | |
| 22.14 | | Removing and stacking existing pipes (all sizes) | m | 20 | | R | - |
| 22.18 | | Brickwork | | | | | |
| | | (b) 230mm thick | m^2 | 50 | | R | - |
| 22.23 | | Service ducts | | | | | |
| | | (a) 110mm dia. Internal PVC | m | 108 | | R | - |
| 22.25 | | Overhaul on excavated material carted to spoil, backfill material, existing structures Demolished and removed to spoil and Removing and relaying, and removing Stacking existing prefabricated culverts For haul in excess of the free-haul Distance. (1km free-haul) | m³-km | 1312 | | R | - |
| 2200 | | TOTAL CARRIED FORWARD TO SUMMARY | | | | | |
| 2300 23.02 | | CONCRETE KERBING, CONCRETE CHANNELING, OPEN CHUTES AND CONCRETE LININGS FOR OPEN DRAINS Concrete kerbing-channeling combination: | | | | | |
| 23.03 | | Concrete chutes: | | | | | |
| | | (a) LI Prefabricated concrete chutes as | m | | | Rate Only | |
| 23.05 | | Inlet, outlet, transition and similar structures | | | | | |
| | | (a) LI Open chutes /trapezoidal channel(Class 25/19 concrete): | | | | | |
| | | (i) Chute inlets Type A | No. | | | Rate Only | |
| | | 1) On slope | No. | | | Rate Only | |
| | | 2) At low point | No. | | | Rate Only | |
| | | (ii) Chute outlets (Type C) | No. | | | Rate Only | |
| | | TOTAL CARRIED FORWARD | | | | | |

| ITEM | LI | DESCRIPTION | UNIT | QUANTITY | | AMOUNT R |
|-------|----|--|----------------|--|-----|-----------|
| | | | BR | OUGHT FORW | ARD | |
| | | Inlet, outlet, transition and similar structures: (Including in-situ | | | | |
| | | concrete chutes | | | | |
| 23.06 | | | | | | |
| | | LI Cast in stone pitching lining for trapeziod channel | | - | | |
| | | atone nitabing laid in 1.4 compart mortes | m ² | 6000 | 1 | _ |
| | | stone pitching laid in 1.4 cement mortar | m | 6000 | | R - |
| | | 4) 115 1 (0) 54 (5:1) (| 2 | 050 | • | |
| | | (b) LI Formwork (Class F1 surface finish) for | m ² | 350 | | R - |
| | | Type "grouted stone pitching | | + | • | |
| | | (i) To side with form work on both internal | | + | | |
| | | And external faces (each face measured) | | | | |
| | | | | | | |
| | | (c) LI Class U2 surface finish to cast in situ edge beams - | | | | |
| | | 200mmx300mm concrete | m ² | Rate Only | | Rate Only |
| | | | | | | |
| | | | | | | |
| 23.07 | | Trimming of excavations for concrete/stone pitch | | | | |
| | | lined open drains: | | + | | |
| | | | | | | |
| | | (a) In soft material | m ² | 3000 | | R - |
| | | | | | | |
| | | (b) In hard material | m ² | 300 | | R - |
| | | | | | | |
| 23.08 | | Stone pitch/Concrete lining for open drains: | | | | |
| | | (a) LI Cast in situ concrete lining | | 1 | | |
| | | (Class 25/19 concrete): | 3 | D . O . | • | |
| | | (i) Side drains - Type "A" | m ³ | Rate Only | | Rate Only |
| | | | 3 | | | |
| | | (ii) Side drains - Type "D" | m ³ | Rate Only | | Rate Only |
| | | | 3 | | | |
| | | (iii) Side drains - Type "F" | m ³ | Rate Only | | Rate Only |
| | | (h) 1101110 | | 1 | | |
| | | (b) LI Class U2 surface finish to cast in situ concrete: | | - | | |
| | | (i) Olde desire | 2 | Data Oak | | |
| | | (i) Side drains | m ² | Rate Only | | Rate Only |
| 23.09 | | Formwork to cast in situ concrete | | + | • | |
| 23.09 | | lining for open drains (Class F2 | | 1 | | |
| | | surface finish): | | + | • | |
| | | our tage (milen). | | | | |
| | | (b) LI To side with formwork on both internal | m ² | Rate | | Rate Only |
| | | and external faces (each face measured) | | Rate | | hate Only |
| | | and external races (each race measures) | | 1 | | |
| | | (c) LI To ends of slabs and top | m ² | 6 | | R - |
| | | (o) El 10 chas di diass and top | | , , | | IX - |
| 23.10 | | LI Sealed joints in concrete linings of | | | | |
| 25.10 | | open drains (2 layers of 3-ply malthoid) 300mm wide as supplied | | | | |
| | | by ABE or similar as approved | m | Rate Only | | Rate Only |
| | | · | | | | , |
| 23.11 | | LI Concrete screed for backfill below chutes(class 20/19) | m ³ | 4 | | R - |
| | | | | 1 | | |
| 23.12 | | Steel reinforcement | | 1 | | |
| | | | | 1 | | |
| | | (c) Welded steel fabric | kg | Rate Only | | Rate Only |
| | | | | | | |
| | | | | 1 | | |
| | | | | | | |
| | | | | _ | 4 | |
| | | | | + | - | |
| | | | | | | |
| 2300 | l | TOTAL CARRIED FORWARD TO SUMMARY | I | 1 | ı | İ. |

| (a) 0m up to 1,5m (b) Exceeding 1,5m up to 3,0m (c) Exceeding 1,5m up to 1,0m (c) Exceeding 1,5m | ITEM | LI | DESCRIPTION | UNIT | QUANTITY | RATE | AMOUNT R | \Box |
|--|--------|----|--|------|----------|------|----------|----------|
| (a) 0m up to 1,5m (b) Exceeding 1,5m up to 3,0m (c) Exceeding 1,5m up to 1,0m (c) Exceeding 1,5m | 3100 | | BORROW MATERIALS | | | | | |
| (a) Exceeding 1,5m up to 3,0m m³ 400 R | B31.01 | | Excess overburden | | | | | |
| 11.03 Finishing-off borrow areas in: (a) Hard material (b) Intermediate Material (c) Soft Material (b) Intermediate Material (c) Soft Material (c) Sof | | | (a) 0m up to 1,5m | m³ | 2000 | | R - | |
| (a) Hard material (b) Intermediate Material (c) Soft Material (c) Soft Material (d) TOTAL CARRIED FORWARD TO SUMMARY ITEM (U) DESCRIPTION (U) DESCRIPTION (U) AMSS EARTHWORKS(EMBARKWENT) (U) AMSS EARTHWORKS(EMBARKWENT) (U) AMS EARTHWORKS (EMBARKWENT) (U) TO FILL METHOD FOR EMBARKMENT) Executes in all materials for trenches, backfill, compact and dispose of surplus material. (i) Along the mountain embarkment. Embarkment to be processed in 300mm layer and compacted to 93% mod assistion (b) Hard excavation (c) Hard excavation (d) Hard excavation (e) Boulder excavation (f) Hard excavation (g) Soft excavation (h) Intermediate excavation (h) I | | | (b) Exceeding 1,5m up to 3,0m | m³ | 400 | | R - | |
| (c) Soft Material | 31.03 | | Finishing -off borrow areas in: | | | | | |
| (c) Soft Material | | | (a) Hard material | ha | 0.01 | | R - | |
| TOTAL CARRIED FORWARD TO SUMMARY | | | (b) Intermediate Material | ha | 1 | | R - | |
| U DESCRIPTION UNIT QUANTITY RATE AMOUNT R | | | (c) Soft Material | ha | 0.01 | | R - | |
| U DESCRIPTION UNIT QUANTITY RATE AMOUNT R | | | | | | | | |
| 33.01 MASS EARTHWORKS(EMBARKMENT) Cut and borrow to fill, including freehaul up to 1.0 km. EARTHWORKS (EMBARKMENT) TRENCHES FOR STORMARKMENT) Excavate in all materials for trenches, backfill, compact and dispose of surplus material: (i) Along the mountain embarkment. Embarkment to be processed in 300mm layer and compacted to 93% mod-asashto mod-as | 3100 | | TOTAL CARRIED FORWARD TO SUMMARY | | | | | \dashv |
| Cut and borrow to fill, including freehaul up to 1.0 km. EARTHWORKS (EMBARKMENT) TRENCHES FOR STORMWATER EARTH DRAINAGE AND USING CUT TO FILL METHOD FOR EMBARKMENT) Excavate in all materials for trenches, backfill, compact and dispose of surplus material: (i) Along the mountain embarkment. Embarkment to be processed in 300mm layer and compacted to 93% mod-asabto Extra over item 33.01 for excavating and breaking down material in: (a) Intermediate excavation m³ 1655 R Cut to spoil, including free haul up to 1, 0 km. Material obtained from: (a) Soft excavation m³ 645 R (b) Intermediate excavation m³ R Roadbed preparation and the compaction of material (b) Compaction to 93% of modified AASHTO density In situ treatment of roadbed: (a) In situ treatment of roadbed: (a) In situ treatment of roadbed: (a) In situ treatment and removal of debris m³ 180 R Finishing-off cut and fill slopes, medians and interchange areas: (a) Cut slopes m² 180 R | ITEM | LI | | UNIT | QUANTITY | RATE | AMOUNT R | ╛ |
| up to 1,0 km EARTHWORKS (EMBARKMENT) TRENCHES FOR STORMWATER EARTH DRAINAGE AND USING CUT TO FILL METHOD FOR EMBARKMENT) Excavate in all materials for trenches, backfill, compact and dispose of surplus material : (i) Along the mountain embarkment . Embarkment to be processed in 300mm layer and compacted to 93% mod-aashto m³ 5355 m R - | 3300 | | MASS EARTHWORKS(EMBARKMENT) | | | | | |
| EARTHWORKS (EMBARKMENT) TRENCHES FOR STORMWATER EARTH DRAINAGE AND USING CUT TO FILL METHOD FOR EMBARKMENT) Excavate in all materials for trenches, backfill, compact and dispose of surplus material: | 33.01 | | Cut and borrow to fill, including freehaul | | | | | |
| TRENCHES FOR STORMWATER EARTH_DRAINAGE AND_USING. CUT TO FILL METHOD FOR EMBARKMENT) Excavate in all materials for trenches, backfill, compact and dispose of surplus material: (i) Along the mountain embarkment . | | | | | | | | |
| CUT TO FILL METHOD FOR EMBARKMENT) Excavate in all materials for trenches, backfill, compact and dispose of surplus material : | | | | | | | | |
| dispose of surplus material: (i) Along the mountain embarkment. Embarkment to be processed in 300mm layer and compacted to 93% mod-aashto mod-aashto mod-aashto mod-aashto mod-aashto material in: (a) Intermediate excavation m³ 1655 R - (b) Hard excavation m³ 645 R - Cut to spoil, including free haul up to 1, 0 km. Material obtained from: (a) Soft excavation m³ R - (b) Intermediate excavation m³ R - (c) Boulder excavation m³ R - (e) Boulder excavation Class B m³ R - (e) Boulder excavation and the compaction of material (b) Compaction to 93% of modified m³ 2400 R - 33.12 In situ treatment of roadbed: (a) In situ treatment and removal of debris m³ 180 R - 53.13 Finishing-off cut and fill slopes, medians and interchange areas: (a) Cut slopes m² 180 R - | | | | | | | | |
| Embarkment to be processed in 300mm layer and compacted to 93% mod-aashto Extra over item 33.01 for excavating and breaking down material in: (a) Intermediate excavation (b) Hard excavation Cut to spoil, including free haul up to 1, 0 km. Material obtained from: (a) Soft excavation (b) Intermediate excavation (c) Intermediate excavation Roadbed preparation and the compaction of material (b) Compaction to 93% of modified AASHTO density In situ treatment of roadbed: (a) In situ treatment and removal of debris Finishing-off cut and fill slopes, medians and interchange areas: (a) Cut slopes (b) Fill slopes m² 180 R | | | · · · · · · · · · · · · · · · · · · · | | | | | |
| Basilo | | | | | | | | |
| breaking down material in: (a) Intermediate excavation | | | | m³ | 5355 | | R - | |
| (a) Intermediate excavation | 33.03 | | | | | | | |
| Cut to spoil, including free haul up to 1, 0 km. Material obtained from: (a) Soft excavation (b) Intermediate excavation (e) Boulder excavation Class B Roadbed preparation and the compaction of material (b) Compaction to 93% of modified AASHTO density In situ treatment of roadbed: (a) In situ treatment and removal of debris Finishing-off cut and fill slopes, medians and interchange areas: (a) Cut slopes (b) Fill slopes Material obtained ma R - R - - - - - - - - - - | | | | m³ | 1655 | | R - | |
| 133.04 | | | (b) Hard excavation | m³ | 645 | | R - | |
| (b) Intermediate excavation m³ R - (e) Boulder excavation Class B m³ 2400 R - (e) Compaction to 93% of modified m³ 2400 R - (e) Compaction to 93% of modified m³ 2400 R - (e) Compaction to 93% of modified m³ 180 R - (e) R | 33.04 | | | | | | | |
| (e) Boulder excavation Class B m³ R - Roadbed preparation and the compaction of material (b) Compaction to 93% of modified AASHTO density In situ treatment of roadbed: (a) In situ treatment and removal of debris m³ 180 R - Finishing-off cut and fill slopes, medians and interchange areas: (a) Cut slopes m² 180 R - (b) Fill slopes m² 180 R - | | | (a) Soft excavation | m³ | | | R - | |
| Roadbed preparation and the compaction of material (b) Compaction to 93% of modified AASHTO density In situ treatment of roadbed: (a) In situ treatment and removal of debris m³ 180 R - Finishing-off cut and fill slopes, medians and interchange areas: (a) Cut slopes m² 180 R - (b) Fill slopes m² 180 R - | | | (b) Intermediate excavation | m³ | | | R - | |
| Roadbed preparation and the compaction of material (b) Compaction to 93% of modified AASHTO density In situ treatment of roadbed: (a) In situ treatment and removal of debris m³ 180 R - Finishing-off cut and fill slopes, medians and interchange areas: (a) Cut slopes m² 180 R - (b) Fill slopes m² 180 R - | | | | | | | | |
| (b) Compaction to 93% of modified AASHTO density | | | (e) Boulder excavation Class B | m³ | | | R - | |
| AASHTO density In situ treatment of roadbed: (a) In situ treatment and removal of debris Finishing-off cut and fill slopes, medians and interchange areas: (a) Cut slopes (b) Fill slopes This interchange areas: (a) Cut slopes This interchange areas: (b) Fill slopes This interchange areas: This interchange area | B33.10 | | Roadbed preparation and the compaction of material | | | | | |
| (a) In situ treatment and removal of debris m³ 180 R - Finishing-off cut and fill slopes, medians and interchange areas: (a) Cut slopes m² 180 R - (b) Fill slopes m² 180 R - | | | | m³ | 2400 | | R - | |
| Finishing-off cut and fill slopes, medians and interchange areas: (a) Cut slopes | 33.12 | | In situ treatment of roadbed: | | | | | |
| and interchange areas: (a) Cut slopes m² 180 R - (b) Fill slopes m² 180 R - | | | (a) In situ treatment and removal of debris | m³ | 180 | | R - | |
| (b) Fill slopes m ² 180 R - | 33.13 | | | | | | | |
| | | | (a) Cut slopes | m² | 180 | | R - | |
| TOTAL CARRIED FORWARD | | | (b) Fill slopes | m² | 180 | | R - | |
| | | | TOTAL CARRIED FORWARD | | | | | \dashv |

| ITEM | LI | DESCRIPTION | UNIT | QUANTITY | RATE | AMOUNT R |
|----------|----|---|-----------|------------|------|-----------|
| 33.14 | | Extra over item 33.01 for excavating | BRO | DUGHT FORW | | |
| 55.11 | | material from the pavements and fills of | | | | |
| | | existing roads: | | | | |
| | | (a) Non-cemented material | m³ | | | R - |
| | | | | | | |
| 33/16.02 | | OVERHAUL | | | | |
| | | Overhaul (extra over items 33.01 &33.04 on material hauled in | | | | |
| | | excess of the free-haul distance of 1km (ordinary overhaul) | m³-km | 2400 | | R - |
| 3300 | | TOTAL CARRIED FORWARD TO SUMMARY | | | | |
| | | | | | | |
| ITEM | LI | DESCRIPTION | UNIT | QUANTITY | RATE | AMOUNT R |
| 3400 | | PAVEMENT LAYERS OF GRAVEL MATERIAL | | | | |
| 34.01 | | Pavement layers constructed from gravel taken from cut or borrow, incl. free-haul up to 1,0 km. | | | | |
| | | (a) Gravel Selected layer compacted to: | | | | |
| | | (i) 95% of modified AASHTO density (200mm compacted layer thickness) | m³ | 2400 | | R - |
| | | , | | | | |
| 34.02 | | Extra over item 34.01 for excavation of material in: | | | | |
| | | (a) Intermediate excavation | m³ | 2400 | | R - |
| | | (b) Hard excavation | m³ | | | Rate Only |
| 34.04 | | In-situ reconstruction of existing layers as: | | | | |
| | | (a) Gravel Selected layer compacted to 93% of modified AASHTO density | | | | |
| | | | | | | |
| 34.10 | | (a) Vibratory rollers | | | | |
| | | (d) Flat-wheeled rollers | m² | | | Rate Only |
| | | (e) Pneumatic-tyred rollers | m² | | | Rate Only |
| | | | | | | |
| 34/16.02 | | OVERHAUL | | | | |
| | | Overhaul (extra over items 34.01 on material hauled in excess of | | | | |
| | | the free-haul distance of 1km (ordinary overhaul) | m³-km | 2400 | | R - |
| | | | III*-KIII | Z4UU | | n - |
| 3400 | | TOTAL CARRIED FORWARD TO SUMMARY | | | | |

| ITEM | LI | DESCRIPTION | UNIT | QUANTITY | RATE | AMOUNT R |
|------------------|----|--|----------------|----------|------|----------|
| 5100 | | PITCHING, STONEWORK AND PROTECTION AGAINST EROSION | | | | |
| 3100 | | THOMMO, OTONEWORK AND PROTECTION AGAINST ERCOGON | | | | |
| 51.01 | | Stone pitching: | | | | |
| | | (b) LI Grouted stone pitching | m^2 | 300 | | R - |
| 51.02 | | Riprap | | | | |
| 51.02 | | | | | | |
| | | (a) LI Packed Riprap average nominal diameter of 200mm with SG of 2.1 | m³ | 20 | | R - |
| 51.04 | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| 5100 | | TOTAL CARRIED FORWARD TO SUMMARY | | | | |
| | | | | | | |
| ITEM 5200 | LI | DESCRIPTION GABIONS | UNIT | QUANTITY | RATE | AMOUNT R |
| 5200 | | GABIONS | | | | |
| 52.01 | | Foundation trench excavation | | | | |
| | | and backfilling: | | | | |
| | | (b) LI In all other classes of | m ³ | 100 | | R - |
| | | materials | | 100 | | N I |
| 52.02 | | Confess and and the bodding | m² | 20 | | |
| 52.02 | | Surface preparation for bedding the gabions | m | 20 | | R - |
| 52.03 | | Gabions: | | | | |
| | | (a) LI Galvanized gabion boxes: | | | | |
| | | (iii) 2,0m x 1,0m x 1,0m with 80mm x | | | | |
| | | 100mm | 3 | | | |
| | | mesh and 7.3 diam mesh wire | m ³ | | | R - |
| | | (b) Galvanized gabion mattresses, 0,3m | | | | |
| | | deep with 80mm x 100mm mesh and diaphragms at 1,0 centres and 7.3mm | | | | |
| | | diameter mesh wire | m ³ | 60 | | R - |
| 52.04 | | Filter fabric | | | | |
| 52.04 | | i ilici iabi ic | | | | |
| | | (a) LI Bidim grade A4 or approved equivalent | m^2 | 500 | | R - |
| 5200 | | TOTAL CARRIED FORWARD TO SUMMARY | | | | |

| ITEM | LI | DESCRIPTION | UNIT | QUANTITY | RATE | AMOUNT R | ٦ |
|-------|----|---|----------------|----------|------|----------|---|
| 5600 | | ROAD SIGNS | | | | | 7 |
| | | Road sign boards with painted or | | | | | |
| | | coloured semi-matt background. | | | | | |
| | | Symbols, lettering and borders in | | | | | |
| | | semi-matt black or in Class 1 retro- | | | | | |
| | | reflective material, where the sign | | | | | |
| | | board is constructed from: | | | | | |
| | | (c) Prepainted galvanized steel plate (chromadek 1,6mm thick or approved equivalent) | | | | | |
| | | (i) Area not exceeding 2m ² | m ² | 20 | | R - | |
| | | (ii) Area exceeding 2m ² but not 10 m ² | m² | 12 | | R - | |
| 56.02 | | Extra over B56.01 for using: (a) Background of retro-reflective material: | | | | | |
| | | (iii) Class I | m ² | 20 | | R - | |
| | | (b) Lettering, symbols, numbers, arrows, emblems | | | | | |
| | | (ii) Class III | m^2 | 10 | | R - | |
| 56.03 | | Road sign supports (overhead road sign structures excluded) | | | | | |
| | | (a) Steel tubing (wall thickness 3mm) | | | | | |
| | | (i) 75mm | t | 0.4 | | R - | |
| | | (ii) 100mm | t | 0.4 | | R - | |
| | | (b) Timber 150mm | m | 100 | | R - | |
| 56.05 | | Excavation and backfilling for road sign supports (not applicable to kilometer posts) | m ³ | 3.5 | | R - | |
| 56.06 | | Extra over item 56.05 for cement- treated soil backfill | m ³ | 3.5 | | R - | |
| 56.07 | | Extra over item 56.05 for rock excavation | m ³ | 1.5 | | R - | |
| 56.10 | | Danger plates at culverts | | | | | |
| | | (a) 200mm*800mm | No | 32 | | R - | |
| 5600 | | TOTAL CARRIED FORWARD TO SUMMARY | | | | | I |
| ITEM | LI | DESCRIPTION | UNIT | QUANTITY | RATE | AMOUNT R | 4 |
| 5900 | | FINISHING THE ROAD AND ROAD RESERVE | | | | | |
| 59.01 | | Finishing the road and road reserve: | | | | | |
| | | (b) Single carriageway road | km | 2 | | R - | |
| 59.02 | | Treatment of old roads and | km | 2 | | R - | |
| | | temporary diversions | | | | | |
| | • | TOTAL CARRIED FORWARD TO SUMMARY | | | | | 1 |

| ITEM | LI | DESCRIPTION | UNIT | QUANTITY | RATE | AMOUNT R | |
|---------|----|--|-----------|-----------|--------------|----------|-------|
| 8100 | | TESTING MATERIALS AND WORKMANSHIP | | | | | |
| 81.02 | | Other special tests requested by the Engineer: | | | | | |
| | | (a) Cost of testing | P. Sum | 1 | R 100,000.00 | 10000 | 00.00 |
| | | (b) Charge on provisional sum for overheads and profits | % | ######### | 10% | R 10,000 | 0.00 |
| | | TOTAL CARRIED FORWARD TO SUMMARY | | | | | |
| ITEM | LI | DESCRIPTION | UNIT | QUANTITY | RATE | AMOUNT R | |
| | Li | PART 1: 4/3300 x 2100 INSITU CULVERT | Oitii | QUARTITI | INCL | AMOONTK | |
| | | | | | | | |
| | | FOUNDATIONS FOR STRUCTURES (Section 6100) | | | | | |
| 2/61.01 | | Additional foundation investigations | Prov. Sum | 1 | 15000.00 | 1500 | 00.00 |
| | | (b) Charge on provisional sum for | | | | | |
| | | overheads and profits | % | ######### | 10% | R 1,500 | 0.00 |
| 2/61.02 | | Excavation: | | | | | |
| 2/01.02 | | Excavation. | | | | | |
| | | (a) Excavating soft material situated within the following successive depth ranges: | | | | | |
| | | (i) 0m up to 2 m | m³ | 230 | | R | |
| | | (i) 0iii up to 2 iii | 111- | 230 | | K | - |
| | | (ii) Exceeding 2 m and up to 4 m | m³ | 30 | | R | - |
| | | (b) Extra over subitem 61.02(a) for excavation in hard material irrespective of depth | m³ | 30 | | R | - |
| | | (c) Extra over subitem 61.02(a) for additional excavation required by the Engineer after the excavation has been completed | m³ | 10 | | R | _ |
| 2/61.02 | | Access and drainage | | | | | |
| 2/61.03 | | Access and drainage: | | | | | |
| | | (a) Access | Lump Sum | 1 | | R | - |
| 2/61.04 | | Backfill to excavations utilizing: | | | | | |
| | | | 2 | 450 | | _ | |
| | | (a) Material from the excavation | m³ | 150 | | R | - |
| | | (b) Imported material | m³ | 15 | | R | - |
| | | (c) soil cement | m³ | 15 | | R | - |
| | | | | | | | |
| 2/61.05 | | Fill within a restricted area (extra over item 33.01) | m³ | | | R | - |
| | | | | | | | |
| 2/61.06 | | material imported for backfill and foundation fill and fill for | | 465 | | _ | |
| | | caissons | m³-km | 190 | | R | - |
| | | TOTAL CARRIED FORWARD | 1 | | | | |
| | | 1 | | | | | |

| ITEM | LI | DESCRIPTION | UNIT | QUANTITY | DATE | AMOUNT R | |
|----------|----|--|----------------|----------|------|------------|---|
| 2/B61.08 | ш | Foundation fill consisting of: | UNIT | QUANTITY | NATE | AIVIOUNI K | _ |
| 2/601.06 | | (a) Rock fill | m³ | 20 | 1 | R | |
| | | (d) NOCK IIII | III | 20 | 1 | , n | - |
| | | (b) Compacted granular material. | m³ | | | R | _ |
| | | (b) Compacted grandial material. | - " | | | " | - |
| | | (c) Floor slab Mass concrete, class 25/38 | m ² | | 1 | R | _ |
| | | (c) Floor stab inlass concrete, class 25/36 | - " | | 1 | , n | |
| | | (d) Concrete screed, 75 mm thick, class 20/19 concrete | m ² | | | | |
| | | (d) Concrete screed, 75 mm thick, class 20/19 concrete | m | | - | R | - |
| | | | - | | - | | |
| | | FALSEWORK, FORMWORK AND CONCRETE FINISH (Section | + | | 1 | | |
| | | 6200) | | | | | |
| | | 0200) | | | 1 | | |
| 2/62.02 | | Vertical formwork to provide: | | | | | |
| | | (a) Class F1 surface finish to: | | | 1 | | |
| | | , , | | | 1 | | |
| | | (ii) In – and outlets | m ² | 50 | 1 | R | _ |
| | | () | | | 1 | 1" | |
| | | (b) Class F2 surface finish to: | | | | | |
| | | | | | 1 | | |
| | | (i) Cell structure | m ² | 6 | 1 | R | _ |
| | | (i) Concinuotare | | T T | 1 | 1" | |
| | | (ii) In –and outlets | m ² | 50 | | R | _ |
| | | (ii) iii –and oducts | | - 00 | 1 | , | |
| 2/62.03 | | Horizontal formwork to provide: | | | 1 | | |
| 2,02.03 | | The state of the s | 1 | | | | |
| | | (c) Class F2 surface finish to: | | | | | |
| | | (4) | | | 1 | | |
| | | (i) Cell structure | m ² | 15 | 1 | R | _ |
| | | (i) Con Structure | | | 1 | 1" | |
| | | | | | 1 | | |
| | | | | | | | |
| | | STEEL REINFORCEMENT FOR STRUCTURES (Section 6300) | | | | | |
| | | | | | | | |
| | | | | | | | |
| 2/63.01 | | Steel reinforcement for: | | | | | |
| | | | | | | | |
| | | (a) structure | | | | | |
| | | | | |] | | |
| | | (i) Mild-steel bars | t | 0.5 |] | R | - |
| | | | | | 1 | | |
| | | (ii) High-yield-stress-steel-hot-rolled bars | t | 5 | 1 | R | - |
| | | | 1 | | | | |
| | | TOTAL CARRIED TO SUMMARY | | | | | |

| ITEM | LI | DESCRIPTION | UNIT | QUANTITY | RATE | AMOUNT R |
|----------------|-----|---|----------------|--------------|-------------|-------------|
| | | CONCRETE FOR STRUCTURES | | | | |
| | | (Section 6400) | | | | 0.00 |
| | | | | | | |
| 2B/64.01 | | Cast in situ concrete: | | | | |
| | | (a) Class 30/19 in: | | | | |
| | | (a) Class 50/19 III. | | | | |
| | | (i) Cell structure including head walls | m³ | 24 | | R - |
| | | (1) | | | | |
| | | (ii) Inlets and outlets | m³ | 21 | | R - |
| | | | | | | |
| 2/64.06 | | | | | | |
| | | (h) Poinforced concrete in existing structure | m³ | 20 | | R - |
| | | (b) Reinforced concrete in existing structure | III | 20 | | к - |
| | | | | | | |
| | | NO FINES CONCRETE, JOINTS, BEARINGS, PARAPETS AND | | | | |
| | | DRAINAGE FOR STRUCTURES (Section 6600) | | | | |
| 2/66.06 | | Filled joints: | | | | |
| 2,00.00 | | | | | | |
| | | (a) Joints measure per square metre: | | | | |
| | | | | | | |
| | | (i) 10 mm thick bitumen impregnated fireboard | m ² | | | R - |
| | | | | | | |
| 2/66.14 | | Dowels: | | | | |
| | | (a) Dowels, 700 mm long galvanized R20 bars, with filter | | | | |
| | | through formwork complete as shown on the drawings | No | | | R - |
| | | anough formwork complete as shown on the drawings | | | | |
| 2/66.19 | | Drainage pipes and weepholes: | | | | |
| | | | | | | |
| | | (b) Weepholes | | | | |
| | | (i) 50 mm dia uPVC class 6 pipe | | | | |
| | | (i) 50 mm dia uPVC class 6 pipe | m | | | R - |
| | | Synthetic-fibre filter fabric, Bidim Grade A4 or approved | | | | |
| 2/66.21 | | equivalent | m ² | | | R - |
| | | | | | | |
| 2/66.23 | | Crushed stone in drainage strips | m ³ | | | R - |
| | | | | | | |
| | | TOTAL CARRIED TO SUMMARY | | | | |
| | | | | | | |
| ITEM SCHEDU | LI | DESCRIPTION PROVISION FOR STRUCTURED TRAINING | UNIT | QUANTITY | RATE | AMOUNT R |
| B12.08 | LED | COMMUNITY PARTICIPATION | | | | |
| D12.00 | | COMMONT FACTION ATION | | | | |
| | | a) PSC Training | L Sum | 1 | R 30,000.00 | R 30,000.00 |
| | | , J | | | , | , |
| | | b) Compensation for PCS Participation and Meetings | Prov Sum | 1 | R 6,000.00 | R 6,000.00 |
| | | | | | | |
| | | c) Overheads, charges & profit on a) above | % | R 30,000.00 | 10% | R 3,000.00 |
| D40.00 | | TD AINING | | | | |
| B12.09 | | TRAINING | | | | |
| | | b) Generic Skills | Prov Sum | 1 | R 50,000.00 | R 50,000.00 |
| | | | | | 55,000.00 | 50,000.00 |
| | | c) Entrepreneurial Skills | Prov Sum | 1 | R 50,000.00 | R 50,000.00 |
| | | | % | R 100,000.00 | 10% | |
| | | | | | | |
| | | d) Training Venue | L Sum | 1 | R 10,000.00 | R 10,000.00 |
| | | TOTAL CARRIED TO SUMMARY | I | | | |

GA-MAKGOBA(MATHABATHA) REGRAVELLING AND STORMWATER PROJECT

| BILL OF QUANTITIES SUMMAR | v | |
|---------------------------|--|----------|
| ITEM | DESCRIPTION | AMOUNT R |
| 1200 | GENERAL REQUIREMENTS AND PROVISIONS | |
| 1300 | CONTRACTOR'S ESTABLISHMENT ON SITE AND GENERAL OBLIGATIONS | |
| 1500 | ACCOMMODATION OF TRAFFIC | |
| 1800 | DAYWORK AND HIRE OF CONSTRUCTION PLANT | |
| 2100/2200/2300 | DRAINS | |
| 3100 | BORROW MATERIALS | |
| 3300 | MASS EARTHWORKS(EMBARKMENT) | |
| 3400 | PAVEMENT LAYERS OF GRAVEL MATERIAL | |
| 5100 | PITCHING, STONEWORK AND PROTECTION AGAINST EROSION | |
| 5200 | GABIONS | |
| 5600 | ROAD SIGNS | |
| 5900 | FINISHING THE ROAD AND ROAD RESERVE | |
| 8100 | TESTING MATERIALS AND WORKMANSHIP | |
| 6100/6200/6300 | FOUNDATIONS FOR STRUCTURES | |
| 6400 | CONCRETE FOR STRUCTURES | |
| | PROVISION FOR STRUCTURED TRAINING | |
| SUBTOTAL | | |
| CONTINGENCIES @ 5% | | |
| SUBTOTAL | | |
| VAT @ 15% | | |
| TOTAL | | |