



THE SOUTH AFRICAN NATIONAL ROADS AGENCY SOC LIMITED

CONTRACT SANRAL: NRA 2024/1323

**PANEL FOR ROUTINE ROAD MAINTENANCE WORKS ACROSS
SOUTH AFRICA**

ISSUE DATE:	8 NOVEMBER 2024
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BOOK 3 OF 3

PART C2: PRICING DATA

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C2.1 PRICING INSTRUCTIONS

- C2.1.1 Measurement and payment shall be in accordance with the relevant provisions of the Standard Specifications as amended in the Scope of Works.
- C2.1.2 The units of measurement described in the Bill of Quantities are metric units. Abbreviations used in the Bill of Quantities are detailed in the Standard Specifications.
- C2.1.3 For the purposes of the Bill of Quantities, the following words shall have the meanings hereby assigned to them.
- Unit: The unit of measurement for each item of work as defined in the Standard Specifications or the Scope of Works.
- Quantity: The number of units of work for each item.
- Rate: The payment per unit of work for which the Contractor tenders to do the work.
- Amount: The product of the quantity and the rate tendered for an item.
- Lump Sum: An amount tendered for an item, the extent of which is described in the Bill of Quantities, the Scope of Work or elsewhere, but of which the quantity of work is not measured in units.
- Prime cost: Is a specific type of Provisional Sum where payment is made on the production of invoices showing the cost price of the implementation or installation of the service required. Services rendered in this manner carry a mark-up for which a rate is offered at tender stage to cover all the Contractor's overhead charges and profit in providing the item or services.
- Provisional Sum: A sum (if any) which is specified in the contract as a provisional sum, for the execution of any part of the works or the supply of plant, materials or services under sub-clause 13.5 (Provisional sums).
- C2.1.4 Unless otherwise stated, items are measured net in accordance with the drawings, and no allowance is made for waste.
- C2.1.5 It will be assumed that prices included in the Bill of Quantities are based on Acts, Ordinances, Regulations, By-laws, International Standards and National Standards that were published 28 days before the closing date for tenders. (Refer to www.stanza.org.za or www.iso.org for information standards).
- C2.1.6 The prices and rates in the Bill of Quantities are fully inclusive prices for the work described under the items, and include all duties, taxes (except Value Added Tax) and other levies payable by the Contractor. Such prices and rates cover all costs and expenses that may be required in and for the execution of the work described in accordance with the provisions of the Scope of Work, and shall cover the cost of all general risks, liabilities and obligations set forth or implied, as well as overhead charges and profit. These prices will be used as a basis for assessment of payment for additional work that may have to be carried out.
- C2.1.7 Where the Scope of Work requires detailed drawings and designs or other information to be provided, all costs associated therewith are deemed to have been provided for and included in the unit rates and sum amount tendered such items.
- C2.1.8 Each pay item should be priced individually in conjunction with the relevant specifications and drawings. No cross subsidisation of pay items will be allowed. Imbalanced rates including zero, all-inclusive and low rates will be requested to be rebalanced in terms of Conditions of Tender C3.9 .
- C2.1.9 The quantities set out in the Bill of Quantities are approximate and do not necessarily represent the actual amount of work to be done. The quantities of work accepted and certified for payment will be used for determining payments due and not the quantities given in the Bill of Quantities.

- C2.1.10 Reasonable compensation will be received where no pay item appears in the Bill of Quantities in respect of work required in terms of the Contract and which is not covered in any other pay item.
- C2.1.11 The short descriptions of the items of payment given in the Bill of Quantities are only for the purposes of identifying the items. More details regarding the extent of the work entailed under each item appear in the Scope of Work.
- C2.1.12 The item numbers appearing in the Bill of Quantities refer to the corresponding item numbers in the Standard Specifications.
- C2.1.13 The pricing schedules are provided electronically on the Compact Disc. A printout of the entire completed Bill of Quantities must be signed and attached to the tender as well as an electronic copy of the priced Bill of Quantities. In the event of any discrepancy between the signed printed copy, and the electronically submitted copy, the tender rates in the signed copy will govern. The item numbers and description of the PDF document will govern. The item numbers and description of the PDF document will govern. For all addenda issued relating to the pricing schedule, the item numbers, description and quantities of the issued document will govern.

C2.2 PRICING SCHEDULE (Incorporating SBD3)

CONTRACT SANRAL: NRA 2024/1323 ROUTINE ROAD MAINTENANCE WORKS ACROSS

Notes to tenderer:

- 1) If the Form of Offer is submitted but the Pricing Schedule is omitted
 - i. Where rate only items are applicable
- 2) If a signed Form of Offer is submitted with an incomplete pricing schedule (no summary to tender) that does not balance back to the Form of Offer
 - i. *Pricing Schedule incomplete
- 3) If a signed Form of Offer is submitted with an incomplete pricing schedule that does not balance back to the Form of Offer
 - i. *Only summary of Pricing Schedule submitted.

The tender shall be declared non-responsive tender.

C2.3 BILL OF QUANTITY

ITEM CODE	ITEM DESCRIPTION	PAY ITEM	CPA APPLY	UNIT OF RATE	QTY	UNIT RATE (Excl. VAT)
M020	GENERAL REQUIREMENTS AND PROVISIONS	No	No	None	1	
M020.01	Information sign boards	No	No	None	1	
M020.01(a)	Type 1 (large)	Yes	Yes	NO.	1	
M020.01(b)	Type 2 (small)	Yes	Yes	NO.	1	
M020.02	Compensation to landowners	No	No	None	1	Project Specific
M020.02(a)	Compensation to landowners	Yes	Yes	PROV SUM	1	Project Specific
M020.02(b)	The Contractors overhead charges and profit in respect of sub-item M020.02 (a) above	Yes	Yes	%	1	
M020.03	Advertising cost	No	No	None	1	
M020.03(a)	Advertising Cost	Yes	Yes	PROV SUM	1	Project Specific
M020.03(b)	The Contractors overhead charges and profit in respect of sub-item M020.03 (a) above	Yes	Yes	%	1	
M020.04	Stakeholder and Community Liaison and Social Facilitation	No	No	None	1	
M020.04(a)	Cost of Liaison, Social Facilitation and PLC Support	Yes	Yes	PROV SUM	1	Project Specific
M020.04(b)	Handling cost and profit in respect of sub-item M020.04(a)	Yes	Yes	%	1	
M020.05	Target Group Participation	No	No	None	1	
M020.05(a)	Contract Participation Performance Bonus	Yes	Yes	PROV SUM	1	Project Specific
M020.06	Training, coaching, guidance, mentoring and assistance	No	No	None	1	
M020.06(a)	Training Costs:	Yes	Yes	None	1	
M020.06(a)(i)	Accredited generic skills training	Yes	Yes	Prime Cost	1	
M020.06(a)(ii)	Community skills training	Yes	Yes	Prime Cost	1	
M020.06(a)(iii)	Handling cost and profit in respect of subitems M020.06(a)(i) and (ii)	Yes	Yes	%	1	
M020.06(b)	Other costs during training	Yes	Yes	PROV SUM	1	Project Specific
M020.06(c)	Training Venue	Yes	Yes	LUMP SUM	1	
M020.07	Wellness Program	No	No	None	1	
M020.07(a)	Office Facilities for Wellness Champion	Yes	Yes	MONTH	1	
M020.07(b)	Wellness Champion	No	No	PROV SUM	1	Project Specific
M020.07(c)	Venue for ACT process	No	No	PROV SUM	1	Project Specific
M020.07(d)	Transport for workers and their immediate families for ACT process	No	No	PROV SUM	1	Project Specific
M020.07(e)	Remuneration for workers during ACT process	No	No	PROV SUM	1	Project Specific
M020.07(f)	The Contractors overhead charges and profit in respect of sub-item M020.07 (b) to (e)	No	No	%	1	
M020.08	Transport for Wellness Champion	No	No	None	1	
M020.08(a)	Transport for Wellness Champion	No	No	PROV SUM	1	Project Specific

M020.08(b)	The Contractors overhead charges and profit in respect of sub-item M020.08 (a)	No	No	%	1	
M030	CONTRACTORS ESTABLISHMENT ON SITE AND GENERAL OBLIGATIONS	No	No	None	1	Project Specific
M030.01	Fixed obligations	Yes	Yes	Is	1	Project Specific
M030.02	Value related obligations	Yes	Yes	Is	1	Project Specific
M030.03	Time-related obligations	Yes	Yes	MONTH	1	Project Specific
M030.03(a)	General obligations	Yes	Yes	MONTH	1	Project Specific
M030.03(b)	Occupational health and safety obligation	Yes	Yes	MONTH	1	Project Specific
M030.03(c)	Environmental Obligations	Yes	Yes	MONTH	1	Project Specific
M030.03(d)	Reporting Obligations	Yes	Yes	MONTH	1	
M030.05	Tenders Process for Targeted Enterprises	No	No	None	1	
M030.05(a)	Contractor's charge for the management and execution of the Targeted Enterprise procurement process:	No	No	None	1	
M030.05(a)(i)	Procurement process for the totality of all tenders concluded for the appointment of Targeted Enterprise subcontractors of CIDB 1 CE and 2 CE contractor grading	Yes	Yes	NO.	1	
M030.05(a)(ii)	Procurement process for the totality of all tenders concluded for the appointment of Targeted Enterprise subcontractors of CIDB 3 CE and 4 CE contractor grading	Yes	Yes	NO.	1	
M030.05(a)(iii)	Procurement process for the totality of all tenders concluded for the appointment of Targeted Enterprise subcontractors of CIDB 5 CE and higher contractor grading	Yes	Yes	NO.	1	
M030.06	Responsibilities of the Contractor towards Targeted Enterprises Contractor's establishment, management, management support, assistance, coaching, guidance, mentoring and supervision of Targeted Enterprises	No	No	None	1	
M030.06(a)	Preparing and maintaining a Portfolio of Evidence for each subcontractors	Yes	Yes	MONTH	1	
M030.08	Preparing and maintaining a Portfolio of Evidence for each subcontractors	No	No	None	1	
M030.08(a)	The Contractors overhead charges and profit in respect of sub-item M030.08 (a)	No	No	PROV SUM	1	Project Specific
M030.08(b)	ROUTE PATROL SERVICES	No	No	%	1	
M040	ROUTE PATROL SERVICES	No	No	None	1	
M040.01	Route Patrol	Yes	Yes	MONTH	1	
M040.02	Temporary repair of potholes	Yes	Yes	MONTH	1	
M040.03	Procurement and implementation of visual capturing devices for route patrol services	No	No	None	1	
M040.03(a)	Procurement and implementation of visual capturing devices for route patrol services	No	No	PROV SUM	1	Project Specific
M040.03(b)	The Contractors overhead charges and profit in respect of sub-item M040.03(a)	No	No	%	1	
M050	ACCOMMODATION OF TRAFFIC	No	No	None	1	

M050.01	Provision of temporary traffic control facilities	Yes	Yes	None	1
M050.01(a)	Portable STOP/GO signs: 750mm	Yes	Yes	NO.	1
M050.01(b)	Road signs:R- and TR- series	No	No	None	1
M050.01(b)(i)	1200mm	Yes	Yes	NO.	1
M050.01(b)(ii)	900mm	Yes	Yes	NO.	1
M050.01(c)	Road signs: TW- series	No	No	None	1
M050.01(c)(i)	1500mm	Yes	Yes	NO.	1
M050.01(c)(ii)	1200mm	Yes	Yes	NO.	1
M050.01(d)	Rectangular road signs:TGS-, TIN- and TW-series (excluding delineators and barricades)	Yes	Yes	M2	1
M050.01(e)	Delineators	No	No	None	1
M050.01(e)(i)	1000mm x 250mm	Yes	Yes	NO.	1
M050.01(e)(ii)	800mm x 200mm	Yes	Yes	NO.	1
M050.01(e)(iii)	Solid rubber moulded heavy duty Bases for (e) (i)	Yes	Yes	NO.	1
M050.01(e)(iv)	Solid rubber moulded heavy duty Bases for (e) (ii)	Yes	Yes	NO.	1
M050.01(f)	Barricades	No	No	None	1
M050.01(f)(i)	2400mm x 400mm	Yes	Yes	NO.	1
M050.01(f)(ii)	1800mm x 300mm	Yes	Yes	NO.	1
M050.01(g)	Traffic cones: 750mm	Yes	Yes	NO.	1
M050.02	Accommodation of traffic and maintaining temporary deviations	No	No	None	1
M050.02(a)	General Provisions	Yes	Yes	MONTH	1
M050.02(b)	Work undertaken by Contractor	Yes	Yes	MONTH	1
M050.02(c)	Work undertaken by Subcontractor	Yes	Yes	MONTH	1
M050.02(d)	Traffic Safety Officer	Yes	Yes	MONTH	1
M050.03	Supply and use of truck-mounted attenuators	Yes	Yes	MONTH	1
M050.04	Additional lane closures	Yes	Yes	NO.	1
M060	SKILLS DEVELOPMENT	No	No	None	1
M060.01	Skills Development	No	No	None	1
M060.01(a)	Contract Skills Development Goals (CSDG)(formula to be inserted 0.25% of Subtotal A)	No	No	Prime Cost	1
M110	PAVEMENT LAYERS REPAIR	No	No	None	1
M110.01	Removal and excavating material from existing pavements (except milled material)	No	No	None	1
M110.01(a)	Area up to 50m²	Yes	Yes	M3	1
M110.01(b)	Area exceeding 50m² but smaller than 100m²	Yes	Yes	M3	1
M110.01(c)	Area exceeding 100m²	Yes	Yes	M3	1
M110.02	Milling out material from existing pavements	No	No	None	1
M110.02(a)	Not exceeding 30 mm	Yes	Yes	M3	1
M110.02(b)	Exceeding 30mm but not 60mm	Yes	Yes	M3	1
M110.02(c)	Exceeding 60mm but not exceeding 150mm	Yes	Yes	M3	1
M110.02(d)	Exceeding 150mm but not exceeding 250mm	Yes	Yes	M3	1
M110.02(e)	Exceeding 250mm but not exceeding 350mm	Yes	Yes	M3	1

M110.02(f)	Establishing of milling machine on site	Yes	Yes	NO.	1
M110.02(g)	Moving the milling machine on site for distance exceeding 5,0 km	Yes	Yes	NO.	1
M110.03	Backfilling of base layer failures with: Chemically stabilised gravel excavated from the existing pavement	No	No	None	1
M110.03(a)		No	No	None	1
M110.03(a)(i)	Areas up to 50m ²	Yes	Yes	M3	1
M110.03(a)(ii)	Areas exceeding 50m ² up to 100m ²	Yes	Yes	M3	1
M110.03(a)(iii)	Areas exceeding 100m ²	Yes	Yes	M3	1
M110.03(a)(iv)	Extra over sub-item (a)(i), (ii) and (iii) for procuring and importing gravel material	Yes	Yes	M3	1
M110.03(b)	Emulsion-treated crushed stone pavement	No	No	None	1
M110.03(b)(i)	Areas up to 50m ²	Yes	Yes	M3	1
M110.03(b)(ii)	Areas exceeding 50m ² up to 100m ²	Yes	Yes	M3	1
M110.03(b)(iii)	Areas exceeding 100m ²	Yes	Yes	M3	1
M110.03(b)(iv)	Extra over sub-item (a)(i), (ii) and (iii) for importing crushed stone	Yes	Yes	M3	1
M110.03(c)	Asphalt base (hot mix – continuously graded 28mm max.)	No	No	None	1
M110.03(c)(i)	Areas up to 50m ²	Yes	Yes	ton	1
M110.03(c)(ii)	Areas exceeding 50m ² up to 100m ²	Yes	Yes	ton	1
M110.03(c)(iii)	Areas exceeding 100m ²	Yes	Yes	ton	1
M110.04	Surfacing of base layer repairs with:	No	No	None	1
M110.04(a)	Asphalt surfacing (hot mix - continuously graded medium)	No	No	None	1
M110.04(a)(i)	Areas up to 50m ²	Yes	Yes	ton	1
M110.04(a)(ii)	Areas exceeding 50m ² up to 100m ²	Yes	Yes	ton	1
M110.04(a)(iii)	Areas exceeding 100m ²	Yes	Yes	ton	1
M110.04(b)	Cold premixed asphalt mixture (cold mix)	No	No	None	1
M110.04(b)(i)	Areas up to 50m ²	Yes	Yes	ton	1
M110.04(b)(ii)	Areas exceeding 50m ² up to 100m ²	Yes	Yes	ton	1
M110.04(b)(iii)	Areas exceeding 100m ²	Yes	Yes	ton	1
M110.04(c)	13.2mm bituminous single seal with slurry (Cape Seal)	Yes	Yes	None	1
M110.04(c)(i)	Areas up to 50m ²	Yes	Yes	M2	1
M110.04(c)(ii)	Areas exceeding 50m ² up to 100m ²	Yes	Yes	M2	1
M110.04(c)(iii)	Areas exceeding 100m ²	Yes	Yes	M2	1
M110.05	Establishment and moving of asphalt paver on site	No	No	None	1
M110.05(a)	Establishment of asphalt paver	Yes	Yes	NO.	1
M110.05(b)	Moving the paver on site for distance exceeding 5,0 km	Yes	Yes	NO.	1
M110.06	Backfilling of pavement layers	No	No	None	1
M110.06(a)	Subbase layer	No	No	None	1
M110.06(a)(i)	Areas up to 50m ²	Yes	Yes	M3	1
M110.06(a)(ii)	Areas exceeding 50m ² up to 100m ²	Yes	Yes	M3	1
M110.06(a)(iii)	Areas exceeding 100m ²	Yes	Yes	M3	1
M110.06(b)	Selected layer	No	No	None	1
M110.06(b)(i)	Areas up to 50m ²	Yes	Yes	M3	1
M110.06(b)(ii)	Areas exceeding 50m ² up to 100m ²	Yes	Yes	M3	1
M110.06(b)(iii)	Areas exceeding 100m ²	Yes	Yes	M3	1
M110.06(c)	Fill layer	No	No	None	1

M110.06(c)(i)	Areas up to 50m ²	Yes	Yes	M3	1
M110.06(c)(ii)	Areas exceeding 50m ² up to 100m ²	Yes	Yes	M3	1
M110.06(c)(iii)	Areas exceeding 100m ²	Yes	Yes	M3	1
M110.07	Binder Variation	No	No	None	1
M110.07(a)	Penetration grade bitumen	Yes	Yes	ton	1
M110.07(b)	Anionic bitumen emulsion	Yes	Yes	litre	1
M110.07(c)	Cationic bitumen emulsion	Yes	Yes	litre	1
M110.07(d)	Invert bitumen emulsion	Yes	Yes	litre	1
M110.08	Variation in active filler content	No	No	None	1
M110.08(a)	Cement	Yes	Yes	ton	1
M110.08(b)	Lime	Yes	Yes	ton	1
M110.09	Overhaul of material hauled in excess of 1,0 km	Yes	Yes	M3-km	1
M110.10	Milling and Paving	No	No	None	1
M110.10(a)	Milling and Paving	No	No	PROV SUM	1
M110.10(b)	Overhead charges and profit in respect of subitem M110.10(a)	No	No	None	1
M110.11	100mm cores in asphalt paving	Yes	Yes	NO.	1
M120	REPAIR OF POTHOLES	No	No	None	1
M120.01	Pothole repair (non-performance based)	No	No	None	1
M120.01(a)	Hot mix continuously graded asphalt	Yes	Yes	NO.	1
M120.01(b)	Cold mix asphalt	Yes	Yes	NO.	1
M120.02	Pothole repair (performance based)	Yes	Yes	MONTH	1
M120.03	Temporary pothole repair material for the route patrol	No	No	None	1
M120.03(a)	Cold mix asphalt	Yes	Yes	KG	1
M121	REPAIR OF EDGE BREAKS	No	No	None	1
M121.01	Repair of edge breaks (non performance based)	No	No	None	1
M121.01(a)	Hot mix continuously graded asphalt	Yes	Yes	M	1
M121.01(b)	Cold mix asphalt	Yes	Yes	M	1
M121.02	Repair of edge breaks (performance based)	Yes	Yes	MONTH	1
M122	REPAIR OF SURFACE FAILURES	No	No	None	1
M122.01	Repair of Surface failures (non performance based)	No	No	None	1
M122.01(a)	Hot mix continuously graded asphalt	Yes	Yes	NO.	1
M122.01(b)	Cold mix asphalt	Yes	Yes	NO.	1
M122.02	Repair of Surface failures (performance based)	Yes	Yes	MONTH	1
M130	CRACK SEALING	No	No	None	1
M130.01	Cleaning and sealing the cracks	No	No	None	1
M130.01(a)	Cleaning cracks per metre with:	No	No	None	1
M130.01(a)(i)	Cold compressed air	Yes	Yes	M	1
M130.01(a)(ii)	Hot compressed air	Yes	Yes	M	1
M130.01(b)	Cleaning cracks per area with:	No	No	None	1
M130.01(b)(i)	Cold compressed air	Yes	Yes	M2	1
M130.01(b)(ii)	Hot compressed air	Yes	Yes	M2	1
M130.01(c)	Applying herbicides for sealing cracks	Yes	Yes	litre	1
M130.01(d)	Priming of cracks	Yes	Yes	M	1
M130.01(e)	Sealing the cracks with:	No	No	None	1
M130.01(e)(i)	C-E1 modified binder	Yes	Yes	M	1

Project Specific

M130.01(e)(ii)	CC-E1 modified binder	Yes	Yes	M	1
M130.01(e)(iii)	C-R1 modified binder	Yes	Yes	M	1
	Extra over M130.01(e) for filling wide cracks with fine sand to underside of base layer as specified				
M130.01(f)		Yes	Yes	M	1
M130.01(g)	Heating of surface before rolling	Yes	Yes	M	1
M130.01(h)	Rolling the cracks	Yes	Yes	M	1
M130.02	Geotextile crack sealing	No	No	None	1
M130.02(a)	Sealing cracks with 200mm wide geotextile "bandage" using:	No	No	None	1
M130.02(a)(i)	65% Cationic bitumen emulsion (solvents omitted)	Yes	Yes	M	1
M130.02(a)(ii)	SC-E1 modified emulsion (solvents omitted)	Yes	Yes	M	1
M130.02(a)(iii)	Other appropriate product	Yes	Yes	M	1
M130.02(b)	Sealing "crocodile" cracks with geotextile over areas using:	No	No	None	1
M130.02(b)(i)	65% Cationic bitumen emulsion (solvents omitted)	Yes	Yes	M2	1
M130.02(b)(ii)	SC-E1 modified emulsion (solvents omitted)	Yes	Yes	M2	1
M130.03	Prefabricated road patch for crack sealing	No	No	None	1
M130.03(a)	Sealing "crocodile" cracks with pre-fabricated road patch over areas using:	No	No	None	1
M130.03(a)(i)	10mm nominal size aggregate (single seal)	Yes	Yes	M2	1
M130.03(a)(ii)	14mm nominal size aggregate (single seal)	Yes	Yes	M2	1
M140	BLEEDING REPAIR	No	No	None	1
M140.01	Repair of bleeding (Method 1)	No	No	None	1
M140.01(a)	Using 14,0 mm aggregate	Yes	Yes	M2	1
M140.01(b)	Using 10,0 mm aggregate	Yes	Yes	M2	1
M140.01(c)	Using 7,0 mm aggregate	Yes	Yes	M2	1
M140.01(d)	Using 5,0 mm aggregate	Yes	Yes	M2	1
M140.02	Repair of bleeding (Method 2)	No	No	None	1
M140.02(a)	Using 14,0 mm aggregate	Yes	Yes	M2	1
M140.02(b)	Using 10,0 mm aggregate	Yes	Yes	M2	1
M140.02(c)	Using 7,0 mm aggregate	Yes	Yes	M2	1
M140.02(d)	Using 5,0 mm aggregate	Yes	Yes	M2	1
M140.03	Repair of bleeding (Method 3)	No	No	None	1
M140.03(a)	Using 14,0 mm aggregate	Yes	Yes	M2	1
M140.03(b)	Using 10,0 mm aggregate	Yes	Yes	M2	1
M140.03(c)	Using 7,0 mm aggregate	Yes	Yes	M2	1
M140.03(d)	Using 5,0 mm aggregate	Yes	Yes	M2	1
M140.04	Precoating of aggregate	Yes	Yes	M3	1
M140.05	Aggregate Variation	No	No	None	1
M140.05(a)	14,0 mm aggregate	Yes	Yes	M3	1
M140.05(b)	10,0 mm aggregate	Yes	Yes	M3	1
M140.05(c)	7,0 mm aggregate	Yes	Yes	M3	1
M140.05(d)	5,0 mm aggregate	Yes	Yes	M3	1
M140.06	Bituminous binder variations	No	No	None	1
M140.06(a)	Precoating fluid	Yes	Yes	litre	1
M140.06(b)	Anionic bitumen emulsion	Yes	Yes	litre	1

M140.06(c)	Cationic bitumen emulsion	Yes	Yes	litre	1	Project Specific
M140.07	Application of fog spray	No	No	None	1	
M140.07(a)	60 % Spray-grade emulsion	Yes	Yes	litre	1	
M140.07(b)	30 % Spray-grade emulsion	Yes	Yes	litre	1	
M140.08	Aggregate for blinding using	No	No	None	1	
M140.08(a)	Natural sand	Yes	Yes	M3	1	
M140.08(b)	Crusher sand	Yes	Yes	M3	1	
M140.09	Bleeding Repair by water cutting	No	No	None	1	
M140.09(a)	Bleeding Repair by water cutting The Contractors overhead charges and profit in respect of sub-item	No	No	PROV SUM	1	
M140.09(b)	M140.09 (a)	No	No	%	1	
M150	CRACK AND JOINT SEALING OF CONCRETE PAVEMENTS	No	No	None	1	
M150.01	Preparation and sealing or resealing of old joints and cracks in existing concrete pavements:	No	No	None	1	
M150.01(a)	Expansion joints	Yes	Yes	M	1	
M150.01(b)	Construction joints and weakened plane joints:	No	No	None	1	
M150.01(b)(i)	Less than 12mm width	Yes	Yes	M	1	
M150.01(b)(ii)	12mm to 20mm width	Yes	Yes	M	1	
M150.01(b)(iii)	Exceeding 20mm width	Yes	Yes	M	1	
M150.01(c)	Cracks:	No	No	None	1	
M150.01(c)(i)	Less than 12mm width	Yes	Yes	M	1	
M150.01(c)(ii)	12mm to 20mm width	Yes	Yes	M	1	
M150.01(c)(iii)	Exceeding 20mm width	Yes	Yes	M	1	
M150.02	Temporary partial-depth pothole repair of concrete with asphalt surfacing	No	No	None	1	Project Specific
M150.02(a)	Hot mix continuously graded asphalt	Yes	Yes	NO.	1	
M150.02(b)	Cold mix asphalt	Yes	Yes	NO.	1	
M150.03	Small repairs to existing concrete pavements	No	No	None	1	
M150.03(a)	Small repairs to existing concrete pavements The Contractors overhead charges and profit in respect of sub-item	No	No	PROV SUM	1	
M150.03(b)	M150.03(a)	No	No	%	1	
M160	SURFACE TREATMENT - TEXTURE CORRECTION	No	No	None	1	
M160.01	Application of slurry mixed on site	No	No	None	1	
M160.01(a)	Tack coating using 30 % stable grade bitumen emulsion	Yes	Yes	litre	1	
M160.01(b)	Slurry applied for texture treatment (Fine Slurry Fine Grade with 60% stable-grade anionic bitumen emulsion)	No	No	None	1	
M160.01(b)(i)	Applied by hand	Yes	Yes	M3	1	
M160.01(b)(ii)	Applied by spreader box	Yes	Yes	M3	1	
M160.01(c)	Slurry applied for texture treatment (Fine Slurry Medium Grade, 60% stable-grade anionic bitumen emulsion)	No	No	None	1	
M160.01(c)(i)	Applied by hand	Yes	Yes	M3	1	
M160.01(c)(ii)	Applied by spreader box	Yes	Yes	M3	1	
M160.01(d)	Slurry applied for texture treatment (Fine Slurry Fine Grade, 60% stable-grade anionic bitumen emulsion + 3% Latex)	No	No	None	1	

M160.01(d)(i)	Applied by hand	Yes	Yes	M3	1
M160.01(d)(ii)	Applied by spreader box	Yes	Yes	M3	1
M160.01(e)	Slurry applied for texture treatment (Fine Slurry Medium Grade, 60% stable-grade anionic bitumen emulsion + 3% Latex)	No	No	None	1
M160.01(e)(i)	Applied by hand	Yes	Yes	M3	1
M160.01(e)(ii)	Applied by spreader box	Yes	Yes	M3	1
M160.02	Application of slurry from commercial sources	No	No	None	1
M160.02(a)	Tack coating using 30 % stable grade bitumen emulsion	Yes	Yes	litre	1
M160.02(b)	Slurry applied for texture treatment (Fine Slurry Fine Grade with 60% stable-grade anionic bitumen emulsion)	No	No	None	1
M160.02(b)(i)	Applied by hand	Yes	Yes	M3	1
M160.02(b)(ii)	Applied by spreader box	Yes	Yes	M3	1
M160.02(c)	Slurry applied for texture treatment (Fine Slurry Medium Grade, 60% stable-grade anionic bitumen emulsion)	No	No	None	1
M160.02(c)(i)	Applied by hand	Yes	Yes	M3	1
M160.02(c)(ii)	Applied by spreader box	Yes	Yes	M3	1
M160.02(d)	Slurry applied for texture treatment (Fine Slurry Fine Grade, 60% stable-grade anionic bitumen emulsion + 3% Latex)	No	No	None	1
M160.02(d)(i)	Applied by hand	Yes	Yes	M3	1
M160.02(d)(ii)	Applied by spreader box	Yes	Yes	M3	1
M160.02(e)	Slurry applied for texture treatment (Fine Slurry Fine Grade, 60% stable-grade anionic bitumen emulsion + 3% Latex)	No	No	None	1
M160.02(e)(i)	Applied by hand	Yes	Yes	M3	1
M160.02(e)(ii)	Applied by spreader box	Yes	Yes	M3	1
M161	SURFACE TREATMENT -RUT FILLING	No	No	None	1
M161.01	Application of slurry for rut filling mixed on site	No	No	None	1
M161.01(a)	Tack coating using 30 % stable grade bitumen emulsion	Yes	Yes	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)	Yes	Yes	M3	1
M161.01(c)	Slurry applied by spreader box with rigid squeegees in two applications for rut filling (Fine Slurry Medium Grade, Modified Cationic Bitumen Emulsion AC-E1)	Yes	Yes	M3	1
M161.01(d)	Slurry applied by spreader box with rigid squeegees in one application for rut filling (Fine Slurry Coarse Grade, Modified Cationic Bitumen Emulsion AC-E1)	Yes	Yes	M3	1

M161.01(e)	Slurry applied by spreader box with rigid squeegees in two applications for rut filling (Fine Slurry Coarse Grade, Modified Cationic Bitumen Emulsion AC-E1)	Yes	Yes	M3	1
M161.01(f)	Slurry applied by spreader box with rigid squeegees in one application for rut filling(Fine Slurry Medium Grade, Modified Cationic Bitumen Emulsion AC-E2)	Yes	Yes	M3	1
M161.01(g)	Slurry applied by spreader box with rigid squeegees in two applications for rut filling(Fine Slurry Medium Grade, Modified Cationic Bitumen Emulsion AC-E2)	Yes	Yes	M3	1
M161.01(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)	Yes	Yes	M3	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)	Yes	Yes	M3	1
M161.02	Application of slurry for rut filling from commercial sources	No	No	None	1
M161.02(a)	Tack coat using 30% bitumen emulsion	Yes	Yes	litre	1
M161.02(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)	Yes	Yes	M3	1
M161.02(c)	Slurry applied by spreader box with rigid squeegees in two applications for rut filling (Fine Slurry Medium Grade, Modified Cationic Bitumen Emulsion AC-E1)	Yes	Yes	M3	1
M161.02(d)	Slurry applied by spreader box with rigid squeegees in one application for rut filling (Fine Slurry Coarse Grade, Modified Cationic Bitumen Emulsion AC-E1)	Yes	Yes	M3	1
M161.02(e)	Slurry applied by spreader box with rigid squeegees in two applications for rut filling (Fine Slurry Coarse Grade, Modified Cationic Bitumen Emulsion AC-E1)	Yes	Yes	M3	1
M161.02(f)	Slurry applied by spreader box with rigid squeegees in one application for rut filling(Fine Slurry Medium Grade, Modified Cationic Bitumen Emulsion AC-E2)	Yes	Yes	M3	1

M161.02(g)	Slurry applied by spreader box with rigid squeegees in two applications for rut filling(Fine Slurry Medium Grade, Modified Cationic Bitumen Emulsion AC-E2)	Yes	Yes	M3	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)	Yes	Yes	M3	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)	Yes	Yes	M3	1
M161.03	Application of slurry for rut filling from commercial sources	No	No	None	1
M161.03(a)	Application of slurry for rut filling from commercial sources	No	No	PROV SUM	1
M161.03(b)	The Contractors overhead charges and profit in respect of sub-item M161.03(a)	No	No	%	1
M170	REPAIR OF SLOPE FAILURES AND WASHAWAYS	No	No	None	1
M170.01	M2100: REPAIR AND MAINTENANCE OF INLET AND OUTLET STRUCTURES	No	No	None	1
M170.01(a)	M2200: SUBSOIL DRAIN INSTALLATION AND MAINTENANCE	No	No	None	1
M170.01(a)(i)	Soft material	Yes	Yes	M3	1
M170.01(a)(ii)	Intermediate material	Yes	Yes	M3	1
M170.01(a)(iii)	Hard and boulder class material	Yes	Yes	M3	1
M170.01(b)	Drying excavated material suitable for re-use	Yes	Yes	M3	1
M170.01(c)	Roadbed compaction to 90% of modified AASHTO density	Yes	Yes	M3	1
M170.01(d)	Backfill at excavated area in	No	No	None	1
M170.01(d)(i)	Fill embankments to 90% of modified AASHTO density	Yes	Yes	M3	1
M170.01(d)(ii)	Cut embankments to 90% of modified AASHTO density including haul for a free haul distance of 1,0km.	Yes	Yes	M3	1
M170.02	Reconstruction of pavement layers	No	No	None	1
M170.02(a)	Natural gravel selected subgrade	Yes	Yes	M3	1
M170.02(b)	Cement stabilised natural gravel subbase	Yes	Yes	M3	1
M170.02(c)	Emulsion treated crushed stone base	Yes	Yes	M3	1
M170.02(d)	Crushed stone base (G1)	Yes	Yes	M3	1
M170.02(e)	Hot mix asphalt(continuously graded medium)	Yes	Yes	M3	1
M170.02(f)	Cold mix asphalt (Agreement SA certified)	Yes	Yes	M3	1
M170.03	Prime and Tack coats	No	No	None	1
M170.03(a)	30% Stable grade emulsion	Yes	Yes	litre	1
M170.03(b)	Inverted bitumen emulsion prime	Yes	Yes	litre	1
M170.04	Overhaul on natural gravel material	Yes	Yes	M3-km	1
M170.05	Repair of slope failures and washaways	No	No	None	1

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M170.05(a)	Provisional sum for repair of slope failures and washaways The contractors overhead charges and profit in respect of sub-item	No	No	PROV SUM	1	Project Specific
M170.05(b)	M170.05(a) REPAIR AND MAINTENANCE OF INLET AND OUTLET STRUCTURES	No	No	%	1	
M210		No	No	None	1	
M210.01	Excavation	No	No	None	1	
M210.01(a)	Excavating soft material	Yes	Yes	M3	1	
M210.01(b)	Excavating hard material	Yes	Yes	M3	1	
M210.02	Backfilling	No	No	None	1	
M210.02(a)	Using the excavated material	Yes	Yes	M3	1	
M210.02(b)	Using stabilised excavated material	Yes	Yes	M3	1	
M210.03	Reconstruction of inlet and outlet structures	No	No	None	1	
M210.03(a)	In concrete (class indicated)	No	No	None	1	Project Specific
M210.03(a)(i)	15/19	Yes	Yes	M3	1	
M210.03(a)(ii)	20/19	Yes	Yes	M3	1	
M210.03(a)(iii)	25/19	Yes	Yes	M3	1	
M210.03(a)(iv)	30/19	Yes	Yes	M3	1	
M210.03(b)	In brickwork	Yes	Yes	M3	1	
M210.03(c)	Plastering	Yes	Yes	M2	1	
M210.03(d)	Maintenance of grids	No	No	None	1	
M210.03(d)(i)	Welding and loosening of steel grids	No	No	PROV SUM	1	
M210.03(d)(ii)	The Contractors overhead charges and profit in respect of sub-item M210.03 (d)(i)	No	No	%	1	Project Specific
M210.04	Accessories	No	No	None	1	
M210.04(a)	Accessories The Contractors overhead charges and profit in respect of sub-item	No	No	PROV SUM	1	
M210.04(b)	M210.04 (a)	No	No	%	1	
M210.05	Demolition of existing structures	No	No	None	1	
M210.05(a)	Plain concrete	Yes	Yes	M3	1	
M210.05(b)	Reinforced concrete	Yes	Yes	M3	1	
M210.05(c)	Brickwork	Yes	Yes	M3	1	
M210.05(d)	Stone masonry	Yes	Yes	M3	1	
M210.06	Repairing of existing structures (type indicated)	No	No	None	1	
M210.06(a)	Concrete (class indicated)	No	No	None	1	Project Specific
M210.06(a)(i)	15/19	Yes	Yes	M3	1	
M210.06(a)(ii)	20/19	Yes	Yes	M3	1	
M210.06(a)(iii)	25/19	Yes	Yes	M3	1	
M210.06(a)(iv)	30/19	Yes	Yes	M3	1	
M210.06(b)	Brickwork	Yes	Yes	M3	1	
M210.06(c)	Stone masonry with rock material obtained from	No	No	None	1	
M210.06(c)(i)	Natural sources	Yes	Yes	M3	1	
M210.06(c)(ii)	Commercial sources	Yes	Yes	M3	1	
M210.06(d)	Plastering	Yes	Yes	M2	1	
M210.07	Steel reinforcement	No	No	None	1	Project Specific
M210.07(a)	Mild steel bars	Yes	Yes	ton	1	
M210.07(b)	High tensile steel bars	Yes	Yes	ton	1	
M210.07(c)	Welded steel mesh	Yes	Yes	KG	1	

M210.08	Overhaul on materials for haul in excess of 1.0 km	No	No	None	1
M210.08(a)	Excavated material to spoil	Yes	Yes	M3-km	1
M210.08(b)	Existing structures demolished	Yes	Yes	M3-km	1
M220	SUBSOIL DRAIN INSTALLATION AND MAINTENANCE	No	No	None	1
M220.01	Excavation	No	No	None	1
M220.01(a)	Excavating soft material	Yes	Yes	M3	1
M220.01(b)	Excavating hard material	Yes	Yes	M3	1
M220.02	Impermeable backfilling	Yes	Yes	M3	1
M220.03	Natural permeable material	No	No	None	1
M220.03(a)	Crushed stone from commercial source (state grade)	No	No	None	1
M220.03(a)(i)	Fine grade	Yes	Yes	M3	1
M220.03(a)(ii)	Course grade	Yes	Yes	M3	1
M220.03(b)	Sand obtained from approved source on site (state grade)	Yes	Yes	M3	1
M220.03(b)(i)	Fine grade	Yes	Yes	M3	1
M220.03(b)(ii)	Course grade	Yes	Yes	M3	1
M220.03(c)	Sand from commercial source (state grade)	Yes	Yes	M3	1
M220.03(c)(i)	Fine grade	No	No	None	1
M220.03(c)(ii)	Course grade	No	No	None	1
M220.04	Pipes	No	No	None	1
M220.04(a)	Unplasticized PVC pipes and fittings, normal duty, complete with couplings	No	No	None	1
M220.04(a)(i)	110 mm slotted pipe	Yes	Yes	M	1
M220.04(a)(ii)	150 mm slotted pipe	Yes	Yes	M	1
M220.04(a)(iii)	110 mm perforated pipe	Yes	Yes	M	1
M220.04(a)(iv)	150 mm perforated pipe	Yes	Yes	M	1
M220.04(b)	High density type polyethylene pressure pipes and fittings, complete with couplings (state size, type and class and whether or not perforated)	Yes	Yes	M	1
M220.04(b)(i)	110 mm	Yes	Yes	M	1
M220.04(b)(ii)	150 mm	Yes	Yes	M	1
M220.05	Polyethylene sheeting 0,25 mm thick	Yes	Yes	M2	1
M220.06	Synthetic fibre filter fabric (describe type and grade)	Yes	Yes	M2	1
M220.07	Composite in-place drainage systems (state type, size and grade)	Yes	Yes	M	1
M220.08	Inlet and outlet structures	No	No	None	1
M220.08(a)	Rodding eyes	Yes	Yes	NO.	1
M220.08(b)	Outlet structures	Yes	Yes	NO.	1
M220.09	Exposing of existing drains	Yes	Yes	M3	1
M220.10	Clearing of subsoil drains	Yes	Yes	M	1
M220.11	Overhaul for material hauled in excess of 1,0 km free-haul	Yes	Yes	M3-km	1
M230	CLEANING OF WATERWAY STRUCTURES	No	No	None	1
M230.01	Cleaning of waterway structures, inlet and outlets areas	No	No	None	1
M230.01(a)	Cleaning of waterway structures, inlets and outlets areas	No	No	PROV SUM	1

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M230.01(b)	The Contractor's overhead charges and profit in respect of sub-item M230.01(a)	No	No	%	1
M230.01(c)	Cleaning of waterway structures, inlets and outlets areas on (performance base)	No	No	None	1
M230.01(c)(i)	(specify section and km distance including interchanges)	Yes	Yes	MONTH	1
M230.02	Overhaul of material in excess of the free-haul distance of 1,0 km	Yes	Yes	M3-km	1
M240	CLEANING OF PREFABRICATED CULVERTS	No	No	None	1
M240.01	Cleaning of prefabricated culverts (non performance based)	No	No	None	1
M240.01(a)	Route, Section, km distance	No	No	None	1
M240.01(a)(i)	Pipes with an internal diameter up to and including 750 mm	Yes	Yes	NO.	1
M240.01(a)(ii)	Pipes with an internal diameter exceeding 750 mm	Yes	Yes	NO.	1
M240.01(a)(iii)	Box culverts up to and including 1,5 m vertical dimension	Yes	Yes	NO.	1
M240.01(a)(iv)	Box culverts exceeding 1,5 m vertical dimension	Yes	Yes	NO.	1
M240.02	Cleaning of prefabricated culverts (performance based)(specify route, section and km distance)	No	No	None	1
M240.02(a)	Initial cleaning of culverts (specify route, section and km distance)	No	No	None	1
M240.02(a)(i)		Yes	Yes	Is	1
M240.02(b)	Cleaning of culverts (specify route, section and km distance)	No	No	None	1
M240.02(b)(i)		Yes	Yes	MONTH	1
M250	CLEANING OF CONCRETE DRAINS AND CHANNELS	No	No	None	1
M250.01	Cleaning of concrete drainage (non-performance based)	No	No	None	1
M250.01(a)	Cleaning of concrete drainage	Yes	Yes	M	1
M250.01(b)	Cleaning of median concrete grid channels next to NJ Barriers	Yes	Yes	M	1
M250.02	Additional cleaning of concrete drainage channels	No	No	None	1
M250.02(a)	Hand Cleaning	Yes	Yes	M	1
M250.02(b)	Extra over M250.02(a) for work during night time	No	No	%	1
M250.02(c)	Mechanical vacuum road sweeper	Yes	Yes	KM	1
M250.02(d)	Hand cleaning (emergency clean ups)	Yes	Yes	h	1
M250.02(e)	Mechanical vacuum road sweeper (emergency clean ups)	Yes	Yes	h	1
M250.02(f)	Extra over Item 250.02(c), (d) and (e) for work during night time	Yes	Yes	%	1
M250.03	Cleaning of pedestrian paths	No	No	None	1
M250.03(a)	Cleaning of pedestrian paths on instruction of the Engineer (specify section and km distance)	Yes	Yes	M	1
M250.04	Cleaning of concrete drains(performance based)	No	No	None	1

M250.04(a)	Initial cleaning of concrete drains (specify section and km distance including interchanges)	Yes	Yes	Is	1
M250.04(b)	Cleaning of concrete drains (specify section and km distance including interchanges)	Yes	Yes	MONTH	1
M260	CLEANING AND MAINTENANCE OF EXISTING EARTH CHANNELS	No	No	None	1
M260.01	Cleaning earth drains and channels	Yes	Yes	M3	1
M260.02	Repairing of earth drains and channels	Yes	Yes	M3	1
M260.03	Banks and dykes	Yes	Yes	M3	1
M260.04	Construction of new earth drains	Yes	Yes	M3	1
M260.05	Overhaul of material in excess of the free-haul distance of 1,0 km	Yes	Yes	M3-km	1
M270	EDGE BUILD-UP REMOVAL	No	No	None	1
M270.01	Removal edge build-up	Yes	Yes	None	1
M270.01(a)	Removal edge build-up	Yes	Yes	None	1
M270.01(a)(i)	Remove material by hand and dispose of adjacent to road	Yes	Yes	M	1
M270.01(a)(ii)	Remove material by hand and load for spoil	Yes	Yes	M	1
M270.01(a)(iii)	Remove material by machine and dispose of adjacent to the road	Yes	Yes	KM	1
M270.01(a)(iv)	Remove material by machine and load for spoil	Yes	Yes	KM	1
M270.01(b)	Overhaul on material hauled in excess of 1,0 km	Yes	Yes	M3-km	1
M270.02	Removal edge build-ups (performance based)	No	No	None	1
M270.02(a)	Initial edge build-up removal (specify route, section and km distance)	No	No	None	1
M270.02(a)(i)		Yes	Yes	Is	1
M270.02(b)	Edge build-up removal	No	No	None	1
M270.02(b)(i)	(specify section and km distance including interchanges)	Yes	Yes	MONTH	1
M280	CONCRETE CHANNEL CONSTRUCTION AND MAINTENANCE OF EXISTING CHANNELS	No	No	None	1
M280.01	Excavation	Yes	Yes	None	1
M280.01(a)	For open drains	Yes	Yes	None	1
M280.01(a)(i)	Soft material	Yes	Yes	M3	1
M280.01(a)(ii)	Hard material	Yes	Yes	M3	1
M280.01(b)	Chutes and kerb-channel combinations	No	No	None	1
M280.01(b)(i)	Soft material	Yes	Yes	M3	1
M280.01(b)(ii)	Hard material	Yes	Yes	M3	1
M280.02	Cast in situ concrete	No	No	None	1
M280.02(a)	Linings (class indicated)	Yes	Yes	M3	1
M280.02(b)	Chutes (class indicated)	Yes	Yes	M3	1
M280.02(c)	Channels for kerb and channel (class indicated)	Yes	Yes	M3	1
M280.02(d)	Concrete berms	Yes	Yes	M3	1
M280.03	Concrete screed or backfill below chutes (class indicated)	Yes	Yes	M3	1

M280.04	Precast concrete kerbing and chutes	No	No	None	1
M280.04(a)	Kerbing (type indicated)	Yes	Yes	None	1
M280.04(b)	Chutes (types indicated)	Yes	Yes	M	1
M280.05	Steel reinforcement	No	No	None	1
M280.05(a)	Mild steel bars	Yes	Yes	ton	1
M280.05(b)	High tensile steel bars	Yes	Yes	ton	1
M280.05(c)	Welded steel mesh	Yes	Yes	KG	1
M280.06	Sealed joints in concrete lining of open drains (type indicated with reference to drawings)	Yes	Yes	M	1
M280.07	Demolition and removal of damaged existing structures	No	No	None	1
M280.07(a)	Plain concrete	Yes	Yes	M3	1
M280.07(b)	Reinforced concrete	Yes	Yes	M3	1
M280.07(c)	Kerbing and channelling	Yes	Yes	M3	1
M280.07(d)	Concrete berms	Yes	Yes	M3	1
M280.08	Down chutes	No	No	None	1
M280.08(a)	Corrugated steel (type and diameter specified)	Yes	Yes	M	1
M280.08(b)	Plastic (type and diameter specified)	Yes	Yes	M	1
M280.08(c)	Concrete (type and diameter specified)	Yes	Yes	M	1
M280.09	Overhaul on material for haul in excess of 1,0 km	No	No	None	1
M280.09(a)	Excavated material to spoil	Yes	Yes	M3-km	1
M280.09(b)	Existing structures demolished	Yes	Yes	M3-km	1
M280.10	Asphalt Berms	Yes	Yes	ton	1
M310	FENCING	No	No	None	1
M310.01	Clearing fence line	No	No	None	1
M310.01(a)	2 m wide for new fences	Yes	Yes	KM	1
M310.01(b)	1 m wide alongside existing fences	Yes	Yes	KM	1
M310.02	Repair of existing fences of less than 100 m lengths:	No	No	None	1
M310.02(a)	Stock-proof fences	Yes	Yes	M	1
M310.02(b)	Vermin-proof fences	Yes	Yes	M	1
M310.02(c)	Pedestrian fences	Yes	Yes	M	1
M310.02(d)	Security fences	Yes	Yes	M	1
M310.02(e)	Steel palisade fence	Yes	Yes	M	1
M310.02(f)	Concrete palisade fence	No	No	None	1
M310.02(f)(i)	1.2m high	Yes	Yes	M	1
M310.02(f)(ii)	1.4m high	Yes	Yes	M	1
M310.02(f)(iii)	1.8m high	Yes	Yes	M	1
M310.02(f)(iv)	2,1m high	Yes	Yes	M	1
M310.02(f)(v)	2,4m high	Yes	Yes	M	1
M310.02(g)	Steel mesh fencing (as specified)	Yes	Yes	M	1
M310.02(g)(i)	1,2m high	Yes	Yes	M	1
M310.02(g)(ii)	2,0m high	Yes	Yes	M	1
M310.02(h)	Flat wrap barbed wire fencing	Yes	Yes	M	1
M310.02(i)	Game proof fences	Yes	Yes	M	1
M310.03	Repair of existing fence of greater than 100 m lengths:	No	No	None	1
M310.03(a)	Stock-proof fences	Yes	Yes	M	1
M310.03(b)	Vermin-proof fences	Yes	Yes	M	1
M310.03(c)	Pedestrian fences	Yes	Yes	M	1

M310.03(d)	Security fences	Yes	Yes	M	1
M310.03(e)	Steel palisade fences	Yes	Yes	M	1
M310.03(f)	Concrete palisade fences	Yes	Yes	M	1
M310.03(f)(i)	1.2m high	Yes	Yes	M	1
M310.03(f)(ii)	1.4m high	Yes	Yes	M	1
M310.03(f)(iii)	1.8m high	Yes	Yes	M	1
M310.03(f)(iv)	2,1m high	Yes	Yes	M	1
M310.03(f)(v)	2,4m high	Yes	Yes	M	1
M310.03(g)	Steel mesh fencing (as specified)	Yes	Yes	M	1
M310.03(g)(i)	1,2m high	Yes	Yes	M	1
M310.03(g)(ii)	2,0m high	Yes	Yes	M	1
M310.03(h)	Flat wrap barbed wire fencing	Yes	Yes	M	1
M310.04	Erection of new fences of less than 1 km lengths:	No	No	None	1
M310.04(a)	Stock-proof fences	Yes	Yes	M	1
M310.04(b)	Vermin-proof fences	Yes	Yes	M	1
M310.04(c)	Pedestrian fences	Yes	Yes	M	1
M310.04(d)	Security fences	Yes	Yes	M	1
M310.04(e)	Steel palisade fences	Yes	Yes	M	1
M310.04(f)	Concrete palisade fences	Yes	Yes	M	1
M310.04(f)(i)	1.2m high	Yes	Yes	M	1
M310.04(f)(ii)	1.4m high	Yes	Yes	M	1
M310.04(f)(iii)	1.8m high	Yes	Yes	M	1
M310.04(f)(iv)	2,1m high	Yes	Yes	M	1
M310.04(f)(v)	2,4m high	Yes	Yes	M	1
M310.04(g)	Steel mesh fencing (as specified)	Yes	Yes	M	1
M310.04(g)(i)	1,2m high	Yes	Yes	M	1
M310.04(g)(ii)	2,0m high	Yes	Yes	M	1
M310.04(h)	Flat wrap barbed wire fencing	Yes	Yes	M	1
M310.05	Supply and erection of new fences of greater than 1km	No	No	None	1
M310.05(a)	Supply of fencing material	No	No	None	1
M310.05(a)(i)	Supply and erection of new fences of greater than 1km	No	No	PROV SUM	1
M310.05(a)(ii)	Overhead charges and profit in respect of subitem M310.05 (a)(i)	No	No	%	1
M310.05(b)	Concrete backfill	Yes	Yes	M3	1
M310.06	New gates	No	No	None	1
M310.06(a)	Single leaf	Yes	Yes	NO.	1
M310.06(a)(i)	Stock-proof fences	Yes	Yes	NO.	1
M310.06(a)(ii)	Vermin-proof fences	Yes	Yes	NO.	1
M310.06(a)(iii)	Pedestrian fence	Yes	Yes	NO.	1
M310.06(a)(iv)	Security fences	Yes	Yes	NO.	1
M310.06(b)	Double leaf (size and type indicated)	No	No	None	1
M310.06(b)(i)	Stock-proof fences	Yes	Yes	NO.	1
M310.06(b)(ii)	Vermin-proof fences	Yes	Yes	NO.	1
M310.07	Moving of existing fences and gates	No	No	None	1
M310.07(a)	Fences	Yes	Yes	M	1
M310.07(a)(i)	Stock-proof fences	Yes	Yes	M	1
M310.07(a)(ii)	Vermin-proof fences	Yes	Yes	M	1
M310.07(a)(iii)	Pedestrian fences	Yes	Yes	M	1
M310.07(a)(iv)	Security fences	Yes	Yes	M	1
M310.07(a)(v)	Steel palisade fences	Yes	Yes	M	1
M310.07(a)(vi)	Concrete palisade fences	Yes	Yes	M	1

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M310.07(a)(vii)	Steel mesh fencing (as specified)	Yes	Yes	M	1	Project Specific
M310.07(a)(viii)	Flat wrap barbed wire fencing	Yes	Yes	M	1	
M310.07(b)	Gates	Yes	Yes	NO.	1	
M310.08	Dismantling of existing and damaged fences	Yes	Yes	M	1	
M310.09	Drilling and blasting holes for posts and anchors	Yes	Yes	NO.	1	
M310.10	Procurement of specialised fencing	No	No	None	1	
M310.10(a)	Procurement of specialised fencing (cattle grids) The Contractors overhead charges and profit in respect of sub-item M310.10(a)	No	No	PROV SUM	1	
M310.10(b)		No	No	%	1	
M320	COLLECTION AND REMOVAL OF DEBRIS AND LITTER	No	No	None	1	
M320.01	Initial Clearing of the road reserve (state section and km distance incl. interchanges)	Yes	Yes	LUMP SUM	1	
M320.02	General Clearing of the road reserve	No	No	None	1	
M320.02(a)	Urban roads (state section and km distance incl. interchanges)	No	No	None	1	
M320.02(a)(i)	Specify section and km distance incl. I/C	Yes	Yes	WEEKLY	1	
M320.02(b)	Peri urban roads (state section and km distance incl. interchanges)	No	No	None	1	
M320.02(b)(i)	Specify section and km distance incl. I/C	Yes	Yes	MONTH	1	
M320.02(c)	Rural roads (state section and km distance incl. interchanges)	No	No	None	1	
M320.02(c)(i)	Specify section and km distance incl. I/C	Yes	Yes	MONTH	1	
M320.03	Additional ad-hoc clearing of	No	No	None	1	
M320.03(a)	Lay-byes	Yes	Yes	NO.	1	
M320.03(b)	Toll plazas	No	No	None	1	
M320.03(b)(i)	List toll plazas	Yes	Yes	NO.	1	
M320.03(c)	Interchanges	No	No	None	1	
M320.03(c)(i)	List interchanges	Yes	Yes	NO.	1	
M320.04	Removal of illegal dumpings	No	No	None	1	
M320.04(a)	Removal of illegal dumping material	Yes	Yes	M3	1	
M320.04(b)	Overhaul on material hauled in excess of 1,0km	Yes	Yes	M3-km	1	
M330	SHOULDER REPAIRS	No	No	None	1	
M330.01	Reinstating gravel shoulder	No	No	None	1	
M330.01(a)	Ripping, watering, mixing, placing and compacting existing shoulders to 93 % of Mod AASHTO density	Yes	Yes	M3	1	
M330.01(b)	Extra over sub-item M330.01 (a) for adding extra material	No	No	None	1	
M330.01(b)(i)	Borrowing in road reserve (within free haul distance, 1,0 km)	Yes	Yes	M3	1	
M330.01(b)(ii)	Commercial sources	Yes	Yes	M3	1	
M330.01(b)(iii)	Milled material	Yes	Yes	M3	1	
M330.01(c)	Extra over for sub-item M330.01 (a) for stabilising material	Yes	Yes	M3	1	
M330.01(d)	Extra over for sub-item M330.01 (a) for adding chemical stabilising agent	No	No	None	1	

M330.01(d)(i)	Ordinary Portland cement	Yes	Yes	ton	1
M330.01(d)(ii)	Road lime (specify type)	Yes	Yes	ton	1
	Extra over for sub-item M330.01 (a) for bituminous stabilising agent (specify type)	No	No	None	1
M330.01(e)	Anionic stable grade emulsion	Yes	Yes	litre	1
M330.01(e)(i)	Cationic stable grade emulsion	Yes	Yes	litre	1
M330.01(e)(ii)	Other (specify)	Yes	Yes	litre	1
M330.02	Blading of gravel shoulders	No	No	None	1
M330.02(a)	Blading of gravel shoulders	Yes	Yes	KM	1
M330.02(b)	Cutting of mitre drains	Yes	Yes	M	1
M330.03	Preparation of road reserve	No	No	None	1
M330.03(a)	Reserve with dual carriageway	Yes	Yes	KM	1
M330.03(b)	Reserve with single carriageway	Yes	Yes	KM	1
M330.04	Overhaul on material in excess of the free-haul distance of 1,0km	Yes	Yes	M3-km	1
M340	MAINTENANCE OF ARRESTOR BED	No	No	None	1
M340.01	Maintenance of arrestor bed	No	No	None	1
	"Fluffing" arrestor bed once per month and after every vehicle entry (joy riding or emergency)	Yes	Yes	MONTH	1
M340.01(a)	Removal of fines	Yes	Yes	M3	1
M340.02	Establishment of screening sieve machine	Yes	Yes	LUMP SUM	1
M340.03	Replenishment of stone aggregate	No	No	None	1
M340.03(a)	Replenishment of stone aggregate	No	No	PROV SUM	1
	The Contractors overhead charges and profit in respect of subitem M340.03 (a)	No	No	%	1
M340.03(b)		No	No	%	1
M350	STABILISATION OF CUTTINGS	No	No	None	1
M350.01	Barring down of rock surface in the vertical height intervals stated	No	No	None	1
M350.01(a)	Height up to 5 m	Yes	Yes	M2	1
M350.01(b)	Height exceeding 5m up to 10m	Yes	Yes	M2	1
M350.02	Disposal of rock debris	Yes	Yes	M3	1
M350.03	Overhaul on material for haul in excess of 1.0 km	Yes	Yes	M3-km	1
M350.04	Stabilization of cutting by specialist service provider	No	No	None	1
M350.04(a)	Stabilization of cutting slopes by specialist.	No	No	PROV SUM	1
	The Contractors overhead charges and profit in respect of subitem M350.04(a)	No	No	%	1
M350.04(b)		No	No	%	1
M410	ERECTION AND REPAIR OF PERMANENT ROAD TRAFFIC SIGNS	No	No	None	1
M410.01	Erection or re-erection of road sign boards	No	No	None	1
M410.01(a)	Area not exceeding 2 m²	Yes	Yes	M2	1
M410.01(b)	Area exceeding 2 m² but not 10 m²	Yes	Yes	M2	1
M410.01(c)	Area exceeding 10 m²	Yes	Yes	M2	1
M410.01(d)	Overhead road sign boards	Yes	Yes	M2	1
M410.02	Hazard plates	No	No	None	1
M410.02(a)	Hazard plate and post (W401/402)	No	No	None	1
M410.02(a)(i)	600 mm x 150 mm	Yes	Yes	NO.	1
M410.02(a)(ii)	800 mm x 150 mm	Yes	Yes	NO.	1
M410.02(a)(iii)	1200 mm x 300 mm	Yes	Yes	NO.	1

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M410.02(b)	Hazard Plate (W401/402)	No	No	None	1
M410.02(b)(i)	600 mm x 150 mm	Yes	Yes	NO.	1
M410.02(b)(ii)	800 mm x 150 mm	Yes	Yes	NO.	1
M410.02(b)(iii)	1200 mm x 300 mm	Yes	Yes	NO.	1
M410.02(c)	Hazard plate and post (W405/406)	No	No	None	1
M410.02(c)(i)	450mmx450mm	Yes	Yes	NO.	1
M410.02(c)(ii)	600mmx600mm	Yes	Yes	NO.	1
M410.02(c)(iii)	900mmx900mm	Yes	Yes	NO.	1
M410.02(d)	Hazard Plate (W405/406)	No	No	None	1
M410.02(d)(i)	450mmx450mm	Yes	Yes	NO.	1
M410.02(d)(ii)	600mmx600mm	Yes	Yes	NO.	1
M410.02(d)(iii)	900mmx900mm	Yes	Yes	NO.	1
M410.03	Reference marker boards	No	No	None	1
M410.03(a)	Reference marker board and post	Yes	Yes	NO.	1
M410.03(a)(i)	km Triangular board	Yes	Yes	NO.	1
M410.03(a)(ii)	Board Drawing No SP-S-1-3/3	Yes	Yes	NO.	1
M410.03(b)	Reference marker boards	No	No	None	1
M410.03(b)(i)	km Triangular board	Yes	Yes	NO.	1
M410.03(b)(ii)	Board Drawing No SP-S-1-3/3	Yes	Yes	NO.	1
M410.04	Road sign supports	Yes	Yes	M3	1
M410.04(a)	Steel tubing (specify diameter and wall thickness)	Yes	Yes	M	1
M410.04(b)	Timber	No	No	None	1
M410.04(b)(i)	100 - 125 mm	Yes	Yes	M	1
M410.04(b)(ii)	125 - 150 mm	Yes	Yes	M	1
M410.04(b)(iii)	150 - 175 mm	Yes	Yes	M	1
M410.04(b)(iv)	175 - 200 mm	Yes	Yes	M	1
M410.04(b)(v)	200 - 225 mm	Yes	Yes	M	1
M410.05	Excavation and backfilling for road sign supports	No	No	None	1
M410.05(a)	Excavation and Backfilling	Yes	Yes	M3	1
M410.05(b)	Extra over subitem M410.05(a) for rock excavation	Yes	Yes	M3	1
M410.05(c)	Extra over subitem M410.05(a) for soilcrete backfill	Yes	Yes	M3	1
M410.05(d)	Extra over subitem M410.05(a) for concrete backfill	Yes	Yes	M3	1
M410.06	Dismantling, storing and re-erecting road sign boards	No	No	None	1
M410.06(a)	Up to 2 m ²	Yes	Yes	NO.	1
M410.06(b)	Exceeding 2 m ² but not 10 m ²	Yes	Yes	NO.	1
M410.06(c)	Exceeding 10 m ²	Yes	Yes	NO.	1
M410.07	Dismantling and storing road sign boards	No	No	None	1
M410.07(a)	Up to 2 m ²	Yes	Yes	NO.	1
M410.07(b)	Exceeding 2 m ² but not 10 m ²	Yes	Yes	NO.	1
M410.07(c)	Exceeding 10 m ²	Yes	Yes	NO.	1
M410.08	Removal of road sign supports	Yes	Yes	NO.	1
M410.09	Repair of road sign faces	Yes	Yes	M2	1
M410.10	Attachment of overlays to existing road signs (type indicated)	No	No	None	1
M410.10(a)	Retroreflective material (prism grade)	Yes	Yes	M2	1
M410.10(a)(i)	SABS 1519 ClassII material	Yes	Yes	M2	1
M410.10(a)(ii)	SABS 1519 ClassIII material	Yes	Yes	M2	1
M410.10(a)(iii)	SABS 1519 ClassIV material	Yes	Yes	M2	1

M410.10(a)(iv)	1mm thick chromadek plate only	Yes	Yes	m²	1	Project Specific
M410.10(a)(v)	1.4 mm thick Chromadek or approved plate as per SANS 1519-2	Yes	Yes	m²	1	
M410.11	Gravel drainage layer below road sign footings	Yes	Yes	M3	1	
M410.12	Procurement of road sign boards	Yes	Yes	M3	1	
M410.12(a)	Procurement of road sign boards	No	No	PROV SUM	1	
M410.12(b)	Overhead charges and profit in respect of subitem M410.12(a)	No	No	%	1	
M410.13	Erection and repairs of gantry structures	No	No	None	1	
M410.13(a)	Erection and repairs of gantry structures	No	No	PROV SUM	1	
M410.13(b)	Overhead charges and profit in respect of subitem M410.13(a)	No	No	%	1	
M410.14	Supply of Road Signs	No	No	None	1	Project Specific
M410.14(a)	Road signs: R - and TR- series	No	No	None	1	
M410.14(a)(i)	900mm	Yes	Yes	NO.	1	
M410.14(a)(ii)	1200mm	Yes	Yes	NO.	1	
M410.14(b)	Road signs: W- series	No	No	None	1	
M410.14(b)(i)	1200mm	Yes	Yes	NO.	1	
M410.14(b)(ii)	1500mm	Yes	Yes	NO.	1	
M410.14(c)	Road signs: TW- series	No	No	None	1	
M410.14(c)(i)	1200mm	Yes	Yes	NO.	1	
M410.14(c)(ii)	1500mm	Yes	Yes	NO.	1	
M420	ROAD SIGN CLEANING	No	No	None	1	Project Specific
M420.01	Road sign cleaning	No	No	None	1	
M420.01(a)	Cleaning of guard rail reflectors (all types)	No	No	None	1	
M420.01(a)(i)	Cleaning of guard rail reflectors	Yes	Yes	NO.	1	
M420.01(a)(ii)	Re-taping of standard guard rail reflectors - Type V Diamond Grade	Yes	Yes	NO.	1	
M420.01(b)	Cleaning of road signs	Yes	Yes	NO.	1	
M420.01(b)(i)	Area up to 2 m²	Yes	Yes	NO.	1	
M420.01(b)(ii)	Area exceeding 2 m² up to 10 m²	Yes	Yes	NO.	1	
M420.01(b)(iii)	Area exceeding 10 m²	Yes	Yes	NO.	1	
M420.01(c)	Cleaning of overhead road signs (all sizes)	Yes	Yes	NO.	1	
M420.01(d)	Cleaning of danger plates	No	No	None	1	Project Specific
M420.01(d)(i)	W401/402	Yes	Yes	NO.	1	
M420.01(d)(ii)	W405/W406	Yes	Yes	NO.	1	
M420.02	Removal of graffiti	No	No	None	1	
M420.02(a)	From road signs	Yes	Yes	M2	1	
M420.02(b)	From structures	Yes	Yes	M2	1	
M420.03	Painting of metal road sign elements	No	No	None	1	
M420.03(a)	Road sign supports	Yes	Yes	litre	1	
M420.03(b)	Road sign frames	Yes	Yes	litre	1	
M421	REMOVAL OF ILLEGAL SIGNS	No	No	None	1	
M421.01	Removal of illegal signs	No	No	None	1	Project Specific
M421.01(a)	Signs within the road reserve:	No	No	None	1	
M421.01(a)(i)	Area exceeding 0,5 m² up to 2 m²	Yes	Yes	NO.	1	
M421.01(a)(ii)	Area exceeding 2 m² up to 10 m²	Yes	Yes	NO.	1	
M421.01(a)(iii)	Area exceeding 10 m²	Yes	Yes	NO.	1	
M421.01(b)	Signs outside the road reserve:	No	No	None	1	
M421.01(b)(i)	Signs outside the road reserve (Any size)	No	No	PROV SUM	1	

M421.01(b)(ii)	The Contractors overhead charges and profit in respect with item M421.01(b)(i)	No	No	%	1	Project Specific
M430	ROADSTUDS	No	No	None	1	
M430.01	Procurement and Installation of roadstuds	No	No	None	1	
M430.01(a)	Procurement and Installation of roadstuds	No	No	PROV SUM	1	
M430.01(b)	The Contractors overhead charges and profit in respect of sub-item M430.01(a)	No	No	%	1	
M430.02	Removal of damaged roadstuds	No	No	None	1	
M430.02(a)	Surface type	No	No	None	1	
M430.02(a)(i)	Bituminous pavements	Yes	Yes	NO.	1	
M430.02(a)(ii)	Concrete pavements	Yes	Yes	NO.	1	
M430.02(b)	Embedded type	No	No	None	1	
M430.02(b)(i)	Bituminous pavements	Yes	Yes	NO.	1	
M430.02(b)(ii)	Concrete pavements	Yes	Yes	NO.	1	
M430.02(c)	Glass type MDS	Yes	Yes	NO.	1	
M430.03	Replacement of roadstuds	No	No	None	1	
M430.03(a)	Surface type with shank	Yes	Yes	NO.	1	
M430.03(b)	Surface type without shank	Yes	Yes	NO.	1	
M430.03(c)	Embedded type	Yes	Yes	NO.	1	
M430.04	Cleaning of roadstuds	Yes	Yes	NO.	1	
M440	GUARD-RAIL ERECTION AND MAINTENANCE	No	No	None	1	
M440.01	Supply and erection of new galvanised guard rails	No	No	None	1	
M440.01(a)	3,81 m guardrail	Yes	Yes	M	1	
M440.01(b)	4 m guardrail	Yes	Yes	M	1	
M440.02	Supply and erection of new galvanised curved guard rails factory bent to a radius of less than 45,0 m	No	No	None	1	
M440.02(a)	3,81 m guardrail	Yes	Yes	M	1	
M440.02(b)	4 m guardrail	Yes	Yes	M	1	
M440.03	Extra over for erection of guard rail posts	No	No	None	1	
M440.03(a)	Additional timber posts for payment item M440.01, M440.02	No	No	None	1	
M440.03(a)(i)	Timber Post	Yes	Yes	NO.	1	
M440.03(a)(ii)	Steel post	Yes	Yes	NO.	1	
M440.03(a)(iii)	Steel post (sigma post)	Yes	Yes	NO.	1	
M440.03(b)	Excavation in hard material	No	No	None	1	
M440.03(b)(i)	Timber Post	Yes	Yes	NO.	1	
M440.03(b)(ii)	Steel post	Yes	Yes	NO.	1	
M440.03(c)	Backfilling guard-rail post with soilcrete	No	No	None	1	
M440.03(c)(i)	Timber Post	Yes	Yes	NO.	1	
M440.03(c)(ii)	Steel post	Yes	Yes	NO.	1	
M440.03(d)	Backfilling guard-rail post with concrete	No	No	None	1	
M440.03(d)(i)	Timber Post	Yes	Yes	NO.	1	
M440.03(d)(ii)	Steel post	Yes	Yes	NO.	1	
M440.04	End units	No	No	None	1	
M440.04(a)	End wings	Yes	Yes	NO.	1	
M440.04(a)(i)	3,81 m guardrail	Yes	Yes	NO.	1	
M440.04(a)(ii)	4 m guardrail	Yes	Yes	NO.	1	

M440.04(b)	Terminal sections in accordance with the drawings where single guard rail sections are used	No	No	None	1
M440.04(b)(i)	3,81 m guardrail	Yes	Yes	NO.	1
M440.04(b)(ii)	4 m guardrail	Yes	Yes	NO.	1
M440.04(c)	Terminal sections in accordance with the drawings where double guard rail sections are used	No	No	None	1
M440.04(c)(i)	3,81 m guardrail	Yes	Yes	NO.	1
M440.04(c)(ii)	4 m guardrail	Yes	Yes	NO.	1
M440.04(d)	Bull nose end units	No	No	None	1
M440.04(d)(i)	3,81 m guardrail	Yes	Yes	NO.	1
M440.04(d)(ii)	4 m guardrail	Yes	Yes	NO.	1
M440.04(e)	End unit connecting to Bridge barrier	Yes	Yes	NO.	1
M440.05	Guard rail reflectors	Yes	Yes	NO.	1
M440.06	Removal of damaged guard rails and re-erection of guard rails with new material	No	No	None	1
M440.06(a)	Guard rails	No	No	None	1
M440.06(a)(i)	3,81 m guardrail	Yes	Yes	M	1
M440.06(a)(ii)	4 m guardrail	Yes	Yes	M	1
M440.06(b)	End wings	Yes	Yes	NO.	1
M440.06(b)(i)	3,81 m guardrail	Yes	Yes	NO.	1
M440.06(b)(ii)	4 m guardrail	Yes	Yes	NO.	1
M440.06(c)	Terminal sections with single guard rails	No	No	None	1
M440.06(c)(i)	3,81 m guardrail	Yes	Yes	NO.	1
M440.06(c)(ii)	4 m guardrail	Yes	Yes	NO.	1
M440.06(d)	Terminal sections with double guard rails	No	No	None	1
M440.06(d)(i)	3,81 m guardrail	Yes	Yes	NO.	1
M440.06(d)(ii)	4 m guardrail	Yes	Yes	NO.	1
M440.06(e)	Extra over for providing additional guard-rail posts	No	No	None	1
M440.06(e)(i)	Timber post	Yes	Yes	NO.	1
M440.06(e)(ii)	Steel Post (specify type)	Yes	Yes	NO.	1
M440.07	Providing of new material required for the re-erection of guardrails	No	No	None	1
M440.07(a)	Supply of new guardrails	Yes	Yes	M	1
M440.07(b)	Supply of new curved guardrails	Yes	Yes	M	1
M440.07(c)	Timber posts	No	No	NO.	1
M440.07(d)	Spacer blocks	Yes	Yes	NO.	1
M440.07(e)	Steel posts	Yes	Yes	NO.	1
M440.07(f)	Guardrail reflectors	No	No	None	1
M440.07(f)(i)	Type D1 (A)	Yes	Yes	NO.	1
M440.07(f)(ii)	Type D1 (B)	Yes	Yes	NO.	1
M440.07(f)(iii)	Type V	Yes	Yes	NO.	1
M440.07(g)	End Units	No	No	None	1
M440.07(g)(i)	End wings	Yes	Yes	NO.	1
M440.07(g)(ii)	Terminal sections with single guardrails	Yes	Yes	NO.	1
M440.07(g)(iii)	Terminal sections with double guardrails	Yes	Yes	NO.	1
M440.07(g)(iv)	Bull nose end units	Yes	Yes	NO.	1
M440.08	Drilling and blasting holes for guardrail posts	Yes	Yes	NO.	1

M440.09	Reinstatement of concrete to guard rail posts (class indicated)	Yes	Yes	M3	1	Project Specific
M440.10	Re-alignment of guard rails	No	No	None	1	
M440.10(i)	3,81 m guardrail	Yes	Yes	M	1	
M440.10(ii)	4 m guardrail	Yes	Yes	M	1	
M440.11	Painting of guardrails	Yes	Yes	M	1	
M440.12	Installation and repair of wire rope safety fence	No	No	None	1	
M440.12(a)	Installation and repair of wire rope safety fence	No	No	PROV SUM	1	
M440.12(b)	Handling costs and profit in respect of sub-item M440.12(a)	No	No	%	1	
M440.13	Procurement of Wire Rope safety fence materials	No	No	None	1	
M440.13(a)	Procurement of Wire Rope Safety Fence (WRSF) materials	No	No	PROV SUM	1	Project Specific
M440.13(b)	Handling costs and profit in respect of sub-item M440.13(a)	No	No	%	1	
M440.14	Repair of damaged wire rope safety fence and re-erection of wire rope safety fence with new, recovered or renovated material	No	No	None	1	
M440.14(a)	Repair of Wire Rope Safety Fence Installation	Yes	Yes	M	1	
M440.14(b)	Post footings	Yes	Yes	NO.	1	
M440.14(c)	Anchor Blocks	Yes	Yes	NO.	1	
M440.15	Re-tensioning of wire rope safety fence	Yes	Yes	NO.	1	
M440.16	Installation and repair of Impact Antennators - Crash Cushion	No	No	None	1	
M440.16(a)	Installation and repair of Impact Antennators - Crash Cushion	No	No	PROV SUM	1	Project Specific
M440.16(b)	The Contractors overhead charges and profit in respect of sub-item M440.16(a)	No	No	%	1	
M440.17	Repairing of damaged wire rope safety fence	No	No	None	1	
M440.17(a)	Safe Fence materials	No	No	None	1	
M440.17(a)(i)	Stainless steel rigging screws	Yes	Yes	NO.	1	
M440.17(a)(ii)	Stainless steel swage fittings	Yes	Yes	NO.	1	
M440.17(a)(iii)	Stainless steel flat bar to end anchor	Yes	Yes	NO.	1	
M440.17(a)(iv)	Galvanised steel post	Yes	Yes	NO.	1	
M440.17(a)(ix)	Plastic post caps	Yes	Yes	NO.	1	
M440.17(a)(v)	Stainless steel stiffening frame	Yes	Yes	NO.	1	
M440.17(a)(vi)	Steel spreader to end post	Yes	Yes	NO.	1	
M440.17(a)(vii)	Plastic spreader	Yes	Yes	NO.	1	
M440.17(a)(viii)	Plastic ground cover	Yes	Yes	NO.	1	
M440.17(a)(x)	Reflective strips to post caps (Class 3 High Int)	Yes	Yes	NO.	1	
M440.17(a)(xi)	Reflective strips to post (Class 3 High Int)	Yes	Yes	NO.	1	
M440.17(a)(xii)	Pastic ties to post cap	Yes	Yes	NO.	1	
M440.17(a)(xiii)	Galvanised wire rope	Yes	Yes	M	1	
M440.17(a)(xiv)	End anchor frames galvanised	Yes	Yes	NO.	1	
M440.17(a)(xv)	Pre cast footings 200 diameter x 600 mm	Yes	Yes	NO.	1	

M440.17(b)	Brifen materials (Highway Safety Products)	No	No	None	1
M440.17(b)(i)	Wire rope including threaded terminals	Yes	Yes	M	1
M440.17(b)(ii)	Wire rope excluding threaded terminals	Yes	Yes	M	1
M440.17(b)(iii)	Threaded terminals, excluding swaging	Yes	Yes	NO.	1
M440.17(b)(iv)	Rigging screw	Yes	Yes	NO.	1
M440.17(b)(ix)	Locating peg (6mmx25mm galv bolt and nut)	Yes	Yes	NO.	1
M440.17(b)(v)	Safety check rope	Yes	Yes	NO.	1
M440.17(b)(vi)	Rope connection	Yes	Yes	NO.	1
M440.17(b)(vii)	Line post "S" type	Yes	Yes	NO.	1
M440.17(b)(viii)	Deflection post "S" type	Yes	Yes	NO.	1
M440.17(b)(x)	Cap and reflective material (incl cable ties) Class 3 High intensity reflective material	Yes	Yes	NO.	1
M440.17(b)(xi)	Pre cast socket with galvanised sleeve	Yes	Yes	NO.	1
M440.17(b)(xii)	Excluder / dust cover	Yes	Yes	NO.	1
M440.17(b)(xiii)	End anchor frame "Z"	Yes	Yes	NO.	1
M440.17(b)(xiv)	Cast in situ anchor complete	Yes	Yes	NO.	1
M440.17(b)(xv)	Repair of Wire Rope Safety Fence	Yes	Yes	M	1
M440.17(c)	Placement of concrete barriers	No	No	None	1
M440.17(c)(i)	loading of barriers	Yes	Yes	M	1
M440.17(c)(ii)	off loading of barriers	Yes	Yes	M	1
M440.17(c)(iii)	Leveling and placing of barriers in position	Yes	Yes	M	1
M440.17(c)(iv)	Tieing barriers together (Doweling)	Yes	Yes	NO.	1
M440.17(c)(v)	Overhaul for transport barriers	Yes	Yes	M/KM	1
M450	DAZZLE SCREEN ERECTION AND REPLACEMENT	No	No	None	1
M450.01	Supply and erection of dazzle screens	No	No	None	1
M450.01(a)	Metal	Yes	Yes	M	1
M450.01(b)	Timber	Yes	Yes	M	1
M450.02	Supply and erection of dazzle screen supporting posts	No	No	None	1
M450.02(a)	Metal	Yes	Yes	NO.	1
M450.02(b)	Timber	Yes	Yes	NO.	1
M450.03	Removal of damaged dazzle screens and supporting posts	Yes	Yes	M	1
M460	ROAD MARKINGS	No	No	None	1
M460.01	Road-marking paint:	No	No	None	1
M460.01(a)	White lines (broken or unbroken) (width of line indicated)	No	No	None	1
M460.01(a)(i)	100mm wide	Yes	Yes	KM	1
M460.01(a)(ii)	150mm wide	Yes	Yes	KM	1
M460.01(a)(iii)	200mm wide	Yes	Yes	KM	1
M460.01(a)(iv)	300mm wide	Yes	Yes	KM	1
M460.01(a)(v)	500mm wide	Yes	Yes	KM	1
M460.01(b)	Yellow lines (broken or unbroken) (width of line indicated)	No	No	None	1
M460.01(b)(i)	100mm Wide	Yes	Yes	KM	1
M460.01(b)(ii)	150mm Wide	Yes	Yes	KM	1
M460.01(b)(iii)	300mm wide	Yes	Yes	KM	1

M460.01(c)	Red lines (broken or unbroken) (width of line indicated)	No	No	None	1
M460.01(c)(i)	100mm wide	Yes	Yes	KM	1
M460.01(c)(ii)	150mm wide	Yes	Yes	KM	1
M460.01(c)(iii)	300mm wide	Yes	Yes	KM	1
M460.01(d)	White lettering and symbols	Yes	Yes	M2	1
M460.01(e)	Red lettering and symbols	Yes	Yes	M2	1
M460.01(f)	Transverse lines, painted island and arrestor bed markings (any colour)	Yes	Yes	M2	1
M460.02	Retro-reflective road-marking paint:	No	No	None	1
M460.02(a)	White lines (broken or unbroken) (width of line indicated)	No	No	None	1
M460.02(a)(i)	100mm wide	Yes	Yes	KM	1
M460.02(a)(ii)	150mm wide	Yes	Yes	KM	1
M460.02(a)(iii)	200mm wide	Yes	Yes	KM	1
M460.02(a)(iv)	300mm wide	Yes	Yes	KM	1
M460.02(a)(v)	500mm wide	Yes	Yes	KM	1
M460.02(b)	Yellow lines (broken or unbroken) (width of line indicated)	No	No	None	1
M460.02(b)(i)	100mm Wide	Yes	Yes	KM	1
M460.02(b)(ii)	150mm Wide	Yes	Yes	KM	1
M460.02(b)(iii)	300mm wide	Yes	Yes	KM	1
M460.02(c)	Red lines (broken or unbroken) (width of line indicated)	No	No	None	1
M460.02(c)(i)	100mm wide	Yes	Yes	KM	1
M460.02(c)(ii)	150mm wide	Yes	Yes	KM	1
M460.02(c)(iii)	300mm wide	Yes	Yes	KM	1
M460.02(d)	White lettering and symbols	Yes	Yes	M2	1
M460.02(e)	Red lettering and symbols	Yes	Yes	M2	1
M460.02(f)	Transverse lines, painted island and arrestor bed markings (any colour)	Yes	Yes	M2	1
M460.03	Plastic road marking material (specify particulars)	No	No	None	1
M460.03(a)	White lines (broken or unbroken) (width of line indicated)	No	No	None	1
M460.03(a)(i)	100mm wide	Yes	Yes	KM	1
M460.03(a)(ii)	150mm wide	Yes	Yes	KM	1
M460.03(a)(iii)	200mm wide	Yes	Yes	KM	1
M460.03(a)(iv)	300mm wide	Yes	Yes	KM	1
M460.03(a)(v)	500mm wide	Yes	Yes	KM	1
M460.03(b)	Yellow lines (broken or unbroken) (width of line indicated)	No	No	None	1
M460.03(b)(i)	100mm Wide	Yes	Yes	KM	1
M460.03(b)(ii)	150mm Wide	Yes	Yes	KM	1
M460.03(b)(iii)	300mm wide	Yes	Yes	KM	1
M460.03(c)	Red lines (broken or unbroken) (width of line indicated)	No	No	None	1
M460.03(c)(i)	100mm wide	Yes	Yes	KM	1
M460.03(c)(ii)	150mm wide	Yes	Yes	KM	1
M460.03(c)(iii)	300mm wide	Yes	Yes	KM	1
M460.03(d)	White lettering and symbols	Yes	Yes	M2	1
M460.03(e)	Red lettering and symbols	Yes	Yes	M2	1
M460.03(f)	Transverse lines, painted island and arrestor bed markings (any colour)	Yes	Yes	M2	1

M460.04	Setting out and pre-marking the lines (excluding traffic- island markings, lettering and symbols)	Yes	Yes	KM	1	Project Specific
M460.05	Removal of existing, temporary or permanent road markings by:	No	No	None	1	
M460.05(a)	Sandblasting	Yes	Yes	M2	1	
M460.05(b)	Overpainting as temporary measure	Yes	Yes	M2	1	
M460.06	Road markings:	No	No	None	1	
M460.06(a)	Road markings:	No	No	PROV SUM	1	
M460.06(b)	The Contractors overhead charges and profit in respect of sub-item M460.06(a)	No	No	%	1	
M470	MAINTENANCE OF LAY-BYES AND REST AREAS	No	No	None	1	
M470.01	Maintenance of lay-byes and rest areas	No	No	None	1	
M470.01(a)	Maintenance of lay-byes and rest areas	No	No	PROV SUM	1	
M470.01(b)	The Contractors overhead charges and profit in respect of sub-item M470.01(a)	No	No	%	1	
M480	ELECTRICAL FACILITIES	No	No	None	1	
M480.01	Installation/Maintenance/Security of electrical facilities	No	No	None	1	
M480.01(a)	Installation, maintenance and security of electrical facilities	No	No	PROV SUM	1	
M480.01(b)	Overhead charges and profit in respect of sub-item M480.01(a)	No	No	%	1	
M510	GENERAL EROSION PROTECTION	No	No	None	1	
M510.01	Stone pitching	No	No	None	1	
M510.01(a)	Plain pitching	No	No	None	1	
M510.01(a)(i)	Method 1	Yes	Yes	M2	1	
M510.01(a)(ii)	Method 2	Yes	Yes	M2	1	
M510.01(b)	Grouted pitching	Yes	Yes	M2	1	
M510.01(c)	Wired-and-grouted pitching	Yes	Yes	M2	1	
M510.01(d)	Grouted pitching on a concrete bed (total thickness indicated)	Yes	Yes	M2	1	Project Specific
M510.02	Riprap	No	No	None	1	
M510.02(a)	Packed riprap (critical mass of stone indicated)	Yes	Yes	M3	1	
M510.02(b)	Dumped riprap (critical mass of stone indicated)	Yes	Yes	M3	1	
M510.02(c)	Filter backing	No	No	None	1	
M510.02(c)(i)	Crushed stone	Yes	Yes	M3	1	
M510.02(c)(ii)	Filter sand	Yes	Yes	M3	1	
M510.02(d)	Synthetic-fibre filter fabric (type, class and grade stated)	Yes	Yes	M2	1	
M510.03	Foundations	No	No	None	1	
M510.03(a)	Excavation of foundation trenches	Yes	Yes	M3	1	
M510.03(b)	Concrete foundations	Yes	Yes	M3	1	
M510.04	Stone masonry walls	No	No	None	1	
M510.04(a)	Plain packed stone	Yes	Yes	M3	1	
M510.04(b)	Cement-mortared stone walls	Yes	Yes	M3	1	
M510.05	Precast concrete block retaining walls	No	No	None	1	
M510.05(a)	Precast concrete block retaining walls	Yes	Yes	PROV SUM	1	

M510.05(b)	Overhead charges and profit in respect of subitem M510.05(a)	Yes	Yes	%	1
M510.06	Concrete paving and block paving	No	No	None	1
M510.06(a)	Cast in situ concrete paving (Class of concrete and thickness of pitching indicated)	Yes	Yes	M2	1
M510.06(b)	Segmented block paving (type and thickness indicated)	Yes	Yes	M2	1
M510.06(c)	Prefabricated concrete grass blocks	Yes	Yes	M2	1
M510.06(d)	Prefabricated concrete paving blocks for sidewalk pavement (thickness indicated)	Yes	Yes	M2	1
M510.07	Concrete edge beams	Yes	Yes	M3	1
M510.08	Spraying of vegetation destroyer and ant poison	No	No	None	1
M510.08(a)	Herbicide	No	No	None	1
M510.08(a)(i)	Selective (contractor to specify brand name)	Yes	Yes	litre	1
M510.08(a)(ii)	Non selective (contractor to specify brand name)	Yes	Yes	litre	1
M510.08(b)	Ant poison (Contractor to specify brand name)	Yes	Yes	litre	1
M510.09	Biodegradable Fabric	No	No	None	1
M510.09(a)	Biodegradable woven fabric, jute yarn	Yes	Yes	PROV SUM	1
M510.09(b)	Overhead charges and profit in respect of subitem M510.09(a)	Yes	Yes	%	1
M520	GABION PROTECTION	No	No	None	1
M520.01	Foundation trench excavation and backfilling	No	No	None	1
M520.01(a)	In solid rock (material which requires blasting)	Yes	Yes	M3	1
M520.01(b)	In all other classes of material	Yes	Yes	M3	1
M520.02	Surface preparation for bedding the gabions	Yes	Yes	M2	1
M520.03	Gabions	No	No	None	1
M520.03(a)	Gabion baskets (specify size of basket and mesh indicated)	Yes	Yes	M3	1
M520.03(b)	PVC-coated gabion baskets (specify size of basket and mesh)	Yes	Yes	M3	1
M520.03(c)	Gabion mattresses (specify depth of mattress, mesh size and diaphragm spacing indicated)	Yes	Yes	M3	1
M520.03(d)	PVC-coated gabion mattresses (specify depth of mattress, mesh size and spacing of diaphragm)	Yes	Yes	M3	1
M520.04	Geotextile (specify type and grade)	Yes	Yes	M2	1
M610	GENERAL AND SHOULDER MOW	No	No	None	1
M610.01	Initial general mow - non performance based	No	No	None	1
M610.01(a)	Reserve with dual carriageway (State section and km distance incl. I/C)	No	No	None	1
M610.01(a)(i)	State section and km distance incl. I/C	Yes	Yes	Is	1
M610.01(b)	Reserve with single carriageway (State section and km distance incl. I/C)	No	No	None	1

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M610.01(b)(i)	State section and km distance incl. I/C	Yes	Yes	Is	1
M610.02	Initial general mow - performance based	No	No	None	1
M610.02(a)	Reserve with dual carriageway (State section and km distance incl. I/C)	No	No	None	1
M610.02(a)(i)	State section and km distance incl. I/C	Yes	Yes	Is	1
M610.02(b)	Reserve with single carriageway (State section and km distance incl. I/C)	No	No	None	1
M610.02(b)(i)	State section and km distance incl. I/C	Yes	Yes	Is	1
M610.03	General mowing (non-performance based)	No	No	None	1
M610.03(a)	Reserve with dual carriageway (State section and km distance incl. I/C)	No	No	None	1
M610.03(a)(i)	State section and km distance incl. I/C	Yes	Yes	NO.	1
M610.03(b)	Reserve with single carriageway (State section and km distance incl. I/C)	No	No	None	1
M610.03(b)(i)	State section and km distance incl. I/C	Yes	Yes	NO.	1
M610.04	General mow - performance based	No	No	None	1
M610.04(a)	Reserve with dual carriageway (State section and km distance incl. I/C)	No	No	None	1
M610.04(a)(i)	State section and km distance incl. I/C	Yes	Yes	MONTH	1
M610.04(b)	Reserve with single carriageway (State section and km distance incl. I/C)	No	No	None	1
M610.04(b)(i)	State section and km distance incl. I/C	Yes	Yes	MONTH	1
M610.04(c)	Grass cutting of 5km sections	Yes	Yes	MONTH	1
M610.05	Initial shoulder mow - non - performance based	No	No	None	1
M610.05(a)	Reserve with dual carriageway (State section and km distance incl. I/C)	No	No	None	1
M610.05(a)(i)	State section and km distance incl. I/C	Yes	Yes	Is	1
M610.05(b)	Reserve with single carriageway (State section and km distance incl. I/C)	No	No	None	1
M610.05(b)(i)	State section and km distance incl. I/C	Yes	Yes	Is	1
M610.06	Initial shoulder mow - performance based	No	No	None	1
M610.06(a)	Reserve with dual carriageway (State section and km distance incl. I/C)	No	No	None	1
M610.06(a)(i)	State section and km distance incl. I/C	Yes	Yes	Is	1
M610.06(b)	Reserve with single carriageway (State section and km distance incl. I/C)	No	No	None	1
M610.06(b)(i)	State section and km distance incl. I/C	Yes	Yes	Is	1
M610.07	Shoulder mow - non-performance based	No	No	None	1
M610.07(a)	Reserve with dual carriageway (State section and km distance incl. I/C)	No	No	None	1
M610.07(a)(i)	State section and km distance incl. I/C	Yes	Yes	NO.	1
M610.07(b)	Reserve with single carriageway (State section and km distance incl. I/C)	No	No	None	1
M610.07(b)(i)	State section and km distance incl. I/C	Yes	Yes	NO.	1
M610.08	Shoulder mow - performance based	No	No	None	1

M610.08(a)	Reserve with dual carriageway (State section and km distance incl. I/C)	No	No	None	1
M610.08(a)(i)	State section and km distance incl. I/C	Yes	Yes	MONTH	1
M610.08(b)	Reserve with single carriageway (State section and km distance incl. I/C)	No	No	None	1
M610.08(b)(i)	State section and km distance incl. I/C	Yes	Yes	MONTH	1
M611	INSTRUCTED GENERAL AND SHOULDER MOW	No	No	None	1
M611.01	Mowing of designated and additional areas- non-performance based	Yes	Yes	None	1
M611.01(a)	Reserve with dual carriageway (State section and km distance incl. I/C)	Yes	Yes	None	1
M611.01(a)(i)	State section and km distance incl. I/C	Yes	Yes	NO.	1
M611.01(b)	Reserve with single carriageway (State section and km distance incl. I/C)	Yes	Yes	None	1
M611.01(b)(i)	State section and km distance incl. I/C	Yes	Yes	NO.	1
M611.01(b)(vii)	Sight triangles at intersections, road signs, guardrails and marker boards	Yes	Yes	NO.	1
M611.02	Mowing of designated areas - performance based	No	No	None	1
M611.02(a)	Reserve with dual carriageway (State section and km distance incl. I/C)	No	No	None	1
M611.02(a)(i)	State section and km distance incl. I/C	Yes	Yes	MONTH	1
M611.02(b)	Reserve with single carriageway (State section and km distance incl. I/C)	No	No	None	1
M611.02(b)(i)	State section and km distance incl. I/C	Yes	Yes	MONTH	1
M611.03	Mowing of additional areas	No	No	None	1
M611.03(a)	Ad-hoc areas	Yes	Yes	M2	1
M611.03(b)	Rest Areas	Yes	Yes	HA	1
M611.03(c)	Fence line	No	No	None	1
M611.03(c)(i)	1,0m wide	Yes	Yes	KM	1
M611.03(c)(ii)	5,0m wide	Yes	Yes	KM	1
M611.03(d)	1,0m wide either side of concrete drains and pedestrian path	Yes	Yes	KM	1
M611.03(e)	Mowing of additional SANRAL properties		Yes	HA	1
M620	CHEMICAL CONTROL OF UNDESIRABLE VEGETATION	No	No	None	1
M620.01	Annual chemical eradication of undesirable vegetation	No	No	None	1
M620.01(a)	Reserve with dual carriageway (State section and km distance incl. Interchanges)	Yes	Yes	None	1
M620.01(a)(i)	State section and km distance incl. I/C	Yes	Yes	NO.	1
M620.01(b)	Reserve with single carriageway (State section and km distance incl. Interchanges)	No	No	None	1
M620.01(b)(i)	State section and km distance incl. I/C	Yes	Yes	NO.	1
M620.01(c)	Chemical eradication of undesirable vegetation	No	No	PROV SUM	1

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M620.01(d)	The Contractors overhead charges and profit in respect of sub-item M620.01(c)	No	No	%	1
M620.02	Additional chemical eradication of undesirable vegetation and control of vegetation growth on instruction from the Engineer	No	No	None	1
M620.02(a)	Isolated areas	Yes	Yes	M2	1
M620.02(b)	Dense areas (areas more than 20% infested)	Yes	Yes	HA	1
M620.02(c)	Shoulder weedspray	Yes	Yes	KM	1
M620.02(d)	Extra over sub-item M620.02 (c) under guardrails	Yes	Yes	KM	1
M620.02(e)	Between road reserve fence and neighbouring solid wall	Yes	Yes	M2	1
M620.02(f)	Around road signs, marker boards and traffic counting stations	Yes	Yes	None	1
M620.02(f)(i)	Road reserve with dual carriageway(State section and km distance incl. Interchanges)	Yes	Yes	NO.	1
M620.02(f)(ii)	Road reserve with single carriageway(State section and km distance incl. Interchanges)	Yes	Yes	NO.	1
M620.02(g)	Openings, cracks and jointson concrete channels, lay-byes and block paved areas, and joints between the road pavement and concrete channels	Yes	Yes	None	1
M620.02(g)(i)	Road reserve with dual carriageway(State section and km distance incl. Interchanges)	Yes	Yes	None	1
M620.02(g)(ii)	Road reserve with single carriageway(State section and km distance incl. Interchanges)	Yes	Yes	None	1
M630	REMOVAL OF UNDESIRABLE VEGETATION: PHYSICAL ERADICATION	No	No	None	1
M630.01	Eradication of undesired vegetation	Yes	Yes	None	1
M630.01(a)	Initial eradication	Yes	Yes	None	1
M630.01(a)(i)	Undesirable vegetation and trees with a girth of 0 to 150mm (specify section and km distance incl interchanges)	Yes	Yes	Is	1
M630.01(a)(ii)	Trees with a girth of 151mm to 500mm (specify section and km distance incl interchanges)	Yes	Yes	Is	1
M630.01(b)	Annual Eradication (specify section and km distance including interchanges)	Yes	Yes	NO.	1
M630.02	Tree felling on instruction from the Engineer	No	No	None	1
M630.02(a)	Girth exceeding 150 mm to 500 mm	Yes	Yes	NO.	1
M630.02(b)	Girth exceeding 500 mm up to 1 000 mm	Yes	Yes	NO.	1
M630.02(c)	Girth exceeding 1 000 mm up to 2 000 mm	Yes	Yes	NO.	1
M630.02(d)	Girth exceeding 2 000 mm up to 4 000 mm	Yes	Yes	NO.	1

M630.02(e)	Girth exceeding 4 000 mm	Yes	Yes	NO.	1
M630.03	Burning of fire breaks per operation	No	No	None	1
M630.03(a)	5m wide fire breaks in median	Yes	Yes	None	1
M630.03(a)(i)	State section and km distance incl. I/C	Yes	Yes	NO.	1
M630.03(b)	5m wide fire breaks from edge of road surface to road reserve fence	No	No	None	1
M630.03(b)(i)	State section and km distance incl. I/C	Yes	Yes	NO.	1
M630.03(c)	5m wide fire breaks next to road reserve fence	Yes	Yes	KM	1
M630.04	Additional eradication of undesired vegetation as instructed by the Engineer	Yes	Yes	HA	1
M640	MAINTENANCE AND ESTABLISHMENT OF PLANTS, TREES AND SHRUBS	No	No	None	1
M640.01	Hoeing around trees, shrubs and hedges	No	No	None	1
M640.01(a)	Trees, shrubs and hedges up to 20 m apart	Yes	Yes	NO.	1
M640.01(b)	Trees, shrubs and hedges between 20 m and 100 m apart	Yes	Yes	NO.	1
M640.01(c)	Trees, shrubs and hedges exceeding 100 m apart	Yes	Yes	NO.	1
M640.02	Trimming of shrubs and hedges	No	No	None	1
M640.02(a)	Annual trimming of shrubs and hedges	Yes	Yes	None	1
M640.02(a)(i)	Reserve with dual carriageway (State section and km distance incl. Intersections)	Yes	Yes	NO.	1
M640.02(a)(ii)	Reserve with single carriageway (State section and km distance incl. intersections)	Yes	Yes	NO.	1
M640.03	Preparing plant holes	No	No	None	1
M640.03(a)	Trees	Yes	Yes	NO.	1
M640.03(b)	Shrubs and hedge plants	Yes	Yes	NO.	1
M640.04	Supply of trees, shrubs and hedge plants	No	No	None	1
M640.04(a)	Supply of trees, shrubs and hedge plants	Yes	Yes	PROV SUM	1
M640.04(b)	The Contractors overhead charges and profit in respect of sub-item M640.04(a)	Yes	Yes	%	1
M640.05	Watering of trees, shrubs and grass	Yes	Yes	KL	1
M640.06	Trimming of trees on instruction of the Engineer	Yes	Yes	NO.	1
M650	ESTABLISHMENT OF GRASS	No	No	None	1
M650.01	Trimming for grassing	No	No	None	1
M650.01(a)	Machine trimming	Yes	Yes	M2	1
M650.01(b)	Hand trimming	Yes	Yes	M2	1
M650.02	Loosening of topsoil	No	No	None	1
M650.02(a)	Ripping	Yes	Yes	HA	1
M650.02(b)	Ploughing for loosening topsoil	Yes	Yes	HA	1
M650.03	Topsoil placing	No	No	None	1
M650.03(a)	Flat areas	Yes	Yes	M3	1
M650.03(b)	Slopes	Yes	Yes	M3	1
M650.04	Overhaul on material hauled in excess of 1,0 km	Yes	Yes	M3-km	1

Project Specific

M650.05	Chemical fertiliser and/or soil improvement material for grassing (types indicated)	Yes	Yes	ton	1	Project Specific
M650.06	Removal of existing vegetation from slopes before sodding	Yes	Yes	M2	1	
M650.07	Grassing	No	No	None	1	
M650.07(a)	Grass runners (type of grass indicated)	Yes	Yes	M2	1	
M650.07(b)	Sodding	No	No	None	1	
M650.07(b)(i)	Nursery sods (type of grass indicated)	Yes	Yes	M2	1	
M650.07(b)(ii)	Veld sods	Yes	Yes	M2	1	
M650.07(c)	Hydro seeding and hand sowing	No	No	None	1	
M650.07(c)(i)	Providing an approved seed mixture for hydro seeding or hand sowing	Yes	Yes	KG	1	
M650.07(c)(ii)	Hydro seeding	Yes	Yes	HA	1	
M650.07(c)(iii)	Hand sowing (labour-intensive)	Yes	Yes	M2	1	
M710	EMERGENCY STANDBY TEAM	No	No	None	1	
M710.01	Emergency standby	No	No	None	1	
M710.01(a)	Emergency team on standby	Yes	Yes	MONTH	1	
M710.01(b)	Emergency equipment on standby	Yes	Yes	MONTH	1	
M710.01(c)	Call out cost	Yes	Yes	KM	1	
M720	ALL-EMERGENCY NORMALISATION	No	No	None	1	
M720.01	All-emergency normalisation	No	No	None	1	
M720.01(a)	Accident restoration and cleaning of spillages	Yes	Yes	HOUR	1	
M720.01(b)	Sheltering of animals	Yes	Yes	HOUR	1	
M720.01(c)	Fire fighting	Yes	Yes	HOUR	1	
M720.01(d)	Safeguarding of dangerous area	Yes	Yes	HOUR	1	
M720.02	Procurement of materials	No	No	None	1	
M720.02(a)	Procurement of materials	No	No	PROV SUM	1	
M720.02(b)	The contractors overhead charges and profit in respect of sub-item	No	No	%	1	
M810	SMALL REPAIRS OF STRUCTURES	No	No	None	1	
M810.01	Minor repairs to structures	No	No	None	1	
M810.01(a)	Minor repairs to structures	No	No	PROV SUM	1	
M810.01(b)	The Contractor's overhead charges and profit in respect of sub-item M810.01 (a)	No	No	%	1	
M910	DAYWORKS SCHEDULE	No	No	None	1	Project Specific
M910.01	Labour during normal working hours	No	No	None	1	
M910.01(a)	Unskilled	Yes	Yes	HOUR	1	
M910.01(b)	Semi-skilled	Yes	Yes	HOUR	1	
M910.01(c)	Skilled	Yes	Yes	HOUR	1	
M910.01(d)	Team Leader (Ganger)	Yes	Yes	HOUR	1	
M910.01(e)	Flagmen	Yes	Yes	HOUR	1	
M910.02	Labour outside normal working hours	No	No	None	1	
M910.02(a)	Outside normal working hours and Saturdays	No	No	None	1	
M910.02(a)(i)	Unskilled	Yes	Yes	HOUR	1	
M910.02(a)(ii)	Semi-skilled	Yes	Yes	HOUR	1	
M910.02(a)(iii)	Skilled	Yes	Yes	HOUR	1	
M910.02(a)(iv)	Team Leader (Ganger)	Yes	Yes	HOUR	1	
M910.02(a)(v)	Flagmen	Yes	Yes	HOUR	1	
M910.02(b)	Sundays and public holidays	No	No	None	1	

M910.02(b)(i)	Unskilled	Yes	Yes	HOUR	1
M910.02(b)(ii)	Semi-skilled	Yes	Yes	HOUR	1
M910.02(b)(iii)	Skilled	Yes	Yes	HOUR	1
M910.02(b)(iv)	Team Leader (Ganger)	Yes	Yes	HOUR	1
M910.02(b)(v)	Flagmen	Yes	Yes	HOUR	1
M910.03	Equipment and Transport	No	No	None	1
M910.03(a)	Tipper Trucks	No	No	None	1
M910.03(a)(i)	3 to 5 ton capacity	Yes	Yes	HOUR	1
M910.03(a)(ii)	More than 5 ton capacity	Yes	Yes	HOUR	1
M910.03(b)	Loader (0,5 m3) bucket	Yes	Yes	HOUR	1
M910.03(c)	Grader(CAT 140G or similar)	Yes	Yes	HOUR	1
M910.03(d)	Compactor (Bomag BW 90 or similar)	Yes	Yes	HOUR	1
M910.03(e)	Water truck (5 000 l)	Yes	Yes	HOUR	1
M910.03(f)	Mechanical broom	Yes	Yes	HOUR	1
M910.03(g)	Tractor-trailer combination (43 kW, 3 ton min.)	Yes	Yes	HOUR	1
M910.03(h)	Suitable truck/bus for transporting labourers (specify size)	Yes	Yes	HOUR	1
M910.03(i)	Safety vehicle for pre-marking purposes	Yes	Yes	HOUR	1
M910.03(j)	Compressor (air) including hoses and tools (specify size)	Yes	Yes	HOUR	1
M910.03(k)	Dewatering pump including generators and accessories (specify size)	Yes	Yes	HOUR	1
M910.03(l)	Mobile electric welding sets and accessories (specify size)	Yes	Yes	HOUR	1
M910.03(m)	Cutting torch with mobile electric and oxy acetylene installation	Yes	Yes	HOUR	1
M910.03(n)	Mobile concrete mixers (specify size)	Yes	Yes	HOUR	1
M910.03(o)	Flat bed truck (specify size)	Yes	Yes	HOUR	1
M910.03(p)	Light delivery vehicle (LDV)	Yes	Yes	HOUR	1
M910.03(q)	Centremount cranes (specify size)	Yes	Yes	HOUR	1
M910.03(r)	Portable generator set (6.5 KVa)	Yes	Yes	HOUR	1
M910.03(s)	TLB	No	No	HOUR	1
M910.03(t)	Bobcat	No	No	HOUR	1
M910.03(u)	Excavator (2-6 ton pneumatic tyres)	Yes	Yes	HOUR	1
M910.03(v)	Excavator (18-22 ton tracked)	Yes	Yes	HOUR	1
M910.03(w)	Sky-jack 5 m	Yes	Yes	HOUR	1
M910.03(x)	Establishment of loader (bucket 0,5 cubic metre) to site	Yes	Yes	NO.	1
M910.03(y)	Establishment of Grader (CAT 140 G or similar)	Yes	Yes	NO.	1
M910.03(z)	Establishment of Excavator (18-22 ton tracked)	Yes	Yes	NO.	1
M910.04	Procurement of materials	No	No	None	1
M910.04(a)	Procurement of materials The Contractors overhead charges and profit in respect of sub-item	Yes	Yes	PROV SUM	1
M910.04(b)	M910.04 (a)	Yes	Yes	%	1
M910.05	Extra over item M910.03 for establishment, within 24 hours of	No	No	None	1
M910.05(a)	Tipper Trucks	Yes	Yes	NO.	1
M910.05(a)(i)	3 to 5 ton capacity	Yes	Yes	NO.	1
M910.05(a)(ii)	More than 5 ton capacity	Yes	Yes	NO.	1

Project Specific

M910.05(b)	Dewatering pump including generators and accessories (specify size)	Yes	Yes	NO.	1	Project Specific
M910.05(c)	Water truck (5 000 l)	Yes	Yes	NO.	1	
M910.05(d)	TLB	Yes	Yes	NO.	1	
M910.05(e)	Bobcat	Yes	Yes	NO.	1	
M910.06	Repairs to the road network	No	No	None	1	
M910.06(a)	Repairs to the road network	Yes	Yes	PROV SUM	1	Project Specific
M910.06(b)	The Contractor's overhead charges and profit in respect of sub-item M910.06(a)	Yes	Yes	%	1	
M910.07	Minor road infrastructure	No	No	None	1	
M910.07(a)	Minor Infrastructure	Yes	Yes	PROV SUM	1	
M910.07(b)	The Contractors overhead charges and profit in respect of subitem M910.07(a)	Yes	Yes	%	1	
M920	ALLOWANCE FOR SUBCONTRACTORS	No	No	None	1	Project Specific
M920.01	Additional costs for subcontractors	Yes	Yes	None	1	
M920.01(a)	Establishment on site and general obligations of subcontracts	Yes	Yes	PROV SUM	1	
M920.02	Construction Works by Targeted Enterprises	Yes	Yes	None	1	
M920.02(a)	Payments associated with the construction works carried out by Targeted Enterprise subcontractors of all levels of contractor grading designation appointed in terms of Part D	Yes	Yes	Prime Cost	1	
M920.02(b)	Handling costs and profit in respect of payment associated with subitem M920.02(a)	Yes	Yes	%	1	
TOTAL EXCLUDING VAT						
VAT						
TOTAL INCLUDING VAT						

PART C3: SCOPE OF WORK

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C3 SCOPE OF WORKS

C3.1 PROJECT DESCRIPTION

C3.1.1 SCOPE

This section provides the description of the project and the general requirements for executing the work. The work required is the routine road maintenance of the national road.

Attention is drawn to clause 4.4 of the Particular Conditions of Contract which states “The procurement and appointment of all subcontractors shall follow the process as stipulated in Part D: Stakeholder and community liaison, and targeted labour and targeted Enterprises utilisation and development. No subcontracting outside this process will be allowed.”

C3.1.2 DESCRIPTION OF THE WORKS

C3.1.2.1 Description of site

(a) Location of site

The general locality of the site will be indicated on award.

The site office shall be in confirmed on Award

The term “Site” as defined in the FIDIC Conditions of Contract for Construction, 1999, will comprise the road reserve of existing National Route.

This includes all on-ramps and off-ramps forming part of an interchange, as well as overpasses and underpasses within the national road reserve up to the limits of the SANRAL’s responsibility whether or not it has direct access of the National Road.

The “Site” will also include all road signs within 500 metres of an intersection or interchange, which form part of the road signs layout for the national road.

The “Site” will also include land not provided by the Employer, where equipment and/or materials for use in the permanent works of the contract can be stored and/or stockpiled with the proviso that the land selected for this purpose be approved by the Engineer. The Contractor must make the Contractor’s own arrangements for the use of such land and must obtain written approval from the owner(s) concerned. Possible camp sites will be indicated on Award.

The “Site” will also include all SANRAL owned land in the vicinity of this contract as provided by the Employer in the table below.

The nature of work to be carried out on these properties included but are not limited to:

- grass cutting & bush clearing
- Cutting and maintaining fire breaks
- fence repairs
- monitoring for illegal occupation and reporting to the Route Manager
- monitoring for illegal rubbish dumping and removal
- monitoring for illegal adverts and removal.

(b) Access to the site

Access to the site shall be from established interchanges, intersections and approved accesses.

C3.1.2.2 Nature of work

The description of the project contained in this section is merely an outline of the contract works and shall not limit the work to be carried out by the Contractor under this contract. Approximate quantities of each type of work to be carried out in accordance with the contract will be confirmed on award.

The nature of work to be carried out under this contract includes:

- Establishment of camps on site
- Inspection of the road, structures, waterways, cutting/fill slopes and night inspections
- Accommodation of traffic
- Pavement layers repairs
- Crack sealing and patching of asphalt pavements
- Repair edge breaks and edge drops
- Gravel shoulder repairs
- Repair of slope failures and washaways
- Stabilisation of slopes
- Construction of drainage works to combat erosion
- Cleaning of all drainage structures, including removal of grass and debris from grids, as well as clearing bridge drainage ports and scuppers
- Repairing damaged fencing
- Clearing refuse from the road reserve, lay-byes and interchanges
- Repairing damaged road signs
- Cleaning of road signs
- Installation and replacement of roadstuds
- Repairing damaged guardrails and balustrades
- Road marking
- Regular mowing of grass in the road reserve including the median and the removal of grass cuttings
- Application of herbicide on road edges and around road signs
- Eradication of weeds and undesirable plant growth
- Burning or cutting of firebreaks and assistance with veld fires
- Maintenance of trees and shrubs
- Supply and spreading of topsoil
- Emergency assistance
- Removal of wrecks and abandoned vehicles
- Minor road works done under daywork

The contractor shall be required to attend meetings relating to the Works and the site, inter alia Road Incident Management System, Disaster Management Forum, Project Liaison Committee, Farmers' Association, and Fire Protection Association.

C3.1.2.3 Detailed description of the project

The route description of the national route sections for which routine road maintenance will be provided by this contract, varies and is as follows:

- (i) Starts at km (*chainage*) and ends at km (*chainage*)
 - Type of carriageway = (*state dual or single*)
 - Surfacing = (*state type*)
 - Interchanges = (*number*)
 - Toll Plazas = (*number*)
 - Road reserve width = (*approx. range*) *excluding interchanges*
 - Median description = (*approx. range and type e.g. grass or concrete*)
- (ii) List of interchanges = (*state name, number and chainage*)
- (iii) List of Toll Plazas = (*state name, number and chainage*)

C3.1.2.4 Time for completion

The Time for Completion of the Works shall be project based and confirmed on award.

C3.1.3 DRAWINGS

The drawings issued in electronic format on a CD as part of the tender documents, shall be used for tender purposes only.

The Contractor will be issued with the contract drawings in electronic format on a CD. Any prints which the Contractor may require shall be at own cost.

Any information in the possession of the Contractor, which the Engineer requires to record as-built information, shall be supplied to the Engineer before a Taking-Over Certificate will be issued.

Only figured dimensions shall be used and drawings shall not be scaled unless so instructed by the Engineer. The Engineer will supply all figured dimensions omitted from the drawings.

C3.1.4 POWER SUPPLY AND OTHER SERVICES

The Contractor shall make the Contractor's own arrangements concerning the supply of electrical power and all other services. No direct payment will be made for the provision of electrical and other services. The cost thereof shall be deemed to be included in the rates and amounts tendered for the various items of work for which these services are required.

C3.1.5 CONSTRUCTION IN CONFINED AREAS

It may be necessary for the Contractor to work within confined areas. Except where provided for in the specifications, no additional payment will be made for work done in such confined areas. In certain instances, the width of the work to be undertaken may decrease to zero and the working space may be confined. The work method in such confined areas will be determined by the Contractor's constructional equipment.

However, the Contractor must note that measurement and payment will only be made in accordance with the authorised dimensions, irrespective of the method used for achieving these dimensions and that the tendered rates and amounts shall include full compensation for all special equipment and construction methods and for all difficulties encountered when working in confined areas and narrow widths, and at or around obstructions, and that no extra payment will be made nor will any claim for additional payment be considered in such cases.

C3.1.6 CONTRACTOR'S CAMP SITE

The Contractor shall provide a suitable site for the Contractor's camp and for accommodating the Contractor's labourers. The Contractor will provide, at the camp site, an office for the Engineer as specified.

C3.1.7 ADDITIONAL REQUIREMENTS FOR CONSTRUCTION ACTIVITIES

In addition to the requirements specified in the Standard Specifications, the Contractor shall adhere to the following requirements.

C3.1.7.1 Accommodation of traffic

Reference shall be made to the requirements shown on the drawings as well as to Section M0500 of the Standard Specifications where temporary traffic control measures and limitations regarding lane closures, work areas and the unoccupied spacing of such closures are detailed.

Any cost associated with the accommodation of traffic must be included in the relevant payment items.

C3.1.7.2 Crack sealing and pavement failure repairs

Crack sealing and pavement failure repairs shall be ordered by the Engineer as specified in Series M1000 of the Standard Specifications. Crack sealing shall normally be ordered in late winter or early spring before the summer rains, although further crack sealing may be required in summer.

The Contractor will be supplied with a schedule of work to be undertaken on the affected sections and the programming of the execution thereof is to be agreed with the Engineer.

C3.1.7.3 Construction of drainage works to combat erosion

The Engineer may instruct the Contractor to construct new drains or to repair drainage works damaged by stormwater. Under normal circumstances, this work will generally not require the use of specialist skills or equipment and will be limited to minor earthworks and concrete works.

C3.1.7.4 Cleaning of drainage structures

The Contractor shall clean concrete drainage structures to maintain the acceptance criteria as specified. The Engineer may order the cleaning of earth drainage channels.

C3.1.7.5 Clearing of the road reserve

The Contractor shall have sufficient resources available to clear the entire road reserve included in this contract, at least at the times and frequencies as specified in the Specifications.

The Engineer may order additional clearing during peak traffic periods, particularly during the months of July and December.

C3.1.7.6 Repairing damaged fencing, road signs, guardrails and balustrades,

On a regular basis, the Contractor shall inspect the site to check for damaged fencing, road signs and guardrails.

Damage to fencing, road signs guardrails and balustrades shall be reported to the Engineer who will instruct the action to be taken by the Contractor. Within thirty (30) days of the Commencement Date the contractor shall inspect all the guardrails to ensure that they have been correctly overlapped. A report on this shall be submitted to the Engineer.

The Contractor shall control all vegetation growth around road signs in such a way necessary to prevent any damage to the road signs due to veld fires. The Contractor shall replace all road signs damaged due to veld fires at the Contractor's own cost.

C3.1.7.7 Replacement of roadstuds

The Contractor shall only replace roadstuds, when and as instructed by the Engineer.

C3.1.7.8 Environmental requirements

Trees and shrubs established in landscaped areas of interchanges and in the road reserve may under no circumstances be disturbed without specific instruction from the Engineer for their removal. Trees and shrubs inadvertently destroyed by the Contractor shall be replaced with the equivalent at the Contractor's own cost.

Disposal of any bituminous-based material shall only be at an approved location and by means of an approved method, arranged beforehand with the Engineer. Bituminous binders shall not be disposed of on the Site but shall be returned to the supplier for disposal.

All waste shall be disposed of in terms of the applicable legislation.

Invasive and alien vegetation eradication control plans shall be drawn up and updated annually, in terms of applicable legislation.

Litter collected shall be recorded (by volume and mass) monthly and kept on file and shall be disposed of at an approved landfill site. Recycling of collected litter shall be undertaken where practicably possible.

C3.1.7.9 Mowing of grass

The mowing of grass shall be classified into shoulder mowing and general mowing.

C3.1.7.10 Fire breaks

The Contractor will be required to assist with the clearing and maintenance of fire breaks along the common boundaries with land owners along the route of the road in fire control areas, in terms of the Veld Fire Act, as described in the specifications or as directed by the Engineer.

C3.1.7.11 Maintenance and establishment of plants, trees, shrubs and grass

Top soiling and hydroseeding of sparse areas may be ordered by the Engineer as specified in Series M6000 of the Standard Specifications. If ordered, this work will normally be undertaken in early spring or late summer when mowing operations are not envisaged.

The Contractor will not be expected to handle individual areas on a piecemeal basis but will be supplied with a schedule of areas to be treated and be given an opportunity to agree a programme for this work with the Engineer. These comments are also applicable to the application of fertiliser and herbicides, and the planting of additional trees and shrubs.

Maintenance of trees and shrubs shall be undertaken. Such maintenance may include hoeing around trees and shrubs, trimming and watering. Additional watering of trees and shrubs may be ordered by the Engineer in dry periods and shall be paid for under the appropriate payment item.

C3.1.7.12 Emergency assistance

The emergency assistance shall normally be ordered in the event of natural and unnatural events in the road reserve or on the road surface. This can include accidents involving commercial or passenger vehicles, clearing of spillages, sheltering of animals, firefighting and safeguarding of dangerous areas.

The Contractor will also be required, in full liaison with and under the instruction of the relevant authority, to manage and co-ordinate the clearing of accident scenes so as to ensure that the road is reinstated to a safe condition.

C3.1.7.13 Daywork

Sub-clause 13.6 of the FIDIC Conditions of Contract for Construction, 1999, refers.

The Contractor shall tender the rates applicable to daywork, as provided for in the Bill of Quantities. These rates will be taken into account in the adjudication of tenders.

The tendered rates shall be considered to include full compensation for the work to be performed, including supervision of labour, all plant operators and other operating costs, overheads and profit. Hourly rates for transport and equipment shall apply to the actual number of hours for which the vehicles or equipment are required for a specific item of work, including travelling time if applicable.

The Contractor shall maintain a hard cover duplicate book on site for the purposes of recording daywork. The Contractor shall record the total time claimed under each relevant item of the Bill of Quantities and the applicable instruction of the Engineer and shall ensure that the total times claimed are agreed and signed daily by the Engineer's representative on site.

The Contractor shall not claim daywork for any work for which an applicable rate has been tendered or agreed to in writing by the Engineer.

The cost of materials used and paid for by the Contractor, as authorised by the Engineer, shall be reimbursed at net cost, exclusive of Value Added Tax, plus the percentage as tendered for the Contractor's overhead charges and profit.

In the event where no allowance has been made for a specific item in the Bill of Quantities, the Engineer may order daywork according to sub-clause 13.6 of the FIDIC Conditions of Contract for Construction, 1999.

C3.1.8 ALLOWANCE FOR OTHER CONTRACTORS AND ACCOMMODATION OF OTHER CONTRACTS

In addition to the requirements of clause 4.6 of the FIDIC Conditions of Contract for Construction, 1999 the Contractor must take note of the presence of other Contractors on the site and make allowances for them on the site. This may involve adapting the Contractor's programme to accommodate the work of other Contractors and ensuring access to their sites.

Although details of such contracts are not known it may include, *inter alia*, periodic maintenance, special maintenance, rehabilitation and upgrade contracts. Depending on the scope of works for these contracts, the Contractor may be relieved of his responsibilities on the relevant section of the site during the construction period only, and this may include a reduced scope of work on performance based items where applicable.

The contracts which may be implemented during the Time for Completion of this contract will be confirmed on award.

C3.1.9 PROGRAMME, RESTRICTION AND COMPLETION OF ACTIVITIES

This clause covers matters relating to the programme of work, restriction on certain maintenance activities, completion and responding time of specified activities, compliance with the specifications, and related delay damages and penalties.

C3.1.9.1 Programme

The Time for Completion of the Works shall be confirmed on award.

The Engineer will determine the extent and frequency of the work to be executed in terms of the contract, as certain activities are dependent upon the climatic conditions encountered during the period of the contract. The Engineer will agree on an programme of work per route section with the Contractor.

C3.1.9.2 Restriction on maintenance activities

Certain maintenance activities will be restricted on days with increased traffic flows. These days will be, for example, the day of school closure, over long weekends and public holidays. The Contractor must allow for these restrictions in his programme and no extension of time or claims in this regard will be considered.

Normal routine maintenance involving lane closures (except in the event of emergency normalisation) shall be restricted on the days and for the periods stated in Table C3.1.9/2.

TABLE C3.1.9/2: RESTRICTION ON MAINTENANCE ACTIVITIES

Day(s)	Activity to be restricted	Period of restriction
School closures	Lane closures, except in the event of emergency normalisation	From 12:00 on the day of closure until 07:00 on the following day
Easter weekend	Lane closures, except in the event of emergency normalisation	From 12:00 on Thursday until 07:00 on Tuesday

Long weekends and public holidays	Lane closures, except in the event of emergency normalisation	From 12:00 on the day preceding commencement of long weekend or public holiday until 07:00 on the day following the long weekend or public holiday
13 to 17 December and 2 to 8 January	Lane closures, except in the event of emergency normalisation	From 00:00 on the commencement date of the restriction until 24:00 on the last date of the restriction

C3.1.9.3 Completion time of specified activities and penalties

Generally, the maintenance activities covered by this contract will be on a continuous basis. However, certain specified activities are considered to be a priority or are critical, and it is a condition of contract that they shall be completed or responded to as specified, after receiving an instruction from the Engineer.

Should the Contractor fail to complete the specified activity or respond timeously, or comply with the specifications, he shall be liable for delay damages or a penalty as specified in Table C3.1.9/3. The delay damages or penalty that is applicable on work undertaken by subcontractors that qualify in terms of the definition, and which has been sublet according to the specifications for the tender process, shall be apportioned between the Contractor and subcontractor in the ratio of 50/50.

Definitions:

Completion time:

Completion time is defined as that period from the date on which an instruction is received by the Contractor from the Engineer, to the date of full completion.

Responding time:

Responding time is defined as that period from the time on which an instruction is received by the Contractor from the Engineer, to the time of reporting at the place of the required activity, by the designated standby supervisor and team.

These activities, specified times, delay damages, and including penalties for work not complying with the specifications, are indicated in Table C3.1.9/3.

Notes:

- (a) Indicated day means a calendar day.
- (b) There shall be no reduction of delay damages or penalty for partial completion of works.
- (c) Delay damages and penalties as specified in Table C3.1.9/3, as well as elsewhere in the Scope of Work shall be deducted from the amount A_c as defined in sub-clause 13.8 of the Particular Conditions of Contract, prior to multiplying the amount A_c by the Contract Price Adjustment Factor.
- (d) Payment of delay damages or a penalty shall not absolve the Contractor of any claims, or relieve the Contractor of any of his duties, obligations or responsibilities under the contract.

TABLE C3.1.9/3: SPECIFIED ACTIVITY PERIODS, DELAY DAMAGES AND PENALTIES

Activity	Completion time or inspection frequency	Responding time	Penalty for late responding	Penalty for late completion	Penalty for not to specification
Programme				R1000/day	
Route Patrol Services					
1. Not submitting daily reports	daily				R500/day
2. Equipment missing as specified	daily				R200/article
3. Temporary pothole repair	daily			R5000/pothole/day	
Accommodation of traffic					
1. Lane closure not to specification	inspection				R5000/closure
2. Sign not to specification	daily				R1000/sign
3. Late or no TMP plans					R500/day
Pavement layer repairs					
1. Mill and pave operation	Programme	14 days	R5000/day	R50,000/day	
Repair of potholes, edge breaks and surface failures					
Non-performance based criteria:					
1. Permanent repair of potholes and surface failures	7 days	1 day	R500/day	R5000/day	
2. Repair of edge breaks	Programme	1 day	R500/day	R500/metre/day	
Repair of slope failures and washaways	1 month	7 days	R500/day	R500/day	
Cleaning of waterway structures	2 weeks			R500/day	
Cleaning of prefabricated culverts	Instruction	2 days	R500/day	R5000/culvert/day	R5000/ culvert /day
Cleaning of concrete drains and culvert channels	Instruction	2 days	R500/day	R50/metre/day	R5000/section
Cleaning and maintenance of existing earth drains	Instruction	2 days	R500/day	R50/metre/day	
Edge build-up removal	Instruction	2 days	R500/day	R50/metre/day	R5000/section
Fence repairs					
No livestock	14 days	2 days	R1000/day	R5/metre/day	R5000/section
Livestock	2 days	1 day	R500/day	R10/metre/day	R5000/section
Urban environment	7 days	2 days	R500/day	R15/metre/day	R5000/section
Collection and removal of debris and litter	Programme			R500/day	50% of tendered rate per section plus the R500/day
Shoulder repairs	Programme			R500/day	
Erection and repair of permanent road traffic signs					
1. R-Series	2 days	1 day	R500/day	R500/sign/day	R 5000/sign
2. W-Series	2 days	1 day	R500/day	R500/sign/day	R 5000/sign
3. G-Series (after delivery)	21 days	4 days	R500/day/batch	R500/sign/day	R 5000/sign

Guardrail erection and maintenance					
1. Repair	7 days			R1000/incident/day	
2. Safeguard area		4 hours	R500/hour		
3. Overlap				R500/incident/day	
Controlling vegetation growth: Mowing and cutting					
1. Shoulder mowing	6 weeks			R500/km/day	R1000/section
2. General mowing	Programme 2 months			R500/km/day	R1000/section
3. Mowing operation more than 7.0 km ahead of labourers finishing behind	Inspection				R5000/incident
4. Mowing both sides of single carriageway	Inspection				R5000/incident
Emergency assistance					
1. Accident restoration and clearing of spillages		1 hour	R500/hour		
2. Sheltering of animals		1 hour	R500/hour		
3. Fire fighting		1 hour	R500/hour		
4. Safeguard of dangerous areas		1 hour	R5000/hour		
GENERAL					
1. OH&S Plan	As specified				R1000/incident
2. Quality Assurance System	As specified				R1000/incident
3. Other specified or programmed activity				R5000/day	
4. Any particular, routine or non-routine activity on instruction of the Engineer				R5000/day	
5. Appointment of subcontractors	Within 6 months of commencement of contract			R10000/day	
Environmental infringement					R1000/incident/day
Employing labour outside Targeted Area for the different contracts (1&2 CE and 3to 5CE)					R5000/person/day
No mentoring programme					R500/Subcontractor /day
TGDC subcontractor reporting	Monthly			R500/day	R500/day
Late Payment of Subcontractors				R10 000 / day / Subcontractor	

C3.1.10 LEGAL REQUIREMENTS

The following Acts and associated Regulations and Codes, as amended from time to time, are predominant amongst those which apply to the construction industry, and shall apply to the contract. They are listed here for reference purposes only:

- (i) Constitution of the Republic of South Africa, 1996 (Act No 108 of 1996);
- (ii) Public Finance Management Act, 1999 (Act No 1 of 1999);
- (iii) Preferential Procurement Policy Framework Act, 2000 (Act No 5 of 2000);

- (iv) Broad-Based Black Economic Empowerment Act, 2003 (Act No 53 of 2003); and
- (v) Construction Industry Development Board Act, 2000 (Act No 38 of 2000) and Regulations;
- (vi) Occupational Health and Safety Act, 1993 (Act No 85 of 1993) and all its Regulations;
- (vii) Compensation for Occupational Injuries and Diseases Act, 1993 (Act No 130 of 1993);
- (viii) rates for wages and conditions of labour agreed by the Bargaining Council for the Civil Engineering Industry in terms of the Labour Relations Act, 1995 (Act No 66 of 1995).
- (ix) National Water Act Act No 36 of 1998
- (x) National Veld And Forest Fire Act 101 OF 1998
- (xi) National Environmental Management: Biodiversity Act, No. 10 of 2004
- (xii) National Environmental Management: Waste Act 59 OF 2008
- (xiii) National Environmental Management: Integrated Coastal Management Act, No. 24 of 2008
- (xiv) National Environmental Management Act, Act No. 107, 1998
- (xv) Conservation Of Agricultural Resources Act 43 Of 1983
- (xvi) National Environmental Management: Air Quality Act, 2004 (Act No 39 of 2004)

In addition to the above, in terms of National Treasury Instruction No 3 of 2014/2015 with reference to the Public Finance Management Act, 1999 (Act No 1 of 1999) and Regulations, the Contractor and subcontractors are required to provide the Employer with written confirmation to access the SARS Electronic Tax Compliance Status (TCS) System to verify and continuously track the tax compliance status of all persons conducting business with the State.

C3.1.11 MANAGEMENT OF THE ENVIRONMENT

The Contractor shall be responsible for construction according to an Environmental Management Plan in terms of Section C3.3 of the Scope of Work.

The Contractor must take the utmost care to minimise the impact of his establishment and other construction activities on the environment and must adhere to the requirements as set out in Section C3.3 of the Scope of Work. Where the contractor fails to adhere to these requirements, the specifications in Section C3.3 provide the methodology of the remedy.

C3.1.12 TARGETED PROCUREMENT

The South African National Roads Agency SOC Limited (SANRAL) is committed to the implementation of Government's policies and in turn expects the same from its contractors. In order to comply with the objectives of its preferential procurement policy, SANRAL will utilise its targeted procurement procedure which is the process used to create a demand for the services and supplies of, or to secure the participation of, targeted enterprises in contracts.

Accordingly, it is a requirement of this project that the Contractor is familiar with the specifications that relate to the transformation of the construction industry through the following:

- (i) adherence to the policies and initiatives of the Government;
- (ii) employment of targeted enterprises;
- (iii) provide mentoring, guidance and assistance to subcontractor targeted enterprises;
- (iv) arrangement of engineering skills, entrepreneurial skills and generic skills training programmes for subcontractor targeted enterprises, for which provision has been made in the Bill of Quantities;
- (v) liaison with government institutions and community-based structures; and
- (vi) facilitating a wellness program for site employees and their relatives.

In this regard, Part D of the Scope of Work covers the Contractor's requirements in detail, as well as defining the procurements targets.

C3.1.13 OCCUPATIONAL HEALTH AND SAFETY

In terms of the Construction Regulation 2014, 5(1)(b) of the Occupational Health and Safety Act, 1993 (Act No 85 of 1993), the South African National Roads Agency SOC Limited, as the Employer, is required to compile a specification on health and safety for the project. Section C3.5 of the Scope of Work contains the specification that regulates the Contractor's construction methods to ensure health and safety of his employees, subcontractors and the public.

C3.1.14 CHANGES TO SCOPE OF WORK

It is a condition of this contract that the employer reserves the right to limit the total expenditure on the Works due to possible budget constraints.

C3.1.15 CONTRACTOR PERFORMANCE REPORTS

The Engineer is responsible for the completion of the contractor performance reports on behalf of the Employer. These reports will be completed monthly and on issuance of the Taking-Over Certificate.

The standard for contractor performance reports provides for a uniform and consistent method of assessment of the performance of the Contractor with respect to the following project parameters regarding the Contractor meeting its contractual obligations and achievement of targets:

- (i) time management;
- (ii) cost management;
- (iii) quality management;
- (iv) health and safety management;
- (v) management of site conditions; and
- (vi) management of subcontractors (including payment).

Each performance report will be discussed with the Contractor, who will be given an opportunity to comment on the assessment. The Engineer must respond to any issues raised by the Contractor in writing, and the Contractor's comments and the written response by the Engineer must form part of the contractor performance report. The contractor performance report will be signed off by the Employer.

The monthly contractor performance reports and other inputs from the Engineer will be used to monitor and evaluate the Contractor's performance throughout the contract.

The Contractor will be responsible for the submission of monthly performance reports of the subcontractors which will be used to monitor and evaluate the subcontractor's performance throughout

the contract. The Employer's standard evaluation template will be made available and should be used for these evaluations.

C3.1.16 INTEGRATED TRANSPORTATION INFORMATION SYSTEM

The Employer has developed a comprehensive information management tool called ITIS (Integrated Transportation Information System) to address all facets of its strategic and tactical planning, design, construction and maintenance of the entire road network. This provides support for the management tasks of the Employer and to allow the personnel to make technical decisions more quickly and efficiently.

ITIS is an integrated approach to the sharing and inter-relating of technical performance information for the Employer and relies on people following procedures to populate system with data. ITIS currently consist of the following platforms:

- ITIS Web – Web enabled portal providing online access to various functions, workflows and reports.
- ITIS Desktop – Offline data capture tool enabling the capture of information offline, validation and then synchronisation of data with the ITIS database.
- ITIS Mobile – Application (Android 6 or later) that allows the in-field capture of information using a smart phone or tablet (must have camera and GPS), validation and then synchronisation of data with the ITIS database.

The Employer then has several ITIS modules running on any of the above ITIS platforms which affect the Contractor, who will need to use these modules to perform certain procedures and to provide required information. The current modules applicable to routine road maintenance and their description are as follows:

- (i) Contract Module – management of contracts;
- (ii) Routine Road Maintenance Module - issuing of job instructions (estimates, photographs and workflows) and preparing the payment certificate;
- (iii) Incident Module – recording of incidents on site; and
- (iv) Project Information Module – employment and training data.

User manuals for the various functions can be downloaded from <https://itisnra.co.za/Portal/Myaccount/UserManuals> after the successful registration as a Public user.

C3.1.16.1 Routine Road Maintenance ITIS Module

The Employer's ITIS module is managed by the Engineer, which records the work done and prepares a payment certificate. The timelines for the various stages of the Interim Payment Certificate from the initial preparation by the Engineer, to the submission by the Engineer to the Employer for payment, will be identified by the Employer, and may vary in certain months due to financial deadlines, or shutdown periods.

The work flow sequence is as follows:

- (i) Work is identified by the Engineer or Contractor using ITIS mobile application.
- (ii) The Engineer then issues a Job Instruction for the work to be executed, complete with measurement and rates of the work to be executed via the ITIS mobile application.
- (iii) Engineer prepares an interim Job Instruction for the work to be executed.
- (iv) Contractor determines whether he will do the work or allocate the work to an appointed subcontractor using the ITIS mobile application.
- (v) On arrival at location, the Contractor/subcontractor capture various stages of progress of the works using ITIS mobile application.
- (vi) On completion of the work, the Contractor provides measurement of the work executed via the ITIS mobile application, which the Engineer checks for quality and measurement acceptance.
- (vii) The Engineer signs off the details of the Job Instruction, partially or fully completed, on ITIS module.

- (viii) On a measurement date determined by the Engineer the completed Job Instructions shall be included in a payment certificate, the Engineer shall provide a draft payment certificate to the Contractor for checking purposes.
- (ix) The Contractor shall notify the Engineer of any amendments or corrections to the draft payment certificate.
- (x) The Engineer shall then prepare the Interim Payment Certificate from ITIS module for submission by the Contractor as his Statement in terms of sub-clause 14.3 of the FIDIC Conditions of Contract, for approval by the Engineer and submission to the Employer for payment.

C3.1.17 PERSONNEL REQUIREMENTS

C3.1.17.1 Key personnel

The key persons required for this contract are detailed in the table in paragraph C3.1.17.2 according to the CIDB contractor grading designation determined for the contract.

The names of the Contractor's key persons are shown in Form C1.2.3 Contract Data – Information Provided by the Tenderer.

C3.1.17.2 Minimum requirements

The minimum requirements with regards to qualification, registration and experience in the civil engineering/road construction field, for the Contractor's key personnel shall be as indicated in the table below, according to the CIDB contractor grading designation determined for the contract.

Key person	Minimum technical qualification or registration	Minimum relevant experience (years)¹
Person within Company	PrEng or PrTech with ECSA ² or PrCM with SACPCMP ³	As per functionality Evaluation
Contract Manager	National Diploma in Civil Engineering/ NQF 6 in Civil Engineering	
Contractor's Representative (Construction Manager - Site Agent)	None specified	
	National Diploma in Civil Engineering	
	NQF 6 in Civil Engineering	

Additional resources required	Minimum technical qualification or registration	Minimum relevant experience (years)¹
Targeted Group Development Coordinator	NQF 5 in Civil Engineering	As per functionality Evaluation
Construction Health and Safety Officer (CHSO)	CHSO with SACPCMP	
Designated/Dedicated Environmental Officer (DEO)	NQF 6 Environmental Management/Natural Sciences or similar	

The Contractor's Representative and the Targeted Group Development Coordinator are dedicated positions and they cannot occupy the position of another key person.

For any proposed change in key personnel during the contract, the Contractor shall submit to the Engineer for consent the name and particulars of the key person the Contractor proposes to appoint. The Contractor shall not, without the prior consent of the Engineer, revoke the appointment of the Contractor's key personnel or appoint a replacement.

C3.1.18 LOCAL PRODUCTION AND CONTENT

The Department of Trade and Industry in consultation with National Treasury has designated the construction sector and determined the stipulated minimum threshold for steel products and component for construction for the state procurement for local production and content. Section C3.6 of the Scope of Work contains the specifications for local production and content.

C3.2 PARTICULAR SPECIFICATIONS

The Standard Specifications for Routine Road Maintenance, April 2019 as amended by particular specifications, shall apply to this contract. The particular specifications comprise standard and particular amendments issued by South African National Roads Agency SOC Ltd, and are set out in this section.

C3.2.1 STANDARD AMENDMENTS TO THE STANDARD SPECIFICATIONS

The following standard amendments shall apply.

NONE.

C3.3 ENVIRONMENTAL MANAGEMENT PLAN

C3.3.1 SCOPE

The South African National Roads Agency SOC Limited (SANRAL) recognises environmental management as a key component of road infrastructure development and as part of its Environmental Sustainability Framework has developed this Environmental Management Plan (EMP) as a tool for continual improvement in environmental performance.

This EMP prescribes the methods by which proper environmental controls are to be implemented by the Contractor for construction and maintenance projects. The duration over which the Contractor's controls shall be in place cover the construction period of the project as well as the limited time after contract completion defined by the Conditions of Contract for Construction for Building and Engineering Works Designed by SANRAL published by the Federation Internationale des Ingenieurs-Conseils (FIDIC) as the Defects Notification Period (maintenance period).

The provisions of this EMP are binding on the Contractor during the life of the contract. They are to be read in conjunction with all the documents that comprise the suite of documents for this contract, particularly the conditions of any environmental authorisation and associated site-specific Environmental Management Programme (EMPr). In the event that any conflict occurs between the terms of the EMP and the project specifications or environmental authorisation, the terms herein shall be subordinate.

The EMP is a dynamic document subject to similar influences and changes as are brought by variations to the provisions of the project specification. Any changes to the EMP and/or environmental authorisation cannot occur without being submitted to SANRAL who will manage the process of amending the EMP.

The EMP identifies the following:

- Relevant parties and their responsibilities;
- Construction activities that will impact on the environment;
- Specifications with which the Contractor shall comply in order to protect the environment from the identified impacts; and
- Actions that shall be taken in the event of non-compliance.

C3.3.2 DEFINITIONS

Alien Vegetation: undesirable plant growth which includes but is not limited to all declared category 1 and 2 listed invader species as set out in the Conservation of Agricultural Resources Act (CARA), 1983 and the National Environmental Management: Biodiversity Act (Act No. 10 of 2004). Other vegetation deemed to be alien are those plant species that show the potential to occupy in number, any area within the defined construction area and which are declared to be undesirable.

Construction Activity: any action taken by the Contractor, his sub-contractors, suppliers or personnel during the construction process as defined in the contract documents.

Environment: the surroundings within which the contract exists and comprises land, water, atmosphere, micro-organisms, plant and animal life (including humans) in any part or combination thereof as well as any physical, chemical, aesthetic or cultural inter-relationship among and between them.

Environmental Aspect: any component of a contractor's construction activity that is likely to interact with the environment.

Environmental authorisation: a written statement from a Competent Authority, with the general and specific conditions and the EMPr recording its approval of an application for a planned undertaking that triggers listed activities in the Environmental Impact Assessment (EIA) regulations of the National Environmental Management Act (NEMA).

Environmental Impact: any change to the environment, whether desirable or undesirable, that will result from the effect of a construction activity. An impact may be the direct or indirect consequence of a construction activity.

Environmental Impact Assessment (EIA): a systematic process of identifying, assessing and reporting environmental impacts associated with an activity and includes Basic Assessment and Scoping and Environmental Impact Reporting.

Environmental Management Plan: An Environmental Management Plan (EMP) is an environmental management tool used to ensure that adverse impacts of the construction and operation and decommissioning of a project are prevented and/or minimised, and that the positive benefits are enhanced.

It is intended that this standard EMP be the base document for the development of the draft of each site-specific EMP that is to accompany each application to the relevant competent authority.

Environmental Management Programme (EMPr): A project-specific Environmental Management Plan approved by a competent authority through an environmental impact assessment process.

Road Reserve: a corridor of land, defined by co-ordinates and/or proclamation, within which the road, including access intersections or interchanges, is situated. A road reserve may, or may not, be bounded by a fence.

Site; the site is defined in the FIDIC Conditions of Contract and in the scope of works. It is bound by the limits of construction as shown in the drawings or the title of the project and extends to also include the following:

- Areas outside the construction zones where accommodation of traffic is placed;
- All borrowpits defined in the applications approved by the Department of Mineral Resources (DMR);
- All haul roads constructed by the Contractor for purposes of access;
- Any non-adjacent sites specified in the contract documentation;
- The Contractor's and his subcontractors' camp sites;

For the purposes of this EMP, the site includes areas outside of, but adjacent to, the road reserve that may be affected by construction activities;

Spoil material: is material that is unsuitable for construction of the road pavement and for which no other useful purpose can be found in additional works on the project (e.g. for the provision of protection berms). Such material requires spoiling at convenient areas to be identified by the Engineer and/or Contractor within the Site. Spoil material does not require removal to a designated landfill site unless it contains identifiable hazardous contaminants.

C3.3.3 LEGAL REQUIREMENTS

C3.3.3.1 General

Construction shall be according to the best industry practices, as identified in the project documents. This EMP, which forms an integral part of the contract documents, informs the Contractor as to his duties in the fulfilment of the project objectives, with particular reference to the prevention and mitigation of environmental impacts caused by construction activities associated with the project. The Contractor should note that obligations imposed by the EMP are legally binding in terms of this contract. In the event that any rights and obligations contained in this EMP contradict those specified in the standard or project specifications then the latter shall prevail.

C3.3.3.2 Statutory and other applicable legislation

The Contractor is deemed to have made himself conversant with all legislation pertaining to the environment, including provincial and local government ordinances, which may be applicable to the contract.

Major environmental legislation, as amended from time to time, includes but is not limited to the following:

(i) Conservation of Agricultural Resources Act (Act No. 43 of 1983)

This act provides for control over the utilisation of the natural agricultural resources of South Africa in order to promote the conservation of soil, water sources and vegetation, as well as combating weeds and invader plants.

(ii) The Constitution (Act 6 of 1996)

The Constitution states that everyone has the right to an environment that is not harmful to their health or well-being, and to have the environment protected through reasonable legislative and other measures to prevent pollution and ecological degradation; promote conservation and ensure ecologically sustainable development and use of natural resources.

(iii) Mineral and Petroleum Resources Development Act (Act No. 28 of 2002)

This act makes provision for equitable access to, and sustainable development of, minerals and petroleum resources.

(iv) National Environmental Management Act (NEMA), (Act No. 107 of 1998)

This act supports the Bill of Rights within the Constitution and highlights principles of sustainable development including preservation of ecosystems and biological diversity and avoidance, minimisation and remediation of pollution and environmental degradation. It also sets the stage for the EIA Regulations.

(v) National Environmental Management: Air Quality Act (Act No. 39 of 2004)

This act provides reasonable measures for the prevention of pollution and ecological degradation; and provides for specific air quality measures; for national norms and standards regulating air quality monitoring, management and control by all spheres of government.

(vi) National Environmental Management: Biodiversity Act (Act No. 10 of 2004)

This act makes provisions to accomplish the objectives of the United Nations' Convention on Biological Diversity. SANRAL may be required to apply for permits to conduct certain listed activities which, together with the listed threatened or protected species, may be identified by the Minister.

Section 73 (3) of this act empowers a competent authority to direct a person to take steps to remedy any harm to biodiversity resulting from the actions of that person or as a result of occurrence of listed invasive species occurring on land on which that person is the owner. Thus SANRAL may be directed to remedy harm caused by listed invasive species.

(vii) National Environmental Management: Protected Areas Act (Act No. 57 of 2003)

This act provides for the protection and conservation of ecologically viable areas representative of South Africa's biological diversity, natural landscapes and seascapes.

(viii) National Environmental Management: Waste Act (Act No. 59 of 2008)

This act aims to regulate waste management practices through provision of national norms and standards, specific waste measures, licensing and control of waste activities, remediation of contaminated land as well as providing for compliance and law enforcement.

(ix) National Forests Act (Act No. 84 of 1998)

This act makes provision for promoting the sustainable management and development of forests, and for the protection of certain forests and trees for environmental, economic, educational, recreational, cultural, health and spiritual purposes.

(x) National Heritage Resources Act (Act No. 25 of 1999)

This act provides for an integrated and interactive system for identification, assessment and management of South Africa's heritage resources, and empowers civil society to nurture and conserve their heritage resources.

(xi) National Water Act (Act No. 36 of 1998)

This act makes provision for the protection of surface water and groundwater and their sustainable management for the prevention and remediation of the effects of pollution, as well as for the management of emergency situations.

(xii) The South African National Roads Agency Limited and National Roads Act (Act No. 7 of 1998)

This Act makes provision for a National Roads Agency for the Republic to manage and control the Republic's national roads system and take charge, amongst others, of the development, maintenance and rehabilitation of national roads within the framework of government policy.

C3.3.4 ADMINISTRATION OF ENVIRONMENTAL OBLIGATIONS

Copies of this EMP shall be kept at the site office and must be distributed to all senior contract personnel who shall familiarise themselves with its contents.

Implementation of this EMP requires the involvement of several stakeholders, each fulfilling a different but vital role as outlined herein, to ensure sound environmental management during the construction phase of a project.

(a) SANRAL

SANRAL and anyone acting on SANRAL's behalf is accountable for the potential environmental impacts of any activities that are undertaken and is responsible for managing these impacts.

(b) The Engineer

The Engineer has been appointed by, and acts for, SANRAL as its on-site implementing agent and carries the responsibility to ensure that the Contractor undertakes its construction activities in such a way that SANRAL's environmental responsibilities are not compromised.

The Engineer will, within seven days of receiving a contractor's request for approval of a nominated Designated Environmental Officer (DEO), approve, reject or call for more information on the nomination. The Engineer will be responsible for issuing instructions to the DEO where environmental considerations call for action to be taken.

If in the opinion of the Engineer the DEO is not fulfilling his/her duties in terms of this EMP, the Engineer may, after discussion and agreement with SANRAL, exercise his powers under FIDIC general conditions of contract and instruct replacement of the DEO in writing and with stated reasons.

(c) The Contractor

The Contractor is responsible for project delivery in accordance with the prescribed specifications, among which this EMP shall be included.

The Contractor shall receive and implement any instruction issued by the Engineer relating to compliance with the EMP including the removal of personnel or equipment.

Compliance with the provisions contained herein or any condition imposed by the environmental approvals shall become the responsibility of the Contractor through an approved Designated Environmental Officer (DEO). The Contractor shall nominate a person from among his site personnel to fulfil this function and submit to the Engineer for his approval the *curriculum vitae* of the proposed DEO. This request for approval shall be given, in writing, at least fourteen days before the commencement of any construction activity clearly setting out reasons for the nomination, and with sufficient detail to enable the Engineer to make a decision.

(d) The Designated/Dedicated Environmental Officer (DEO)

Once a nominated representative of the Contractor has been approved, he/she shall become the DEO and shall be the responsible person for ensuring that the provisions of this EMP are complied with during the life of the contract. The DEO shall submit regular written reports to the Engineer but not less frequently than once a month.

The DEO may undertake other construction duties unless Section B: Specification Data, prescribes this position as 'Full-time' or 'dedicated' as opposed to the standard position being 'designated'. However, the DEO's environmental duties shall hold primacy over other contractual duties and the Engineer has the authority to instruct the Contractor to reduce the DEO's other duties or to replace the DEO if, in the Engineer's opinion, he/she is not fulfilling his/her duties in terms of the requirements of this EMP. Such instruction will be in writing clearly setting out the reasons why a replacement is required. A designated DEO will still be required to be based on site, unless an assistant DEO is appointed which will be on site fulltime and work under the mentorship of the DEO.

In addition to the compliance duties relating to EMP the DEO shall also provide full cooperation whenever the Contractor is subjected to environmental audits.

(e) Environmental Control Officer (ECO)

The Environmental Control Officer (ECO) is an independent environmental specialist appointed by SANRAL or the Engineer to objectively and regularly monitor the Contractor's compliance with the conditions of the authorisations issued for the project and the approved EMPr (that is this EMP augmented with specifics of the project). These are external audits and the regularity is determined by the environmental authorisations.

C3.3.5 TRAINING

(a) Qualifications

The (DEO) shall have the minimum qualifications as prescribed above and must be conversant with all legislation pertaining to the environment applicable to the contract. He/she must be appropriately trained in environmental management and possess the skills necessary to impart environmental management skills to all personnel involved in the contract.

The Contractor shall ensure that adequate environmental training takes place. All employees and subcontractor's employees shall have been given an induction presentation on environmental awareness. Where possible, the presentation needs to be conducted in the language of the employees.

(b) Content

Apart from induction environmental training should, as a minimum, include the course content below and no induction or course should be given until the Engineer has been afforded the opportunity to appraise it and provide comment.

- (i) The importance of conformance with all environmental policies and the consequences of departure from standard operating procedures;
- (ii) Environmental impacts, actual or potential, caused by work activities, prevention measures to avoid them and mitigation measures when they occur;
- (iii) Work force roles and responsibilities in achieving conformance with the environmental policy and procedures, including emergency preparedness and response requirements;
- (iv) The environmental benefits of improved personnel performance and
- (v) Consequences of non- compliance.

(c) Induction

In the case of permanent staff, the Contractor shall provide evidence that such induction courses have been presented. In the case of new staff (including contract labour) the Contractor shall inform the Engineer when and how he intends concluding his environmental training obligations.

C3.3.6 ACTIVITIES/ASPECTS CAUSING IMPACTS

Typical environmental aspects and impacts associated with road construction are listed in Table 1: *Aspects and Impacts Associated with Road Construction*. Actual impacts will differ from project to project and, therefore, so may the mitigation measures employed. The most common aspects and impacts are addressed separately, and typical avoidance and/or mitigation measures described. The list and descriptions are not by any means exhaustive and they shall be used for guideline purposes only.

Table 1: Aspects and Impacts Associated with Road Construction

Aspect	Potential Impact
Waste generation/storage	Water pollution; nuisance; visual impact
Water use and stormwater discharge	Change in flow regime and/or reduction in downstream availability; soil erosion: water pollution
Vehicle use and maintenance	Air pollution; noise
Chemical/fuel storage	Water/air/soil pollution; health impacts; accidents e.g. spills, fire
Site clearing; earthworks; layer-works; seal works	Change in landform; impact on heritage resources; noise; soil erosion; air pollution
River bridges; installing drainage structures	Water pollution; impact on river flows; noise
Land acquisition	Loss of land &/or livelihood; change in land use;
Acquisition of building material from borrow pits	Change in landform and use

(a) General approach

The role of the DEO cannot be underestimated and once approved he/she or the assistant DEO shall be on the site at all times, and before the Contractor begins each construction activity, he/she shall give to the Engineer a written statement setting out the following:

- (i) The type of construction activity about to be started.
- (ii) Locality where the activity will take place.
- (iii) Identification of the environmental aspects and impacts that might result from the activity.
- (iv) The methodology of impact prevention for each activity or aspect.
- (v) The methodology of impact containment for each activity or aspect.
- (vi) Identification of the emergency/disaster potential for each activity (if any) and the reaction procedures necessary to mitigate impact severity.
- (vii) Treatment and continued maintenance of impacted environment.

The Contractor shall programme his work in such a way that each cause and effect of a construction activity is also identified and the activity planned so as to prevent any impact from happening and shall demonstrate that he is capable of carrying out any repair and reinstatement of the damaged environment. These requirements shall be concurrent with the time constraints to produce method statements for each construction activity in compliance with the provisions of these project specifications.

The Contractor shall provide such information in advance of any or all construction activities provided that new submissions shall be given to the Engineer whenever there is a change or variation to the original.

The Engineer may provide comment on the methodology and procedures proposed by the DEO, but he shall not be responsible for the Contractor's chosen measures of impact mitigation and emergency/disaster management systems. However, the Contractor shall demonstrate at inception and at least once during the contract that the approved measures and procedures function properly.

(b) Spillages

Streams, rivers and dams shall be protected from direct or indirect spillage of pollutants such as refuse, garbage, cement, concrete, sewage, chemicals, fuels, oils, aggregate, tailings, wash water, organic materials and bituminous products. In the event of a spillage, the Contractor shall be liable to arrange for professional service providers to clear the affected area.

Responsibility for spill containment and treatment (whether hazardous or not) lies with the Contractor. The individual causing a spill, or who discovers a spill, must report the incident to his/her DEO or to the Engineer. The DEO will assess the situation in consultation with the Engineer and act as required. In all cases, the immediate response shall be to contain the spill. The exact treatment of polluted soil/water shall be determined by the Contractor in consultation with the DEO and the Engineer. Areas cleared of hazardous waste shall be re-vegetated according to the Engineer's instructions.

Should water downstream of the spill be polluted, and fauna and flora show signs of deterioration or death, specialist hydrological or ecological advice will be sought for appropriate treatment and remedial procedures to be followed. The requirement for such input shall be agreed with the Engineer. The costs of containment and rehabilitation shall be for the Contractor's account, including the costs of specialist input as well as the sampling and testing of the water quality upstream and downstream of the spill. Water quality sampling and testing, and further treatment shall continue until upstream and downstream results correspond with each other.

(c) Water use and control

The Contractor's use of water shall take into consideration that it is a scarce commodity and shall be optimised. Authorisation shall be obtained from the Department of Water and Sanitation (DWS) before water is drawn from streams or new boreholes developed.

The Contractor shall also ensure that any stream deviations or diversions are undertaken in such a manner that the impact on the environment is minimised. Method statements shall be submitted to the Engineer for comment, detailing how the work will be undertaken, what risks are foreseen and what measures will be employed to minimise such risks. Notwithstanding any comments by the Engineer, work on stream deviations or diversions shall be undertaken in accordance with GN 509 in GG 40229 of 26 August 2016 - General Authorisation in terms of Section 39 of the National Water Act, 1998 (Act No. 36 Of 1998) for Water Uses as defined in sections 21(c) and (i).

The quality, quantity and flow direction of any surface water runoff shall be established prior to disturbing any area for construction purposes. Cognisance shall be taken of these aspects and incorporated into the planning of all construction activities. Before a site is developed or expanded, it shall be established how this development or expansion will affect the drainage pattern. Recognised water users/receivers shall not be adversely affected by the expansion or re-development. No water source shall be polluted in any way due to proposed changes.

Streams, rivers, pans, wetlands, dams, and their catchments shall be protected from erosion and flooding by dredging, daylighting, removal of debris and vegetation, etc. These shall also be protected from direct or indirect spillage of pollutants such as refuse, garbage, cement, concrete, sewage, chemicals, fuels, oils, aggregate, tailings, wash water, organic materials and bituminous products.

The Contractor shall submit to the Engineer his proposals for prevention, containment and rehabilitation measures against environmental damage of the identified water and drainage systems that occur on the site. Consideration shall be given to the placement of sedimentation ponds or barriers where the soils are of a dispersive nature or where toxic fluids are used in the construction process. The sedimentation ponds must be large enough to contain runoff so that they function properly under heavy rain conditions up to 1:5 year severity.

The Contractor shall submit to the Engineer the results of the baseline water quality test taken above and below the site of the proposed activity; and thereafter monthly testing results or at the frequency as may be specified by the Water Use Licence/General Authorisation where applicable. No taking-over can be authorised until the water quality is shown to be at pre-construction levels or better.

(d) Vegetation management

The Contractor shall be responsible for the management of vegetation by protection of indigenous vegetation, especially identified protected species, and the prevention of alien vegetation germinating in areas disturbed by road construction activities within and outside the road reserve. This includes, for example, service roads, stockpile areas, stop/go facilities, windrows and wherever material generated for or from road construction has been stored temporarily. This responsibility shall continue for the duration of the defects notification period. The project specification may instruct the removal of CARA and/or NEMBA-listed category 1 and 2 alien species and planting of specified indigenous species.

(e) Dust control

Dust caused by construction activities shall be controlled by appropriate means and applied at sufficient frequency so as not to cause nuisance to adjacent habitation or affect farming activities or natural vegetation. Vegetation cover should also be kept for as long as possible to reduce the area of exposed surfaces. Dust emissions from batching and screening plants shall be subject to the relevant legislation and shall be the subject of inspection by the relevant authorities.

(f) Noise control

The Contractor shall endeavour to keep noise generating activities to a minimum. Noises that could cause a major disturbance, for instance blasting and crushing activities, should only be carried out during the hours prescribed by the conditions of contract (i.e. normal hours). Should such noise

generating activities have to occur at any time outside normal hours the people in the vicinity of the noise-generating activity shall be warned about the noise well in advance and the activities kept to a minimum. Relevant legislation shall also be taken into consideration, and any practical mitigation measures adopted. No noise generating activity outside of normal hours, regardless of its proximity to residences, can take place without application to the Engineer for approval. The application shall be accompanied by the noise containment measures proposed.

(g) Energy consumption

The Contractor shall take into consideration the impacts of high energy consumption, both from a cost and emissions point of view. Energy use shall be minimised, and where possible, alternative energy sources such as solar utilised.

Furthermore, the Contractor shall measure and keep records of the consumption of carbon units his chosen method of construction produces in the execution of his programme. In conjunction with the Engineer who will provide complete cooperation, a month by month output shall be compiled and efforts made to see how these outputs can be curtailed and reduced.

C3.3.7 ENVIRONMENTAL MANAGEMENT OF CONSTRUCTION ACTIVITIES

C3.3.7.1 Site establishment

The Contractor shall undertake “good housekeeping” practices during construction as stated in the COTO Standard Specifications for Roads and Bridges and the FIDIC conditions of contract. This will help avoid disputes on responsibility and allow for the smooth running of the contract as a whole. Good housekeeping extends beyond the wise practice of construction methods that leaves production in a safe state from the ravages of weather to include the care for and preservation of the environment within which the site is situated.

The construction activities addressed below shall become part of the Contractor’s obligations regarding his programme of work and incorporated into the required method statements for workmanship and quality control.

a) Site establishment

i) Site Plan

The site refers to an area with defined limits on which the project is located. The Contractor shall establish his construction camps, offices, workshops, staff accommodation and testing facilities on the site in a manner that does not adversely affect the environment. However, before any site establishment can begin, the Contractor shall submit to the ECO for his comments and to the Engineer for his approval, plans of the exact location, extent and construction details of these facilities and the impact mitigation measures the Contractor proposes to put in place.

The plans shall detail the locality as well as the layout of the waste management facilities for litter, kitchen refuse, sewage and workshop-derived effluents. The site offices should not be sited in close proximity to steep areas, as this will increase soil erosion. Preferred locations would be flat areas along the route. If the route traverses water courses, streams and rivers, it is recommended that the offices, and in particular the ablution facilities, aggregate stockpiles, spoil areas and hazardous material stockpiles are located as far away as possible from any water course. No camp establishment, including satellite camps, can be placed within 150 metres of an identified watercourse unless the Contractor has applied to DWS and received authorisation to do so. Regardless of the chosen site, the Contractor’s intended mitigation measures shall be indicated on the plan. The site plan shall have been submitted and approved before establishment commences. Detailed, electronic colour photographs shall be taken of the proposed site before any clearing may commence. These records are to be kept by the ECO and the Engineer for consultation during rehabilitation of the site in order that rehabilitation is, as a minimum, done to a standard similar to pre-construction activities.

ii) Vegetation

The Contractor has a responsibility to inform his staff of the need to be vigilant against any practice that will have a harmful effect on vegetation.

The natural vegetation encountered on the site is to be conserved and left as intact as possible. Vegetation planted at the site shall be indigenous and in accordance with instructions issued by the Engineer. Only trees and shrubs directly affected by the works, and such others as may be indicated by the Engineer in writing, may be felled or cleared. In wooded areas where natural vegetation has been cleared out of necessity, the same species of indigenous trees as were occurring shall be re-established. Protected trees may not be removed without a permit from the Department of Forestry, Fisheries and Environment.

Contravention of a notice of listed protected tree species under the National Forests Act, 1998 is regarded as a first category offence that may result in a fine or imprisonment for a period up to three years, or to both a fine and imprisonment. The DEO must be conversant with the latest gazette of declared protected trees.

Rehabilitation shall be undertaken using only indigenous tree, shrub and grass species. Special attention shall be given to any search and rescue operation identified during the environmental assessment process, and any removal to an on-site nursery for continuous nurturing and protection and later replanting.

Any proclaimed weed or alien species that propagates during the contract period shall be cleared by hand before seeding.

Fires shall only be allowed in facilities or equipment specially constructed for this purpose. The need for a firebreak shall be determined in consultation with the Engineer and the relevant authorities, and if required a firebreak shall be cleared and maintained around the perimeter of the camp and office sites.

iii) Water management

Water for human consumption shall be available at the site offices and at other convenient locations on site.

All effluent water from the camp/office sites shall be disposed of in a properly designed and constructed system, situated so as not to adversely affect water sources (streams, rivers, pans, dams etc). Only domestic type wastewater shall be allowed to enter this system.

iv) Heating and cooking fuel

The Contractor shall provide adequate facilities for his staff so that they are not encouraged to supplement their comforts on site by accessing what can be taken from the natural surroundings. The Contractor shall ensure that energy sources are available at all times for construction and supervision personnel for heating and cooking purposes.

b) Sewage management

Particular reference in the site establishment plan shall be given to the treatment of sewage generated at the site offices, site laboratory and staff accommodation and at all localities on the site where there will be a concentration of labour. Sanitary arrangements should be to the satisfaction of the Engineer, the local authorities and legal requirements.

Safe and effective sewage treatment will require one of the following sewage handling methods: septic tanks and soak-aways, dry-composting toilets such as “enviro loos”, or the use of chemical toilets which are supplied and maintained by a specialist service provider. The type of sewage management will depend on the geology of the area selected, the duration of the contract and proximity (availability) of providers of chemical toilets. The waste material generated from these facilities shall be serviced on a

regular basis. The positioning of the chemical toilets shall be done in consultation with the Engineer. Should a soak-away system be used, it shall not be closer than 800 metres from any natural water course or water retention system and shall be approved by the Engineer in consultation with the ECO.

Toilets and latrines shall be easily accessible and shall be positioned within walking distance from wherever employees are employed on the works. Use of the veld for this purpose shall not, under any circumstances, be allowed.

Outside toilets shall be provided with locks and doors and shall be secured to prevent them from blowing over. The toilets shall also be placed outside areas susceptible to flooding. The Contractor shall arrange for regular emptying of toilets and shall be entirely responsible for enforcing their use and for maintaining such latrines in a clean, orderly and sanitary condition to the satisfaction of the Engineer.

c) Waste management

The Contractor's intended methods for waste management shall be outlined and implemented at the outset of the contract and shall be to the satisfaction of the Engineer. A waste inventory shall be drawn up of all waste streams that will possibly be generated by the site/project and an integrated approach shall be taken to its management. Records shall be kept of all waste disposed. Opportunities for avoiding, reducing, reusing and recycling of materials should be identified upfront, as should constraints for their implementation. All personnel shall be instructed to dispose of all waste in the proper manner.

i) Solid waste

Solid waste shall be stored in an appointed area in covered, tip-proof metal drums or similar container for collection and disposal. Disposal of solid waste shall be at a licensed landfill site or at a site approved by the relevant authority in the event that an existing operating landfill site is not within reasonable distance from the project area. No waste shall be burned or buried at or near the project area.

ii) Litter

No littering by construction workers shall be allowed and particular emphasis on litter control measures shall apply at stop/go facilities.

During the construction period, the various contractors' facilities shall be maintained in a neat and tidy condition and the site shall be kept free of litter. At all places of work the Contractor shall provide litter collection facilities for later safe disposal at approved sites.

iii) Hazardous waste

Hazardous waste such as oils shall be disposed of at an approved landfill site and proof of such disposal kept by the Contractor. Special care shall be taken to avoid spillage of bitumen products such as binders or pre-coating fluid to avoid water-soluble phenols from entering the ground or contaminating surface water.

Under no circumstances shall the spoiling of bituminous products on the site, over embankments, in borrow pits or any burying, be allowed. Unused or rejected bituminous products shall be returned to the supplier's production plant. Any spillage of bituminous products shall be attended to immediately and affected areas shall be promptly reinstated to the satisfaction of the Engineer.

iv) Construction and demolition waste

The opportunity for recycling and reuse of construction and demolition waste as fill for road embankments, land reclamation and drainage control must first be explored and take priority before the option of declaring these materials a 'waste'.

The Contractor is encouraged to actively engage with authorities and landowners adjacent to the site and identify where such materials can be usefully deployed to repair existing environmentally damaged areas such as erosion dongas.

d) Control at the workshop

The Contractor's management and maintenance of his plant and machinery will be monitored according to the criteria given below:

i) Hazardous Material Storage

Petrochemicals, oils and identified hazardous substances shall only be stored under controlled conditions. All hazardous materials such as bitumen binders shall be stored in a secured, appointed area that is suitably fenced, bunded and has restricted entry. Storage of bituminous products shall only take place using suitable containers to the approval of the ECO and the Engineer.

The Contractor shall provide proof to the Engineer that relevant authorisation to store such substances has been obtained from the relevant authority. In addition, hazard signs indicating the nature of the stored materials shall be displayed on the storage facility or containment structure. Before containment or storage facilities can be erected the Contractor shall furnish the Engineer with details of the preventative measures he proposes to install in order to mitigate pollution of the surrounding environment from leaks or spillage. The preferred method shall be a concrete floor that is bunded. Any deviation from the method will require proof from the relevant authority that the alternative method proposed is acceptable to that authority. The proposals shall also indicate the emergency procedures in the event of misuse or spillage that will negatively affect an individual or the environment.

ii) Fuel and gas storage

The Contractor shall take cognisance of the limits set by legislation for the storage of fuels and acquire the necessary authorisation for storage capacity beyond these. An adequate bund wall, 110% of volume, shall be provided for fuel and diesel areas to accommodate any leakage spillage or overflow of these substances. The area inside the bund wall shall be lined with an impervious lining to prevent infiltration of the fuel into the soil. Any leakage, spillage or overflow of fuel shall be attended to without delay.

Gas welding cylinders and LPG cylinders shall be stored chained in a secure, well-ventilated area exterior to any building wall.

iv) Oil and lubricant waste

Used oil, lubricants and cleaning materials from the maintenance of vehicles and machinery shall be collected in a holding tank and sent back to the supplier. Water and oil should be separated in an oil trap. Oils collected in this manner, shall be retained in a safe holding tank and removed from site by a specialist oil recycling company for disposal at approved waste disposal sites for toxic/hazardous materials. Oil collected by a mobile servicing unit shall be stored in the service unit's sludge tank and discharged into the safe holding tank for collection by a specialist oil recycling company.

Drip trays shall be used to collect any lubricants or fuel spilled where any vehicle and machinery are repaired or refuelled. The lubricants and fuel collected shall be handled as specified above.

All used filter materials shall be stored in a secure bin for disposal off site. Any contaminated soil shall be removed and replaced. Soils contaminated by oils and lubricants shall be collected and disposed of at a facility designated by the local authority to accept contaminated materials.

e) Clearing the site

In all areas where the Contractor intends to or is required to clear the natural vegetation and soil, either within the road reserve, or at designated or instructed areas outside the road reserve, a plan of action shall first be submitted to the Engineer for his approval. Working areas shall be clearly defined and demarcated on site to minimise the construction footprint. 'No-go- areas' and other sensitive areas shall also be clearly demarcated on site, and staff must be made aware of them.

The plan of action shall contain a photographic record and chainage/land reference of the areas to be disturbed. This shall be submitted to the Engineer for his records before any disturbance/stockpiling may occur. The record shall be comprehensive and clear, allowing for easy identification during inspections.

f) Soil management**i) Topsoil**

Topsoil shall be removed from all areas where physical disturbance of the surface will occur and shall be stored and adequately protected. The contract will provide for the stripping and stockpiling of topsoil from the site for later re-use. Topsoil is the natural soil covering, including all the vegetation and organic matter. Depth may vary at each site. The areas to be cleared of topsoil shall include all storage areas. All topsoil stockpiles and windrows shall be maintained throughout the contract period in a weed-free condition. Weeds appearing on the stockpiled or windrowed topsoil shall be removed by hand. Soils contaminated by hazardous substances shall be disposed of at an approved waste disposal site. The topsoil stockpiles shall be stored, shaped and sited in such a way that they do not interfere with the flow of water to cause damming or erosion, or itself be eroded by the action of water.

The Contractor shall ensure that no topsoil is lost due to erosion – either by wind or water. Areas to be top-soiled and grassed shall be done so systematically to allow for quick cover and reduction in the chance of heavy topsoil losses due to unusual weather patterns. The Contractor's programme shall clearly show the proposed rate of progress of the application of topsoil and grassing. The Contractor shall be held responsible for the replacement, at his own cost, for any unnecessary loss of topsoil due to his failure to work according to the progress plan approved by the Engineer. The Contractor's responsibility shall also extend to the clearing of drainage or water systems within and beyond the boundaries of the road reserve that may have been affected by such negligence.

ii) Subsoil

The subsoil is the layer of soil immediately beneath the topsoil. It shall be removed, to a depth instructed by the Engineer, and if not used for road building it shall be stored and maintained separately from the topsoil so that neither stockpile is contaminated by the other. This soil shall be used for rehabilitation purposes by first spreading it over the excavated slopes without interfering with or contaminating the stockpiled topsoil.

Whilst in stockpile it shall be maintained free from erosion and weed infestation in the same way as for topsoil stockpile maintenance.

g) Earthworks and layerworks

This section includes all construction activities that involve the mining of all materials, and their subsequent placement, stockpile, spoil, treatment or batching, for use in the permanent works, or temporary works in the case of deviations. Before any stripping prior to the commencement of construction, the Contractor shall have complied with the requirements of of this EMP. In addition, the Contractor shall take cognisance of the requirements set out below.

1i) Quarries and borrow pits

The Contractor's attention is drawn to the requirement of the Department of Mineral Resources, that before entry into any quarry or borrow pit, an Environmental Authorisation for the establishment, operation and closure of a quarry or borrow pit shall have been approved by the Department where applicable. It is the responsibility of the Contractor to ensure that he is in possession of the authorisation prior to entry into the quarry or borrow pit. The conditions imposed by the relevant authorisation are legally binding on the Contractor and may be more extensive and explicit than the requirements of this specification. In the event of any conflict occurring between the requirements of the specific authorisation and this EMP the former shall apply.

ii) Excavation, hauling and placement

The Contractor shall provide the ECO and the Engineer with detailed plans of his intended construction processes prior to starting any cut or fill or layer. The plans shall detail measures by which the impacts of pollution (noise, dust, litter, fuel, oil and sewage), erosion, vegetation destruction and deformation of landscape will be prevented, contained and rehabilitated. Particular attention shall also be given to the impact that such activities will have on the adjacent built environment. The Contractor shall demonstrate his "good housekeeping", particularly with respect to closure at the end of every day so that the site is left in a safe condition.

iii) Spoil sites

The Contractor shall be responsible for the safe siting, operation, maintenance and closure of any spoil site he uses during the contract period, including the defects notification period. This shall include existing spoil sites that are being re-entered. Before spoil sites may be used proposals for their locality, intended method of operation, maintenance and rehabilitation shall be given to the ECO for his/her comments and to the Engineer for his approval. The location of these spoil sites shall have signed approval from the affected landowner before submission to the ECO and the Engineer. No spoil site shall be located within 50m of any watercourse. A photographic record shall be kept of all spoil sites for monitoring purposes. This includes before the site is used and after re-vegetation.

The use of approved spoil sites for the disposal of any waste shall be prohibited.

Spoil sites will be shaped to fit the natural topography. Depending on availability, these sites shall receive a minimum of 75mm topsoil and be grassed with the recommended seed mixture. Appropriate grassing measures to minimise soil erosion shall be undertaken by the Contractor. This may include both strip and full sodding. The Contractor may motivate to the Engineer for other acceptable stabilising methods. The Engineer may only approve a completed spoil site at the end of the defects notification period upon receipt from the Contractor of a landowner's clearance notice.

iv) Stockpiles

The Contractor shall plan his activities so that materials excavated from borrow pits and cuttings, in so far as possible, can be transported direct to and placed at the point where it is to be used. However, should temporary stockpiling become necessary, the areas for the stockpiling of excavated and imported material shall be indicated and demarcated on the site plan submitted in writing to the Engineer for his approval. The Contractor's proposed measures for prevention of environmental damage, containment and subsequent rehabilitation shall also be submitted.

The areas chosen shall have no naturally occurring indigenous trees and shrubs present that may be damaged during operations. Care shall be taken to preserve all vegetation in the immediate area of these temporary stockpiles. During the life of the stockpiles the Contractor shall at all times ensure that they are positioned and sloped to create the least visual impact, constructed and maintained so as to avoid erosion of the material and contamination of surrounding environment and kept free from all alien/undesirable vegetation.

After the stockpiled material has been removed, the site shall be re-instated to its original condition. No foreign material generated/deposited during construction shall remain on site. Areas affected by stockpiling shall be landscaped, top soiled, grassed and maintained at the Contractor's cost until clearance from the Engineer and the landowner is received.

Material milled from the existing road surface that is temporarily stockpiled in areas approved by the Engineer within the road reserve, shall be subject to the same condition as other stockpiled materials. Excess materials from windrows, in situ milling or any leftover material from road construction activities may not be swept off the road and left unless specifically instructed to do so in the contract documentation or under instruction from the Engineer.

The ECO shall comment on and the Engineer shall approve the areas for stockpiling and disposal of construction rubble before any operation commences and shall approve their closure only when they have been satisfactorily rehabilitated.

v) **Blasting activities**

Wherever blasting activity is required on the site (including quarries and/or borrow pits) the Contractor shall rigorously adhere to the relevant statutes and regulations that control the use of explosives.

h) On site plant

i) **Crusher, screening plants and concrete batching plants**

Crushing plants and concrete batching plants, whether sited inside or outside of defined quarry or borrow pit areas, shall be subject to the requirements of the applicable industrial legislation that governs gas and dust emissions into the atmosphere. Such sites will be the subject of regular inspections by the relevant authorities during the life of the project. In addition, the selection, entry onto, operation, maintenance, closure and rehabilitation of such sites shall be the same as for those under section C3.3.7.1(g)(i) of this EMP, with the exception that the Contractor shall provide additional measures to prevent, contain and rehabilitate against environmental damage from toxic/hazardous substances. In this regard the Contractor shall provide plans that take into account such additional measures as concrete floors, bunded storage facilities, linings to drainage channels and settlement dams. Ultimate approval of these measures shall be from the relevant authority, as shall approval of closure. The Engineer will assist the Contractor in his applications to the relevant authority.

Screening activities shall be undertaken so that dust and noise is minimised. This can be done by carefully choosing the site for the activity, and by using slightly damp material.

Effluent from concrete batch plants and crusher plants shall be reused where possible or treated in a suitable designated sedimentation dam to the legally required standards to prevent surface and groundwater pollution. The designs of such a facility should be submitted to the Engineer for approval.

ii) **Asphalt Plant**

Asphalt plants shall be subject to the applicable legislation that governs establishment and operation of batching plants. The Contractor shall be responsible to obtain the necessary permit from the relevant authority.

Operation of the plant shall conform to the same requirements as for a crushing plant or concrete batching plant under **C3.3.7.1 h) i)** above.

C3.3.8 AREAS OF SPECIFIC IMPORTANCE

Any area, as determined and identified within the project documents as sensitive or of special interest within the site shall be treated according to the express instructions contained in these specifications or the specific environmental authorisation as well as the approved EMP. The Contractor may offer alternative solutions to the Engineer in writing should he consider that construction will be affected in any way by the

hindrance of the designated sensitive area or feature. However, the overriding principle is that such defined areas requiring protection should not be changed. Every effort to identify such areas within the site will have been made prior to the project going out to tender. The discovery of other sites with archaeological or historical interest that have not been identified shall receive ad hoc treatment.

a) Archaeological sites

If an artefact on site is uncovered, work in the immediate vicinity shall be stopped immediately. The Contractor shall take reasonable precautions to prevent any person from removing or damaging any such article and shall immediately upon discovery thereof inform the Engineer of such discovery. The South African Heritage Resource Agency (SAHRA) is to be contacted, and a SAHRA-registered archaeological consultant may undertake the necessary work involved in confirming the find and advising on how it should be preserved or removed. Work may only resume once clearance is given in writing by the archaeologist. (Read with FIDIC condition of contract clause 4.24).

If a grave or midden is uncovered on site, then all work in the immediate vicinity of the graves/middens shall be stopped and the Engineer informed of the discovery. The South African Heritage Resource Agency and the South African Police Services (SAPS) should be contacted and in the case of graves, arrangements made for an undertaker to carry out exhumation and reburial. The undertaker will, together with SAHRA, be responsible for attempts to contact family of the deceased and for the place where the exhumed remains can be re-interred.

C3.3.9 REHABILITATION

The Contractor shall be responsible for the re-establishment of grass within the road reserve boundaries for all areas disturbed during construction. This includes, for example, service roads, stockpile areas, stop/go facilities, windrows and wherever material generated for, or from, construction has to be stored temporarily, and designated or instructed areas outside the road reserve. It also includes the area where site offices were erected which may require rehabilitation at the end of the contract. All construction material, including concrete slabs and barbecue (braai) areas shall be removed from the site on completion of the contract unless written approval from the relevant landowner demonstrates it is to be left in place.

Responsibility for re-establishment of vegetation shall extend until expiry of the defects notification period. However, SANRAL reserves the right to continue holding retention monies (or not releasing guarantees in lieu of retention) depending upon the state of cover at the end of the defects notification period. Such extension may continue until closure of the relevant quarry or borrow pit has been secured,

Rehabilitation of affected areas should be undertaken as early as possible when the relevant activities are done in order to reduce further environmental damage. All re-vegetation should be undertaken using indigenous vegetation. The standard of rehabilitation should be to the satisfaction of the Engineer and the relevant authorities. The Department of Minerals Resources will only issue closure certificates for borrow pits and quarries when they are satisfied with the rehabilitation undertaken. It should also be noted that in some cases there is a requirement for a final environmental audit covering the extent of the project.

C3.3.10 RECORD KEEPING

The Engineer and the DEO will continuously monitor the Contractor's adherence to the approved impact prevention procedures and the DEO shall submit regular written reports to the ECO and to the Engineer, at least once a month. The DEO will report the environmental compliance performance of the project at regular site meetings. The Engineer shall issue to the Contractor a notice of non-compliance whenever transgressions are observed. The DEO shall document the nature and magnitude of the non-compliance in a designated register, the action taken to discontinue the non-compliance, the action taken to mitigate its effects and the results of the actions. The non-compliance shall be documented and reported to the Engineer in the monthly report.

Copies of all authorisations shall be kept on site and made available for inspection by visiting officials from SANRAL, relevant authorities or internal/external auditors.

C3.3.11 COMPLIANCE AND PENALTIES

The Contractor shall act immediately when a notice of non-compliance is received and correct whatever is the cause for the issuing of the notice. Complaints received regarding activities on the construction site pertaining to the environment shall be recorded in a dedicated register and the response noted with the date and action taken. This record shall be submitted with the monthly reports and an oral report given at the monthly site meetings.

Any non-compliance/omissions with the procedures in this EMP, environmental authorisations and the approved EMPr constitute a breach of the Conditions of Contract. Regulatory financial penalties imposed on SANRAL shall be passed onto the defaulting parties.

C3.4 WELLNESS PROGRAM

C3.4.1 SITE ARRANGEMENTS

The Contractor is required to facilitate a Wellness Program for site employees and their immediate family (spouse/partner and children). The Employer will appoint a service provider who will conduct the Awareness, Counselling and Testing (ACT) process at a suitable venue. For any immediate family situated away from the site, the wellness service provider will make arrangements for the ACT process to be conducted at nearby facilities, if available. The Contractor shall provide a structured plan of how the ACT process will be implemented.

The Contractor is to provide an independent lockable office for use by the Wellness Champion which includes within, office furniture including lockable storage facilities and the supply of paper and stationery, an available telephone line, fax facilities, a computer and printer with internet and email facilities.

The Wellness Process may not be used by the Contractor to fulfil his Occupational, Health and Safety obligations for his employees.

C3.4.2 WELLNESS CHAMPION

The Contractor is to provide a Wellness Champion who will be responsible for managing the wellness program on site. The appointment will be subject to approval by the Engineer.

The Wellness Champion has to meet certain minimum criteria as follows:

- (i) Grade 12;
- (ii) driver's license Code 8;
- (iii) intermediate level of computer literacy;
- (iv) excellent communication skills; and
- (v) excellent report writing using qualitative and quantitative performance indicators.

C3.4.3 WELLNESS CHAMPION DUTIES

The duties of the Wellness Champion will be as follows:

- (i) implement and manage a Wellness Programme on site;
- (ii) co-ordinate the logistics for the Awareness, Counselling and Testing (ACT) sessions on site.
- (iii) create an enabling environment in the workplace for workers with health issues;
- (iv) refer workers to local Clinics (Department of Health) to access effective treatment;
- (v) regular toolbox talks with workers;
- (vi) attend quarterly facilitation meetings on site and annual combined meeting;
- (vii) create and maintain a database of all workers and immediate families, local NGO's and clinics;
- (viii) reporting on site meetings, toolbox talks, weekly planning sheets and monthly reports to service provider.

C3.4.4 WELLNESS PROGRAM COSTS

There is separate provision for the costs of providing transport and communication for the Wellness Champion, ACT venue, transport for the site employees and their immediate family (situated with the site employees) to attend the ACT process, and wages of the workers whilst away from work attending the ACT process.

C3.5 OCCUPATIONAL HEALTH AND SAFETY SPECIFICATION

Note:

The following is a Health and Safety Specification prepared by the Employer in terms of Construction Regulations 5(1)(b), in addition to the Site Specific Health and Safety Specification, prepared by the Construction Health and Safety Agent.

Wherever reference is made in this section of the Scope of Work to contractor this is the equivalent of the *principal contractor* in the Occupational Health and Safety Act and Regulations. Similarly, reference to subcontractors is equivalent to *other contractors*.

C3.5.1 SCOPE

This part of the specification has the objective to assist the contractor entering into contract with the Employer, to comply with the Occupational Health and Safety Act, 1993 (Act No 85 of 1993) (OH&S), as well as all applicable Regulations. Compliance with this document does not absolve the contractor from complying with minimum legal requirements and the contractor remains responsible for the health and safety of his employees and those of his Mandataries. The contractor shall, therefore, include this part of the specification to any contract that he may have with subcontractors and/or suppliers.

This section also covers the development of a health and safety specification that addresses all aspects of occupational health and safety as affected by this contract. It provides the requirements that the contractor shall comply with in order to reduce the risks associated with this contract, which may lead to incidents causing injury and/or ill health. In this matter the spirit and intention of Regulation 5(1)(l) of the Construction Regulations, 2014 regarding negotiations between the parties, related to the contents and approval of the Health and Safety Plan, must be complied with.

C3.5.2 GENERAL OCCUPATIONAL HEALTH AND SAFETY PROVISIONS

C3.5.2.1 Hazard Identification and Risk Assessment (Construction Regulation 9)

C3.5.2.1.1 Risk Assessments

Paragraph C3.5.4 contains a baseline of risk assessment that have been identified by the Employer as possibly applicable to this contract. It is, by no means, exhaustive and is offered as assistance to the contractor.

C3.5.2.1.2 Development of Risk Assessments

The contractor shall, before the commencement of any construction work or work associated with the aforesaid construction work and during such work, conduct a risk assessment by a competent person and the risk assessment so produced shall form part of the OH&S plan and be implemented and maintained as contemplated in Construction Regulation 9(1). Competence is a factor of training, knowledge, experience and/or appropriate qualifications. Where proof of competence is required by the Regulation, a valid training certificate, and where no training course is available a concise CV must be attached to the appointment letter.

The risk assessment shall include, as far as is reasonably practicable, at least:

- the identification of the risks and hazards to which persons may be exposed;
- the analysis and evaluation of the risks and hazards identified, inclusive of a residual risk rating methodology. The method to be used is not prescribed;
- a documented plan and applicable safe work procedures to mitigate, reduce or control those residual risks that have been identified as unacceptably high, by means of the rating system;
- a monitoring plan;
- a review plan, inclusive of dates to be adhered to; and
- ergonomic related risks are to be analysed, evaluated and addressed as part of the process.

Based on the risk assessments, the contractor shall develop a set of site-specific OH&S rules that shall be applied to regulate the OH&S aspects of the construction. The risk assessments, together with the

site-specific OH&S rules shall be submitted to the Employer before construction on site commences. This does not mean that all risk assessments must be attended before work commences, but that all risk assessments receive the necessary attention as the contract progresses, and this is the responsibility of the contractor.

All variations to the scope of work shall similarly be subjected to a risk assessment process.

C3.5.2.1.3 Review of Risk Assessment

The contractor shall ensure that planned task observations are carried out on staff to ensure that risk assessments are relevant, current and contains all work steps, hazards and risks, and control measures. Planned task observations must be carried out by a person/s competent in the task as well as in risk assessment, e.g. site agent, supervisor and or safety officer.

The process of planned task observations will assist the contractor in reviewing the hazard identification, risk assessments and standard working procedures, which review must be carried out when an incident has occurred, when there are changes to the design and or construction process that change the risk profile or at least quarterly.

The contractor must ensure that staff are made aware of any changes in risk assessments by way of training.

C3.5.2.2 Legal Requirements

A contractor shall, as a minimum, comply with:

- The latest version of the Occupational Health and Safety Act and Regulations (Act 85 of 1993), an up-to-date copy of which shall be available on site at all times in soft and hard copy.
- The Compensation for Occupational Injuries and Diseases Act, 1993 (Act No 130 of 1993), an up-to-date copy of which shall be available on site at all times in soft and hard copy.
- Where work mining work is being carried out e.g. borrow pits, the contractor shall comply with the Mines Health and Safety Act and Regulations (Act No 29 of 1960) and any other OH&S requirements that the mine may specify. An up-to-date copy of the Mines Health and Safety Act and Regulations shall be available on site at all times.

C3.5.2.3 Structure and Responsibilities

C3.5.2.3.1 Overall Supervision and Responsibility for OH&S

It is a requirement that the contractor, when he appoints subcontractors in terms of Construction Regulations 7(1)(c), 7(1)(d), 7(1)(f), and 7(3) includes in his agreement with such subcontractors the following:

- OH&S Act (85 of 1993), Section 37(2) agreement: "Agreement with Mandatary"
- OH&S Act (85 of 1993), Section 16(2) appointee/s as detailed in his/their respective appointment forms.

C3.5.2.3.2 Further (Specific) Supervision Responsibilities for OH&S

The contractor shall appoint designated competent employees and/or other competent persons as required by the Act and Regulations. Below is a generic list of identified appointments and may be used to select the appropriate appointments for this contract. The contractor shall note that it is a generic list only and is intended for use as a guideline.

Appointment	Regulation
Construction Manager, Assistant Construction Manager, Construction Supervisor and Assistant Construction Supervisor	Construction Regulation 8(1), 8(2), 8(7) and 8(8)
Construction Vehicles and Mobile Plant/Machinery Supervisor	Construction Regulation 23
Demolition Supervisor	Construction Regulation 14
Drivers and Operators of Construction Vehicles or Plant	Construction Regulation 23
Electrical Installation and machinery on construction sites	Construction Regulation 24
Emergency/Security/Fire Coordinator	Construction Regulation 29

Appointment	Regulation
Excavation Supervisor	Construction Regulation 13
Explosive actuated fastening device	Construction Regulation 21
Fall Protection Plan Developer	Construction Regulation 10
First Aider	General Safety Regulation 3
Fire Equipment Inspector	Construction Regulation 29
Temporary Works Designer and Temporary Works Supervisor	Construction Regulation 12
Hazardous Chemical Substances Supervisor	HCS Regulations
Incident Investigator	General Admin Regulation 9(2)
Ladder Inspector	Driven Machinery Regulation 18
Lifting Machine Operator	Construction Regulation 22
Materials Hoist Inspector	Construction Regulation 19
OH&S Committee	OH&S Act Section 19
Construction OH&S Officer/Manager	Construction Regulation 8(5) & 8(6)
OH&S Representatives	OH&S Act Section 17
Person Responsible for Machinery	General Machinery Regulation 2
Scaffolding Supervisor	Construction Regulation 16
Stacking and Storage Supervisor	Construction Regulation 28
Structures Supervisor	Construction Regulation 11
Suspended Platform Supervisor	Construction Regulation 17
Bulk Mixing Plant Supervisor	Construction Regulation 20
Welding Supervisor	General Safety Regulation 9

It is a requirement that a full or part-time Construction health and safety officer is appointed as per Construction Regulation 8(5) and that the Construction health and safety officer complies with the requirements of Construction Regulation 8(6). Should the contractor elect to appoint a part-time Construction health and safety officer, a full time Candidate Construction health and safety officer must be appointed on site, who must be mentored by the part-time registered Construction health and safety officer.

In addition, the Employer requires that a competent Traffic Safety Officer be appointed. The above appointments shall be in writing and the responsibilities clearly stated together with the period for which the appointment is made. This information shall be communicated and agreed with the appointees. Notice of appointments shall be submitted to the Employer. All changes shall also be communicated to the Employer.

The contractor shall, furthermore, provide the Employer with an organogram of all subcontractors that he has appointed or intends to appoint and keep this list updated and prominently displayed on site.

C3.5.2.3.3 Designation of OH&S Representatives (Section 17 of the OH&S Act)

Where the contractor employs more than 20 persons (including the employees of subcontractors he has to appoint one OH&S representatives for every 50 employees or part thereof. This is a minimum (legal) requirement. The contractor may at his own discretion appoint more OH&S Representatives according to site specific requirements. Notwithstanding legal requirements, at least 1 (one) OH&S Representative shall be appointed, irrespective of the number of employees employed. General Administrative Regulation 6 requires that the appointment or election and subsequent designation of the OH&S representatives be conducted in consultation with employee representatives or employees (Section 17 of the Act and General Administrative Regulations 6 and 7). OH&S representatives shall be designated in writing and the designation shall include the area of responsibility of the person and term of the designation. OH&S representatives must be experienced, permanently employed by the contractor or his subcontractors, trained and able to move freely within their designated area of responsibility.

C3.5.2.3.4 Duties and Functions of the OH&S Representatives (Section 18 of the OH&S Act)

The contractor shall ensure that the designated OH&S representatives conduct continuous monitoring and monthly inspections of their respective areas of responsibility, focusing on unsafe acts and unsafe

conditions and report thereon to the contractor. OH&S representatives shall participate in accident or incident investigations. OH&S representatives shall attend all OH&S committee meetings.

C3.5.2.3.5 Appointment of OH&S Committee (Sections 19 and 20 of the OH&S Act)

The contractor shall establish an OH&S committee, which shall meet at least once a month.

C3.5.2.4 Administrative Controls and the Occupational Health & Safety File

C3.5.2.4.1 The OH&S File (Construction Regulation 7(1)(b))

As required by Construction Regulation 7(1), the contractor and subcontractors shall each keep an OH&S file on site. The following list of documentation is neither exhaustive nor prescriptive but recommended as a guide for the contents of the OH&S file:

- Notification of construction work (Construction Regulation 4)
- Latest copy of OH&S Act (General Administrative Regulation 4)
- Proof of registration and good standing with COID Insurer (Construction Regulation 5(1)(j))
- OH&S plan agreed with the Employer including the underpinning risk assessment/s and method statements (Construction Regulation 7(1))
- Copies of OH&S committee and other relevant minutes
- Designs/drawings (Construction Regulation 7(1)(e))
- A list of subcontractors including copies of the agreements between the parties and the type of work being done by each subcontractor (Construction Regulation 7(1)(f))
- Appointment/designation forms as per paragraphs C3.5.2.3.2.
- Registers as follows:
 - Accident/Incident register (Annexure 1 of the General Administrative Regulations)
 - OH&S representatives' inspection register
 - Asbestos demolition and stripping register
 - Bulk mixing plant inspections
 - Construction vehicles and mobile plant inspections by controller
 - Daily inspection of vehicles, plant and other equipment by the operator/driver/user
 - Demolition inspection register
 - Designer's inspection of structures record
 - Electrical installations, -equipment and -appliances (including portable electrical tools)
 - Excavations inspection
 - Explosive actuated fastening device inspection, maintenance, issue and returns register (including cartridges and nails)
 - Fall protection inspection register
 - First aid box contents
 - Fire equipment inspection and maintenance
 - Hazardous chemical substances record
 - Ladder inspections
 - Lifting equipment register
 - Materials hoist inspection register
 - Machinery safety inspection register (including machine guards and lock-outs)
 - Scaffolding inspections
 - Stacking and storage inspection
 - Temporary works inspections
 - Inspection of structures
 - Inspection of suspended platforms
 - Inspection of tunnelling operations
 - Inspection of vessels under pressure
 - Welding equipment inspections
 - Inspection of work conducted on or near water
 - Welfare facilities as provided

C3.5.2.5 Notification of Construction Work (Construction Regulation 3)

The contractor shall, where the contract meets the requirements laid down in Construction Regulation 4 prior to commencement notify the Department of Labour of the intention to carry out construction work and use the form (Annexure 2 in the Construction Regulations) for the purpose. A copy shall be kept on the OH&S file and a copy shall be forwarded to the Employer for record keeping purposes.

C3.5.2.6 Training and Competence

The training required by the Act and Regulations shall be included in the contractor's OH&S plan. The contractor shall be responsible for ensuring that all relevant training is undertaken. Only accredited training providers shall be used for the regulatory OH&S training. The contractor shall ensure that his and his subcontractors' personnel appointed are competent and that all training required for doing the work safely and without risk to health, has been completed before work commences. The contractor shall ensure that follow-up and refresher training is conducted as the contract work progresses and the work situation changes. This does not absolve any subcontractors from their responsibilities as employers. Records of all training must be kept on the OH&S file for auditing purposes and where appointments are made, a copy of the training certificate must be attached to the relevant appointment.

C3.5.2.7 Consultations, Communication and Liaison

OH&S liaison between the Employer, the contractor, the subcontractors, the designer and other concerned parties will be through the OH&S committee as contemplated in paragraph C3.5.2.3.5. In addition to the above, communication may be directly to the Employer or his appointed agent, verbally or in writing, as and when the need arises.

Consultation with the workforce on OH&S matters will be through their construction managers and supervisors, OH&S representatives and the OH&S committee. The contractor shall be responsible for the dissemination of all relevant OH&S information to the subcontractors e.g. design changes agreed with the Employer and the designer, instructions by the Employer and/or his agent, exchange of information between subcontractors, and the reporting of hazardous/dangerous conditions/situations. The contractors' most senior manager on site shall be required to attend and sign off the minutes of all OH&S meetings.

C3.5.2.8 Checking, Reporting and Corrective Actions

C3.5.2.8.1 Monthly Audit by Employer (Construction Regulation 5(1)(p))

The Employer will conduct monthly health and safety, and document verification audits in compliance with Construction Regulation 5(1)(o) in order to ensure that the contractor has implemented and is maintaining the agreed and approved OH&S plan.

C3.5.2.8.2 Other Audits and Inspections by the Employer

The Employer reserves the right to conduct other ad hoc audits and inspections as deemed necessary. This will include site safety walks.

C3.5.2.8.3 Contractor's Audits and Inspections

The contractor must conduct his own regular internal audits to verify compliance with his own OH&S management system, as well as with this specification. Internal audits may be conducted by the appointed Construction Manager (CR 8.1) for the site, Contractor Health and Safety Manager / Officer who is registered with the SACPCMP or a OH&S Consultant registered with the SACPCMP in a Construction Health and Safety designation. The contractor shall furthermore ensure that each subcontractor's health and safety plan is being implemented by conducting periodic audits at intervals mutually agreed between the contractor and subcontractors, but at least once per month. Audits and inspection on sub-contractors shall be conducted by the appointed Candidate construction health and safety officer or Construction health and safety officer for the site, as listed in the scope of services of the OH&S Officer in the SACPCMP Act, Act 48 of 2000 Section 18(1)(c).

C3.5.2.8.4 Inspections by OH&S Representative's and other Appointees

OH&S representatives shall conduct monthly inspections of their areas of responsibility and report thereon to their foreman or supervisor whilst other appointees shall conduct inspections and report thereon as specified in their appointments e.g. vehicle, plant and machinery drivers, operators and users must conduct daily inspections before start-up.

C3.5.2.8.5 Recording and Review of Inspection Results

All the results of the abovementioned inspections shall be in writing, reviewed at OH&S committee meetings, endorsed by the chairman of the meeting and placed on the OH&S File.

C3.5.2.9 Accidents and Incident Investigation (General Administrative Regulation 9)

The contractor and his subcontractors shall coordinate their investigation of all Section 24 accidents/incidents as well as where employees and non-employees were injured to the extent that he/she/they had to be referred for medical treatment by a doctor, hospital or clinic. The results of the investigation shall be entered into an accident/incident register listed in paragraph C3.5.2.4.1.

The affected contractor shall be responsible for the investigation of all minor as well as non-injury incidents as described in Section 24(1)(b) & (c) of the Act and keeping a record of the results of such investigations including the steps taken to prevent similar accidents in future.

C3.5.2.10 Reporting

The contractor shall provide the Employer with copies of all statutory reports required in terms of the Act within 7 days of the incident occurring.

C3.5.2.11 Medical certificate of fitness (Construction Regulations 7(1)(g) and 7(8))

The Contractor as well as the subcontractor (where appointed) shall ensure that all their employees have a valid certificate of fitness, specific to the construction work to be performed and issued by an occupational health practitioner, in the form of Annexure 3 of the Construction Regulations, GNR 84 of 2014.

C3.5.3 OPERATIONAL CONTROL

C3.5.3.1 Operational Procedures

Each construction activity shall be assessed by the contractor so as to identify operational procedures that will mitigate against the occurrence of an incident during the execution of each activity. This specification requires the contractor:

- to be conversant with all relevant Regulations;
- to comply with their provisions; and
- to include them in his OH&S plan where relevant.

C3.5.3.2 Emergency Procedures

Simultaneous with the identification of operational procedures (per paragraph C3.5.3.1 above), the contractor shall similarly identify and formulate emergency procedures in the event an incident does occur. The emergency procedures thus identified shall also be included in the principal contractor's OH&S plan, and communicated as part of induction training. It is the responsibility of the first aid worker, together with the construction supervisor, to make an assessment regarding the severity of injuries and which actions are appropriate. For example: transfer to a medical facility by ambulance or helicopter.

C3.5.3.3 Personal and Other Protective Equipment (Sections 8/15/23 of the OH&S Act)

The contractor shall identify the hazards in the workplace and conduct a risk assessment with appropriate mitigation measures. The contractor must apply the hierarchy of controls (elimination, substitution, engineering controls, administrative controls, PPE) or, where impracticable, take steps to protect workers and make it possible for them to work safely and without risk to health under hazardous conditions.

Personal protective equipment (PPE) should, however, be the last resort and there should always first be an attempt to apply engineering and other solutions to mitigating hazardous situations before the issuing of PPE is considered.

Where it is not possible to create an absolutely safe and healthy workplace the contractor shall inform employees regarding this and issue, free of charge, suitable equipment to protect them from any hazards being present and that allows them to work safely and without risk to health in a hazardous environment.

It is a further requirement that the contractor maintains the said equipment, instructs and trains the employees in the use of the equipment, and ensures that the prescribed equipment is used by the employee/s.

Employees do not have the right to refuse to use/wear the equipment prescribed by the Employer and, if it is impossible for an employee to use or wear prescribed protective equipment through health or any other reason, the employee cannot be allowed to continue working under the hazardous condition/s for which the equipment was prescribed but an alternative solution has to be found that may include relocating the employee.

The contractor shall include in his OH&S plan the PPE he intends issuing to his employees for use during construction and the sanctions he intends to apply in cases of non-conformance by his employees. Conformance to the wearing of PPE shall be discussed at the weekly inspection meetings.

C3.5.3.4 Other Regulations

Wherever in the Construction Regulations or this specification there is reference to other regulations (e.g. Construction Regulation 24: Electrical Installations and Machinery on Construction Sites) the contractor shall be conversant with and shall comply with these regulations.

C3.5.3.5 Public Health and Safety (Section 9 of the OH&S Act)

The contractor shall, as far as is reasonably practicable, be responsible for ensuring that non-employees affected by the construction work are made aware of the dangers likely to arise from said construction work as well as the precautionary measures to be observed to avoid or minimise those dangers. This includes:

- non- employees entering the site for whatever reason;
- the surrounding community; and
- passers-by to the site.

C3.5.3.6 Health related Epidemics and Pandemics

The contractor shall, as far as reasonably practicable describe in his health and safety plan how health related epidemics and pandemics will be dealt with. The employer is aware that this section in the health and safety plan will not speak to specifics, but generic procedures. Aspects that should be included as a minimum are:

- Risk Assessment reviews;
- Prevention measures;
- Response measures;
- Employee training / information sharing;
- Employee health monitoring;
- Management of infected persons;
- Isolation rooms;
- Employee transportation;
- Employee accommodation;
- Eating facilities;
- Meetings / toolbox talks / Daily safety talks;
- Cleaning of offices / facilities;
- PPE.

Once the nature and scale of the epidemic or pandemic is known, the Contractor must update his health and safety plan with the relevant information and send the updated plan to the relevant appointed OHS Agent for approval. Once approved, the Contractor must implement the updated health and safety plan and maintain the updated plan on site.

C3.5.4 PROJECT/SITE SPECIFIC BASELINE RISK ASSESSMENT

The following is a generic list of hazards and a Baseline Risk Assessment prepared by the Employer in terms of Construction Regulations 5(1)(a):

PROBABILITY LEGEND		CONSEQUENCE / INJURY / LOSS		RANKING					
A	Has happened	5	Fatality or permanent disability or > R 1,000,000		A	B	C	D	E
B	High Probability to happen	4	Major Injury or > R 500,000 < R 1,000,000	5	25	20	15	10	5
C	Could Happen	3	Average Lost time Injury or > R 250,000 < R 500,000	4	20	16	12	10	4
D	Not likely to happen	2	Minor Injury or < R 250,000	3	15	12	9	6	3
E	Very Unlikely to happen	1	Medical Treatment only or Less or No Financial loss	2	10	8	6	4	2
HIGH RISK = 15-25		MEDIUM RISK = 5-12	LOW RISK = 1-4	1	5	4	3	2	1

<u>Activity</u>	<u>Associated Hazards</u>	<u>Associated Risks</u>	<u>Risk Rating</u> High Medium Low
Site establishment	Extreme temperatures; Pesticides, herbicides, dust. Snakes, bees, spiders, vermin (rats & mice); Portable electrical equipment; Electrical hand tools; Lifting equipment; Aggrieved members of the public.	Heat exhaustion; Dehydration; Poisoning; Fatality / Serious health effect; Silicosis; Electrical shock; Personal Injuries; Falling objects; Strikes / riots	M
Security	Aggrieved members of the public; Uncontrolled people	Protest Riots Theft	M

Loading / Unloading of materials / plant & equipment from trucks	Lifting equipment; Inexperience operators; Inexperienced workers;	Material / plant falling from height; Operator losing control; Employees under / close to suspended loads.	M
Transportation of personnel / materials	Overloaded vehicles; Transportation of workers in vehicles not designed to transport people; Transporting vehicle defective / not roadworthy	Operator losing control of vehicle; Vehicle overturning; Vehicle accidents; Fatality; Serious injuries	H
Erection of temporary site offices	Extreme temperatures; Pesticides, herbicides, dust, cement; Snakes, bees, spiders, vermin (rats & mice); Portable electrical equipment; Electrical hand tools; Lifting equipment; Temporary works; Aggrieved members of the public.	Heat exhaustion; Poisoning; Fatality / Serious health effect; Silicosis; Electrical shock; Personal Injuries; Falling objects; Strikes / riots	M
Working with and handling of hazardous / flammable / toxic materials	Hazardous, flammable and toxic substances	Chemical burns; Fire; Serious injuries; Fatalities	M
Disposal of waste materials	Hazardous waste	Environmental pollution Re-use of containers can have serious health effect on people or fatal.	H
Traffic accommodation / calming	Public vehicles; Extreme temperatures Stop & Go	Employees run over by public vehicles – serious injuries / fatalities Heat exhaustion Public not adhering to stop & go signals / try to bypass stop & go – fatality / serious injuries / vehicle accidents.	H
Working in elevated positions - Working at heights, on slopes, next to excavations, on trucks.	Defective / Inadequate equipment; Improper use or non-use of fall protection equipment; Environmental conditions – rain / strong wind, lighting; Live electrical power lines; Suspension trauma.	Inadequate protection of employees against falls; Electrical Shock; Electrical arcing; Slippery work surfaces; Fatality / serious injuries;	H
Stockpiling	Material falling from stockpile	Serious personal injuries; Material damage	M
Operations involving Noise	Noise	Noise induced hearing loss	M
Operations involving Vibration	Vibration	Damage to joints, muscles, circulation and sensory nerves.	M

Working above / near water environments	Working at heights Water environment	Drowning	M
Working near existing services – overhead/underground power cables; telecommunication cables	Electricity	Electrical Shock; Electrical arching; Fire; Burns Fatality Serious injury	H
Working with portable electrical equipment – grinders, circular saws, generators	Electricity Electrical tools Portable electrical equipment	Electrical shock Cuts Personal injuries	M
Driving and operation of construction vehicles and mobile plant	Distracted drivers; Recklessness; Impaired driving; Poor visibility; Poor road conditions; Unsecured loads; Uncontrolled vehicle entry; Equipment failure; Public vehicles; Uneven ground surfaces	Fatalities; Serious injuries; Crashes; Vehicles, plant and equipment damage; Workers not seen by operators; Workers working too close to mobile plant and vehicles; Construction vehicles & mobile plant not road worthy / defective; Roll over of construction vehicles / plant.	H
Excavation work	Unstable ground Underground electrical cables; Underground pipelines; Excavation equipment, construction vehicles & plant.	Cave-ins; People falling into excavation; Workers buried in excavation due to cave-ins; Construction vehicles / plant falling into excavation; Fatalities; Serious injuries	H
Use of explosives	Explosives; Flying debris	Fatality; Serious Injuries	M
Gabion work	Manual handling Slopes Slippery Rocks	Personal injuries Trips, Slips & Falls	M
Work adjacent or in proximity of railway lines	Trains	Working too close to railway track can cause train draft to suck workers under trains. People falling onto or in front of trains while working above railway track.	H
Work adjacent or near traffic	Public vehicles	Workers not attentive to approaching vehicles. Drivers not slowing down to indicated speed limit. Drivers losing control of their vehicles.	H

Temporary works – Form work & support work	Temporary works	Falls from height; Collapse of temporary work overloading	H
Demolition work	Demolition equipment Flying debris Explosives;	Fatality; Serious Injuries; Damage to equipment; Damage to public assets	H
Work adjacent to public property	Construction plant and equipment; Excavation activities; Demolition activities;	Injury to public persons; Damage to public property and assets;	H
Protection of public H&S	Unprotected temporary works; Stockpiles; Incomplete structures.	Public persons accessing construction area, stockpiles and incomplete structures. Fatality / Serious injury to public persons	H
Welfare facilities – drinking water; eating facilities; sanitary facilities	Water not suitable for human consumption; Shortage of water; Hazardous substances; Environmental impact.	Serious health effects; Dehydration Environmental pollution	M
Working in the environment	Bees Snakes Spiders Lighting Strong winds Heavy rain Hot/cold conditions	Poisoning; Fatality / Serious health effect; Electrical shock / burns; Personal Injuries; Slips; Drowning; Heat exhaustion; Dehydration;	M
General work	Hazardous biological agents	Serious health effects; Fatality; Pandemic; Epidemic	H

C3.6 LOCAL PRODUCTION AND CONTENT

C3.6.1 SCOPE

The Department of Trade and Industry in consultation with National Treasury has designated the construction sector and determined the stipulated minimum threshold for steel products and component for construction for the state procurement for local production and content.

This sections provides the requirements for local production and content for the contract.

C3.6.2 PRODUCT DESIGNATION

The products and components for local content and production for construction are as follows:

C3.6.2.1 Steel

Only locally produced or locally manufactured steel products and components for construction with a minimum threshold for local content and production as stipulated below will be considered.

Table 1a: Minimum local content for Steel Value-added Products

Steel Construction Materials	Components	Local Content Threshold
Fabricated Structural Steel	Latticed steelwork, reinforcement steel, columns, beams, plate girders, rafters, bracing, cladding supports, stair stringers & treads, ladders, steel flooring, floor grating, hand railing and balustrading, scaffolding, ducting, gutters, launders, downpipes and trusses	100%
Joining/Connecting Components	Gussets, cleats, stiffeners, splices, cranks, kinks, doglegs, spacers, tabs and brackets	100%
Frames	Doors and windows	100%
Roof and Cladding	Bare steel cladding, galvanised steel cladding and colour coated cladding	100%
Fasteners	Bolts, nuts, rivets and nails	100%
Wire Products	All fencing products, all barbed wire and mesh fencing, fabric/mesh reinforcing, gabions, wire rope/strand and chains, welding electrodes, nails/tacks, springs and screws	100%
Ducting and Structural Pipework	Non-conveyance tubing fabricated from steel sheeting and plate with structural supports	100%
Gutters, downpipes & launders	Fabricated materials made from sheeting associated with roof drainage systems	100%

Table 1b: Minimum local content for Primary Steel Products

Steel Construction Materials	Local Content Threshold
Plates (>4,5mm thick and supplied in flat pieces)	100%
Sheets (<4,5mm thick and supplied in coils)	100%
Galvanised and Colour Coated coils	100%
Wire Rod and Drawn Wire	100%
Sections (Channels, Angles, I-Beams and H-Beams)	100%
Reinforcing bars	100%

In the designation, imported inputs raw materials (i.e. zinc and additives in the surface preparation and protection process (cleaning and coating/galvanising)) used in the production of steel products and components for the construction are deemed as locally manufactured input materials.

The imported input raw material, as specified above, used in the manufacture and production of steel products and components for construction will be deemed to have been sourced locally for the purposes of calculating local content.

C3.6.2.2 Electrical and telecommunication cables

Only locally produced or locally manufactured electrical and telecommunication cables for construction with a minimum threshold for local content and production as stipulated below will be considered.

Electrical Cables: cables used for power transmission	
Cable Products	Stipulated minimum threshold
Low Voltage	90%
Low Cost Reticulation	90%
Medium & High Voltage	90%
ACR	90%

Telecom Cables: cables used for telecommunications	
Cable Products	Stipulated minimum threshold
Optical Fibre Cables	90%
Copper Telecom Cables	90%

Excluded in the designation are mainly primary steel, copper, aluminum, polyvinyl chloride (PVC), cross-linked polyethylene (XLPE), aramid yarn, and optical fibre used for fabrication of cable products. This is to encourage local manufactures to seek the best global competitive prices for primary materials hence the competitive imported materials used in the manufacture of cables will be deemed to have been sourced locally for the purposes of calculating local content.

C3.6.3 COMPLIANCE

Contractors may not subcontract any work in such a manner that the local production and content of the designated products does not meet the specified thresholds.

The completed Form A3.5 (SBD6.2): Declaration Certificate for Local Production and Content for Designated Sectors and Form A3.6: Local Content Declaration: Summary Schedule (Annexure C), submitted by the Contractor are included as part of the contract in Part C5 Annexure.

The Department of Trade and Industry will undertake compliance audits with a view to monitor the implementation of the industrial development strategies.

C3.6.4 MEASUREMENT AND PAYMENT

The Contractor shall not be separately reimbursed or compensated in respect of compliance with the provisions of this clause C3.6. All costs incurred in this regard shall be considered to be included in the rates tendered for the various items of work listed in the Bill of Quantities.

C3.7 PROCESS WHEN REQUESTING EXEMPTION LETTER FROM DTI

For exemption requests on designated products and the minimum threshold for local content cannot be met for various reasons, bidders must apply for exemption per tender. After checking with the industry, the DTI will decide whether to grant an exemption or not.

In the official request (signed letter), the following information should be included:

- Procuring entity/government department/state owned company.
- Tender/bid number.
- Closing date,
- Item(s) for which exemption is being requested for.
- Description of the goods, services or works for which the requested exemption item will be used for and the local content that can be met,
- Reason(s) for the request.
- Supporting letters from local manufacturers and suppliers.

NB – Exemption letters are tender specific and applications are not transferrable.

The turnaround time in response to exemption letters for all designated products is five working days with the exception of rail and boats/vessels which is seven working days.

Request for exemption letters are to be directed to:

Dr Tebogo Makube

Chief Director: Industrial Procurement

Tel: 012 394 3927

E-mail: tmakube@thedti.gov.za

The turnaround time in response to textile, clothing, leather and footwear exemption letters request is two working days and requests are to be directed to:

Patricia Khumalo

Tel: 012 394 1390

E-mail: khumaloP@thedti.gov.za

PART D: STAKEHOLDER AND COMMUNITY LIAISON, AND TARGETED LABOUR AND TARGETED ENTERPRISES UTILISATION AND DEVELOPMENT

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D1001 SCOPE

This section describes the structured engagement with project Stakeholders and affected Communities. It also guides the selection and the enhanced utilisation and development of Targeted Labour and Targeted Enterprises.

The scope of the work described in this section shall be based on the Employer's 14 principles for project liaison, sub-contracting and labour sourcing in all SANRAL projects, which are stipulated below:

1. Establish project liaison committees (PLCs) in each project to create a platform for project liaison, works execution, sub-contracting and employment facilitation.
2. SANRAL to chair PLCs and provide secretarial support. Representation to comprise: SANRAL; contractor; consultant; business representatives; traditional representatives; provincial and municipal government representatives (not politicians); community representatives; and any other critical local stakeholder that may be deemed necessary by the PLC.
3. Project Liaison Officer (PLO) selection to be done under the auspices of the PLC.
4. Definition of a target area (sometimes referred to as a local area or traffic area) to be done under the auspices of the PLC.
5. Setup a database of contractors and suppliers (and consultants where relevant) to be done under the auspices of PLC. The final database to be signed off by the PLC.
6. Setup of database of local labour for the targeted area to be done under the auspices of the PLC. The final list to be signed off by the PLC. An agreed system of labour selection from the database is to be agreed at the PLC.
7. Handover of signed-off databases for sub-contracting and labour to contractor for open tender process and recruitment respectively done by the PLC.
8. Tender to be conducted by contractor using government principles (e.g. public opening of received bids, announcement of bidders and prices). Tabling of winning bidders in the PLC.
9. Appeals on the tender process to be escalated to SANRAL for an independent review.
10. Capability assessments of contractors and suppliers to be done under auspices of PLC prior to tender stage, to identify any deficiencies in skills and experience. For labour, skills assessments are to be done at recruitment stage.
11. Contractor development support and training to be coordinated and conducted, ahead under the auspices of the PLC, prior to project commencement.
12. Identification of works areas that are deliverable by local service providers, and areas where capabilities are not available locally. All works areas where capabilities are not available locally shall be imported and locals will be given an opportunity to learn.
13. Formal contracting arrangements to be ensured for all projects.
14. Communication to be streamlined through the PLC and used to manage expectations of local business and communities.

These principles are applied to facilitate better project level liaison with local communities and structures. They also serve to ensure communication and transparency in the execution of works and to ensure inclusivity in the allocation of projects to benefit black business and local communities.

D1002 DEFINITIONS AND APPLICABLE LEGISLATION**a) Definitions**

Unless inconsistent with the context, in these specifications, the following terms, words or expressions shall have the meanings hereby assigned to them:

- (i) Business Coaching
Business coaching establishes an atmosphere of mutual trust, respect, responsibility and accountability to motivate the business owner and his team.

To that end, the business coach must conduct an ethical and competent practice, based on appropriate professional experience and business knowledge.

(ii) Community¹

South African Citizens, as defined in terms of the South African Citizenship Act, 1995 (Act 88 of 1995), who permanently reside within the Target and Project Area(s) of the project.

(iii) Contract Participation

A process by which the Employer implements Government's objectives by setting targets to enhance Targeted Labour and Targeted Enterprises' utilisation and development, which the Contractor shall achieve as a minimum.

(iv) Contract Participation Goal (CPG)

The monetary value of the targets set by the Employer in the Contract Participation process and stated in the Contract Data.

(v) Contract Participation Performance (CPP)

The measure of the Contractor's progress in achieving the CPG.

(vi) Designated Group^{2, 3}

Unless otherwise permissible in terms of procurement regulations or the PPPFA, "Designated Group" means:

- a. black designated groups;
- b. black people;
- c. women;
- d. people with disabilities; or
- e. small enterprises, as defined in section 1 of the National Small Enterprise Act, 1996 (Act No. 102 of 1996);

(vii) Guidance

Guidance is anticipating where one might go wrong, or where one is doing a task in a complicated, inefficient or ineffective way, and giving help, advice and direction as to how to achieve a better result. Guidance is mostly given by a person in the direct reporting line, but can be given by anyone. Guidance is not imparting skills, but suggesting ways to improve performance.

(viii) Labour

Persons:

- a. who are employed by the Contractor or a Subcontractor in the performance of the Contract; and
- b. who resides in the Project Area; and
- c. whose monthly earnings are derived from hours worked for a fixed hourly rate which is adjusted from time to time by legislation (as a statutory minimum) and the Contractor's or Subcontractor's employment policies;

d. but who are not Targeted Labour.

Note:

The personnel employed by the suppliers of goods and material are not defined as “Labour” for the purposes of this Contract.

(ix) Mentoring

Mentoring is a professional relationship in which an experienced business person assists another by giving advice and imparting their knowledge and wisdom in developing special skills and knowledge that will enhance the less experienced person's professional and personal growth. The objective is to equip the business owner and his team to improve their decision-making skills, being focussed and make positive progress quickly.

(x) Mobilisation Period

The period from the Commencement Date until the physical commencement of the Works, as defined in the Conditions of Contract.

(xi) Project Area

The area through which the road under construction traverse or which is adjacent to and/or in proximity to project operations.

Based on market research and/or resources and skills audits, the Contractor, in liaison with the PLC, could also identify and agree Project Areas where preference would be given to Targeted Enterprises from these areas for sub-contracting.

(xii) Project Liaison Committee (PLC)⁴

The Committee that represents the project's Stakeholders and the Communities affected by the project.

Note:

- a. Elected and/or nominated political office bearers shall not be members of the PLC.
- b. The Employer, Engineer and Contractor participates in this Committee at the relevant project stages and as far as it is within the scope of their respective roles and responsibilities.

(xiii) Project Liaison Officer (PLO)⁵

The person who acts as the liaison officer for the project. The PLO facilitates the selection of Targeted Labour to be employed by the Contractor and attends to the day to day project, Stakeholder, and Community matters that impact on the parties to the project.

(xiv) Stakeholders⁶

Any Stakeholder listed in the Employer's Communication Policy, March 2018, who is affected by the Employer's operations in the Project Area(s) and/or who has an interest or concern in the project, either as a decision maker,

participant or affected party and may include, amongst others, the following entities:

- a. Relevant Provincial departments;
- b. Relevant Municipal departments;
- c. Traditional authorities;
- d. Community interest groups;
- e. Organised youth representation;
- f. Organised women representation;
- g. Organised disabled people representation;
- h. Other structured community groups such as religion, education, farming, etc.
- i. Local transport industry forums, e.g. Bus and taxi;
- j. Business sector forums;
- k. Road user forums;
- l. Environmental interest groups;
- m. Road safety interest groups;
- n. Any other recognised relevant and representative structure.

(xv) Subcontractor

An entity appointed by the Contractor to execute a portion of the Works as defined in the Conditions of Contract.

(xvi) Target Area

The geographic area defined in the Contract Data for Targeted Labour and which typically are:

- a. one or more Provinces;
- b. one or more Metropolitan or District Municipalities;
- c. one or more Local Municipalities;
- d. one or more Wards that are predominantly located within an area and within a predefined radius of the construction activity;
- e. one or more of the areas listed in the definition of Designated Groups.

(xvii) Targeted Enterprise⁷

A Targeted Enterprise is an entity to which the Contractor sub-contracts a percentage of the contract value as a condition of contract and which is:

- a. an EME or QSE which is at least 51% owned by black people;
- b. an EME or QSE which is at least 51% owned by black people who are youth;
- c. an EME or QSE which is at least 51% owned by black people who are women;
- d. an EME or QSE which is at least 51% owned by black people with disabilities;
- e. an EME or QSE which is 51% owned by black people living in rural or underdeveloped areas or townships;
- f. a cooperative which is at least 51% owned by black people;
- g. an EME or QSE which is at least 51% owned by black people who are military veterans

In addition, Targeted Enterprises must be:

- a. CIDB registered where applicable;
- b. tax compliant prior to award of the subcontract;
- c. must be a company in which the Main Contractor has no equity/shareholding

d. COIDA compliant prior to award of the subcontract

(xviii) Targeted Enterprise Construction Manager/ Target Group Development Coordinator (TGDC)

The full-time staff member or service provider appointed by the Contractor to develop, implement and monitor the training, development and support of Targeted Labour and Targeted Enterprises. The Targeted Enterprise Construction Manager also mentors, guides and coaches the Targeted Enterprises.

(xix) Targeted Enterprise Procurement Coordinator (TE Procurement Coordinator)

The person employed, or entity appointed, by the Contractor to facilitate the procurement of Targeted Enterprises.

(xx) Target Group

It is a group of business entities and/or groups selected from the Designated Group as defined in the Preferential Procurement Policy Framework Act Regulations, 2017 and is thus a combination of Targeted Enterprises and Targeted Labour.

(xxi) Targeted Labour⁸

Persons:

- a. who are employed by the Contractor or a Subcontractor in the performance of the Contract; and
- b. whose monthly earnings are derived from hours worked for a fixed hourly rate which is adjusted from time to time by legislation (as a statutory minimum) and the Contractor's or Subcontractor's employment policies; and
- c. permanently reside in the Target Area(s) or who are recognized as being residents of the Target Area(s) based on identification and association with, and recognition by, the residents of the Target Area(s); and
- d. who are defined as Targeted Labour in the Contract Data.

(xxii) Training

Training refers to the process of teaching a Trainee, usually in a classroom or simulated work environment situation where principles, skills, knowledge and theory are taught and demonstrations are given. Assignments are then set to ensure that the Trainee can apply what has been taught. Training is done by a specialist in the subject, and who is qualified and accredited to train. The objective is to improve the competency of the participant.

b) Applicable Legislation and Standards

The following Acts, as amended from time to time, are predominant amongst those which apply to the Construction Industry and are listed here for reference purposes only:

- i. The Constitution of South Africa;
- ii. Public Finance Management Act, 1999 (Act No. 1 of 1999);
- iii. Preferential Procurement Policy Framework Act, 2000 (Act No. 5 of 2000) and its regulations;

- iv. Construction Industry Development Board Act, 2000 (Act No. 38 of 2000);
- v. Broad-Based Black Economic Empowerment Act, 2003 (Act No. 53 of 2003).
- vi. The South African National Roads Agency Limited and National Roads Act, 1998 (Act No. 7 of 1998); and
- vii. The Skills Development Act, 1998 (Act No. 97 of 1998).
- viii. The amended Construction Sector Codes published in Notice 931 of 2017 of Government Gazette No. 41287 on 1 December 2017 by the Department of Trade and Industry.

The following Standards and Practice Notes, as amended from time to time, are applicable in terms of Targeted Labour and Targeted Enterprises and are used fully or portions thereof:

- i. SANS 10845: 2015, Parts 5, 7 and 8; and
- ii. CIDB Standard for Contract Participation Goals for Targeted Enterprises and Labour through Construction Works Contracts, 31 October 2017.

D1003 TARGET GROUP PARTICIPATION

a) Objective

Amongst others, the key objectives of Government are to extend economic opportunities and build entrepreneurial capacity in rural or underdeveloped areas or townships by:

- i. optimising the utilisation of local resources in the Project Area;
- ii. developing these local resources in the execution of the project; and
- iii. maximising the amount of funds retained within the Project Area.

To give effect to these objectives the Contractor shall:

- a. recruit Targeted Labour from the Target Area(s) as stated in the Contract Data; and
- b. subcontract Targeted Enterprises as stated in the Contract Data and give preference to those Targeted Enterprises which are from rural or underdeveloped areas and/or within the Project Area, of which the extent of these areas are based on market research and/or skills and resources audits.

b) Targeted Labour Database

A Targeted Labour Database shall be compiled by the Project Liaison Officer (PLO), with inputs from the Employer, Engineer, Contractor, the Project Liaison Committee (PLC) and the Department of Labour, for the Target Area(s). Once accepted by the parties, the PLO shall utilise this Database to facilitate the selection of Targeted Labour from the Database as per the skills required by the Contractor.

The Targeted Labour Database shall be updated as and when required and as agreed with the parties to reflect new employment seekers in the labour market. Only Labour recruited from the Targeted Labour Database will be measured for Contract Participation Performance (CPP).

c) Targeted Enterprise Database

Following market research and/or a resources and skills audit of Targeted Enterprises in the Project Area, the Contractor shall apply the CPG criteria in the Contract Data to compile a **preliminary** Targeted Enterprise Database.

To inform the market research and/or resources and skills audit, the Contractor shall use, as a minimum, the National Treasury's CSD (to be obtained from the Employer) and the CIDB contractor database. Other databases, e.g. the Local Municipality's Economic Development database, may also be considered to determine the

available resources and skills in the Project Area. The purposes of the preliminary Targeted Enterprise Database are:

- i. for the Contractor to determine if the required resources and skills to execute the identified Targeted Enterprise work packages are available in the anticipated Project Area(s);
- ii. for the PLC to verify that Targeted Enterprises on the preliminary Targeted Enterprise Database are authentic in terms of the Contract Data and other Database criteria agreed with the Employer, Engineer and the Contractor, and
- iii. for the PLC to alert Targeted Enterprises that are not on the preliminary Database, but that are known to the PLC to be possibly eligible or qualifying, of the opportunity.

Based on the above considerations, additional criteria for the Targeted Enterprise Database may be agreed by the Contractor with the Employer, Engineer and the PLC to ensure that the EME and QSE enterprises are targeted as intended by the Employer.

Once the Targeted Enterprise Database has been accepted by the Employer, Engineer and the PLC, the Contractor shall invite Targeted Enterprises to tender for the Targeted Enterprise work packages and preference shall be given to those Targeted Enterprises that adheres to the Database criteria.

Note:

- a. The Targeted Enterprise Database shall be a “live database”. Essentially, it is thus not the Database that is accepted by the Employer, Engineer and the PLC, but rather the **criteria** for compiling the Database.
- b. Any Targeted Enterprise may respond to the invitation to tender, but preference shall be given to those Targeted Enterprises that adheres to the Database criteria, which shall be measured in terms of eligibility and by means of a functionality evaluation.

The Targeted Enterprise Database criteria shall be updated at every instance that a new tender or group of similar tenders are being let for Targeted Enterprise work packages.

Targeted Enterprises within the Project Area shall be encouraged and assisted to register on the CSD and to be compliant with all other statutory requirements.

d) Contract Participation Goal (CPG)

The CPG is the monetary value of the targets set by the Employer and will be calculated as follows:

$$\text{CPG} = \text{Final Contract Value} \times \% \text{ Targeted Enterprise}$$

The Final Contract Value is the total value of the Contractor's final certified work measured at the date of issue of the Taking-Over Certificate. The Final Contract Value include the value of scheduled work and extra work but exclude any Contract Price Adjustment and adjustments for reduced payments, Rise and Fall, Retention Money, Penalties and VAT.

The value of the Prime Cost Sums scheduled under item M920.02 will not necessarily make up the full value of the works required to meet the minimum target set by the Employer for Targeted Enterprises. It is the Contractor's responsibility to assess the work required to meet the targets and, if necessary, to engage additional Targeted Enterprises to execute work on the Contract as well to ensure that the minimum targets are achieved.

The completed ITIS report printout of the module for job creation shall accompany the Contractor's monthly claim presented to the Engineer for payment of certified completed work. Failure to adhere to this requirement shall result in the delay of any payment due until the Engineer confirms that the forms have been received.

e) Contract Participation Performance (CPP)

The CPP is the monetary value of the Contractor's actual progress towards achievement of the CPG calculated as follows:

CPP = total value (excluding VAT) of total value of Targeted Enterprises contribution (excluding VAT) .

The Contractor's CPP shall be monitored monthly to determine the extent to which it is striving to achieve the CPG. The basis of monitoring shall be the levels of the individual contributions for Targeted Enterprises as captured monthly in ITIS project module and ITIS report printout. Monthly returns, in the format required by the Employer, shall be submitted by the Contractor with each interim Payment Certificate.

To assist in the measurement of the CPP the Contractor shall include in its contract programme details of how the CPG will be achieved. The detail shall be provided not later than 1 (one) month after the Engineer has accepted the original construction programme and updated with every subsequent revision.

As an incentive to encourage the Contractor to exceed the CPG, a bonus is offered, measured as follows:

The bonus = $0.10 \times (CPP - CPG)$

Any bonus due (or portion thereof) shall be calculated on the Final Contract Value. No bonus shall apply if Targeted Enterprises and/or any individual sub-targets for Target Groups are not reached. The bonus shall be capped at R500 000.

Conversely, failure to reach either the CPG or any individual Target Group targets shall render the Contractor liable for a penalty as prescribed in clause 8.7 of the FIDIC Conditions of Contract. Penalties for Targeted Enterprises shall be calculated as follows:

Penalty Targeted Enterprises = $0.15 \times (\text{Sum } (TE_n - TGE_n) - 1.2 \times TE_{mv} - 1.2 \times TE_{dp})$

Where:

$n =$	Each lowest order subgroup of Targeted Enterprise stipulated in the Contract Data.
$TE =$	Monetary value (excluding VAT) of Targeted Enterprises calculated at the percentage stipulated in the Contract Data applied to the final contract value (excluding VAT).
$TGE =$	Cumulative monetary value (excluding VAT) by Targeted Enterprises subcontracted to the contract by the Contractor and cumulative monetary value (excluding VAT) by Targeted Enterprise suppliers of goods and/or services.
$TE_{mv} =$	Cumulative monetary value (excluding VAT) by Targeted Enterprises being majority owned by black Military Veterans, subcontracted to the Contract by the Contractor.
$TE_{dp} =$	Cumulative monetary value (excluding VAT) by Targeted Enterprises being majority owned by black Disabled Persons, subcontracted to the Contract by the Contractor.
$(TE_n - TGE_n) =$	The monetary values calculated unless if any calculated value is negative, then it shall be a zero value.

Total Penalty = Penalty Targeted Enterprises

The total Penalty value shall be the Targeted Enterprises Penalty values unless the total Penalty value is negative then it shall be a zero value.

Interim penalty valuations should be calculated to interim Payment Certificate values (excluding VAT) to establish the anticipated outcome, and to plan corrective actions, but must not be applied to the interim certificate value.

Any Penalty payable shall be calculated on, and applied to, the Final Contract Value.

f) Accredited Registration

The CPP for Targeted Enterprises shall only be accepted if the respective Targeted Enterprises comply fully with the definition of a Targeted Enterprise, and documentary evidence to support the claim lodged with the Engineer before the work, goods or service may be considered as having been performed by a Targeted Enterprise. The responsibility for producing evidence of the respective documentation shall rest with the Contractor.

The Contractor shall assume responsibility for the compilation and maintenance of comprehensive records detailing each Targeted Enterprise's progress.

g) Contractor's Responsibility

In terms of the Conditions of Contract, all Targeted Labour recruitment and employment and Targeted Enterprises subcontracting, as well as its associated risks, shall remain the sole responsibility of the Contractor.

From the commencement date of the Works contract, the Contractor shall have a maximum of six (6) months to appoint subcontractors in terms of the specifications. During this period, all work required and undertaken by the Contractor shall count towards the Contractor's own CPG portion irrespective of any delays the Contractor may encounter in appointing subcontractors.

Delays in the appointment of subcontractors outside of the allowable six (6) months will be penalised at the rate stipulated in Subclause 8.7 of the Contract Data unless the Contractor can prove that the delay is not of his own doing.

The Employers CPG requirements, and the compulsory utilisation of project specific Targeted Labour and Targeted Enterprises databases, shall not relieve the Contractor of its obligations under the Contract and shall not attract any liability to the Employer.

D1004 STAKEHOLDER AND COMMUNITY LIAISON AND SOCIAL FACILITATION

a) Purpose

To give effect to the need for transparency and inclusion in the process of delivering services, the Contractor shall liaise with the project Stakeholders and affected Communities for the duration of the Contract's life cycle. This shall be achieved through structured engagement with the PLC which was established by the Employer for this purpose.

b) Contractor's Responsibility

- (i) The Contractor shall make use of the PLC as the official communication channel, and utilise it to facilitate harmonious relationships, with project Stakeholders and affected Communities.
- (ii) The Contractor shall delegate from among its site personnel a responsible person to serve on, and participate in, the PLC and its business.
- (iii) The Contractor shall provide the PLC with any assistance and information that it requires to execute its duties, e.g. training, meeting venue on site, Target Group reports, etc.
- (iv) In terms of the Conditions of Contract, all Targeted Labour recruitment and employment, and Targeted Enterprises' selection and appointment, as well as its associated risks, shall remain the sole responsibility of the Contractor.
- (v) The Employer's assistance in establishing a PLC and providing a PLO to the Contractor, shall not relieve the Contractor of its obligations under the Contract and shall not attract any liability to the Employer.

Note:

In terms of the Conditions of Contract Targeted Enterprises' selection and sub-contracting, as well as its associated risks, shall remain the sole responsibility of the Contractor. The Employer's assistance in establishing a PLC and providing a PLO to the Contractor shall not relieve the Contractor of its obligations under the Contract and shall not attract any liability to the Employer.

c) Project Liaison Committee (PLC)

A PLC has either been established prior to commencement of the Contract or shall be established as soon as possible by the Employer. The PLC consist of representatives of project Stakeholders and affected Communities, as well as the PMT and their representatives.

PLC meetings shall be chaired by the Employer's representative while the Engineer's representative shall provide a secretarial service to take minutes of these meetings.

Secretarial support other than taking minutes at PLC meetings shall be provided by the PLO.

d) Duties of the PLC

The PLC is the official communication channel through which the PMT communicates with project Stakeholders and affected Communities on project matters, as well as to communicate the impact that the project has or might have on project Stakeholders and the affected Communities.

The PLC is also the official communication channel through which project Stakeholders and the affected Communities communicates with the PMT on the impact that the project has on them, or is anticipated to have on them, or on any other project matters.

The Standard Terms of Reference (TOR) for PLCs requires of the PLC to execute specific duties during each stage of the project, i.e. from project initiation to project completion. Some of these duties overlap project stages and hence, a full description is provided here.

The PLC shall execute the following duties:

Project Initiation and Design Stages

- a. Meet as often as required with the Employer and the Engineer to discuss and resolve the project's initiation and design stage matters, which are of interest or concern to project Stakeholders, the affected Communities, the Employer and the Engineer.
- b. Peruse the SANRAL Project Liaison Committee Guidelines and make recommendations on the duties of, and procedures to be followed by, the PLC to fulfil its duties.
Note: The principles of the Guidelines shall not be amended, but duties and procedures may be altered to be project specific and to improve the functionality of the PLC.
- c. Act in accordance to the agreed terms of reference for the PLC.
- d. Inform the Employer of any training that members of the PLC require to execute its duties.
- e. Assist the Employer and Engineer to source suitable candidates, based on the Employer's qualifying criteria, for the position of PLO.
- f. Observe and verify that the qualifying criteria and procedures applied by the Employer and Engineer to select and employ the PLO were executed in a fair and transparent manner, and were within the prescripts of the relevant legislation and regulations.
- g. Make recommendations to the Employer and the Engineer in identifying the project's Target and Project Area(s), from which Targeted Labour and Targeted Enterprises could be employed and subcontracted respectively and acknowledge the identified Target and Project Area(s).
- h. Make recommendations to the Employer and the Engineer in identifying the project's Target Groups for inclusion in the Tender Documents and acknowledge the identified Target Groups.

Project Construction Stage

- a. Meet formally prior to the monthly site meeting, or as may be required, to discuss and resolve project matters, which are of interest or concern to project Stakeholders, the affected Communities, the Employer, the Engineer and the Contractor.
- b. Give input to the Contractor in establishing the eligibility and preference criteria to employ Targeted Labour and subcontract Targeted Enterprises and sign off the agreed criteria.
- c. Peruse and acknowledge the Databases compiled by the PLO and the Contractor from which Targeted Labour will be employed and Targeted Enterprises will be subcontracted respectively.
- d. Verify that the criteria and methodologies applied by the Contractor to employ Targeted Labour and subcontract Targeted Enterprises are executed in a fair and transparent manner, and within the Employer's and Government's Supply Chain Management Policies.
- e. Verify that the conditions of employment and the conditions of subcontracting, in the employment of Targeted Labour and subcontracting of Targeted Enterprises are applied in a fair and transparent manner and according to the Employer's employment and subcontracting requirements.
- f. Make recommendations to the Contractor on the training needs, eligibility criteria and selection criteria for the provision of training to Targeted Labour, Targeted Enterprises, Designated Groups, project Stakeholders and the affected Communities.
- g. Observe and verify that training programmes and support programmes, which the Contractor committed to, are implemented and executed as intended.
- h. Inform the entities whom they represent of any project matters which the Employer, Engineer and Contractor wishes to communicate with project Stakeholders and the affected Communities.
- i. Inform the entities whom they represent of any project matters that are impacting or may impact, either positively or negatively, on project Stakeholders and the affected Communities.

- j. Inform the Contractor of Stakeholder and/or Community requests and/or needs, which could possibly be addressed within the project's Scope of Work.
- k. Inform the Employer, Engineer and Contractor of any road safety concerns within the Project Area(s) and advise them of possible mitigating measures and/or road safety programs that will be most suitable for acceptance by the affected Communities to promote road safety.
- l. Inform the Employer, Engineer and Contractor of any project matters that are impacting, or are anticipated to impact, negatively on project Stakeholders and the affected Communities.
- m. Agree with the Employer, Engineer and Contractor on a dispute resolution mechanism to resolve any disputes that may arise between the Employer, Engineer, Contractor, PLC, project Stakeholders and/or affected Communities.
- n. Assist the Employer, Engineer and Contractor to liaise with project Stakeholders and the affected Communities to resolve any disputes between the Employer, Engineer and/or Contractor and project Stakeholders and the affected Communities, which occurred due to the project.

e) Duties of the PLO

The PLO shall facilitate the employment of Targeted Labour and shall coordinate communication between the PMT and the PLC to address the day to day project, Stakeholder, and Community matters that impact on the parties to the project.

The Standard TOR for PLOs requires of the PLO to execute specific duties during each stage of the project, i.e. from project initiation to project completion. Some of these duties overlap project stages and hence, a full description is provided here.

The PLO shall execute the following duties:

- (i) Except for taking the minutes of PLC meetings, which is a duty of the Engineer or his representative, the PLO shall provide a secretariat function to the PLC which includes, amongst others, the following:
 - a. Schedule meetings;
 - b. Compile meeting agendas;
 - c. Compile document packages for meetings;
 - d. Distribute minutes of meetings;
 - e. Assist PLC to formulate their communication in writing;
 - f. Distribute written communication to and from the PMT and the PLC;
 - g. Keep records of all the above and any other PLC documentation; and
 - h. Provide any other reasonable secretariat function pertaining to the PLC.
- (ii) Attend all PLC meetings to report on the day to day project, Stakeholder and Community matters that impact on the parties to the project.
- (iii) Attend all monthly site meetings to report on the day to day project, Stakeholder and community matters that impact on the parties to the project.
- (iv) Attend any other meetings related to the project and in which any of the project Stakeholders, affected Communities, Local/Targeted Labour and Local/Targeted Enterprises are involved.
- (v) Maintain a full-time presence on site to monitor and address the day to day project, Stakeholder and Community matters that impact on the parties to the project.
- (vi) Maintain a full-time presence on site to assist the PMT in the day to day liaison with project Stakeholders and affected Communities. Typical information to be disseminated by the PLO includes:
 - a. basic Scope of the Works and how it will affect the Community;
 - b. project programme and regular progress updates;

- c. anticipated employment and subcontracting opportunities;
 - d. project programme as it pertains to the employment of Targeted Labour and subcontracting of Targeted Enterprises;
 - e. Occupational Health and Safety precautions; and
 - f. any other information relevant to project Stakeholders and the affected Communities.
- (vii) Be well acquainted with the contractual requirements as it pertains to Targeted Labour employment and training requirements.
 - (viii) Assist the PMT and PLC to establish and agree the eligibility and selection criteria to be followed when employing Targeted Labour.
 - (ix) Assist the PMT in its resources and skills audits by providing a coordinating function between the PMT, project Stakeholders, and the affected Communities.
 - (x) Ensure that Targeted Labour databases, compiled from the resources and skills audits, are based on the agreed eligibility and selection criteria and that it is updated as and when required.
 - (xi) Coordinate the selection and employment of Targeted Labour based on the agreed eligibility and selection criteria and based on the Contractor's labour requirements.
 - (xii) Ensure that each Labourer enters into an employment contract which adheres to current and relevant Labour legislation.
 - (xiii) Ensure that each Labourer understands the conditions of his/her employment with an emphasis on the employment start date, end date and wages payable.
 - (xiv) Identify and inform the PMT of any relevant training required by the Targeted Labour.
 - (xv) Attend all disciplinary proceedings to ensure that hearings are fair and conducted in accordance to the current and relevant Labour legislation.
 - (xvi) Be proactive in identifying PLC, project Stakeholder, affected Communities (including Targeted Labour and/or Targeted Enterprise Subcontractor), requirements, disputes, unrest, strikes, etc. and bring it to the attention of the PMT.
 - (xvii) Assist the PMT to liaise with the PLC, project Stakeholders and the affected Communities to resolve any disputes, which occurs due to the project.
 - (xviii) Other than the document records to be kept as mentioned in (i) above, keep record of all other documents and processes pertaining to the employment of Targeted Labour and any other records that may be of relevance to the functions of the PLC.
 - (xix) Produce and submit a monthly report to the PMT and the PLC on PLC meetings, other meetings attended by the PLO, Targeted Labour employment, and project Stakeholder, affected Community and any other project matters that impact on the parties to the project.

D1005 MOBILISATION PERIOD

During the site establishment stage, but prior to the commencement of the Works, the Contractor or its authorised representative, shall become acquainted with the lines of communication and the agreed dispute resolution mechanism between the PMT, PLC, project Stakeholders and affected Communities. The Contractor shall also follow the agreed eligibility criteria, prequalification criteria and tender processes and procedures to employ Targeted Labour and subcontract Targeted Enterprises.

The above project Stakeholder and Community engagement shall be executed based on the Employer's social facilitation principles and processes.

During the Mobilisation Period, the Contractor shall, where required, execute the following duties:

- a) Liaise with the Employer, Engineer, PLC and PLO to identify and structure the work packages to be subcontracted to Targeted Enterprises.

- b) Liaise with the Employer, Engineer, PLC and PLO to finalise the Project Database(s) to be utilised for subcontracting with Targeted Enterprises.
- c) Liaise with the Employer, Engineer, PLC and PLO to finalise the Project Database(s) to be utilised for the employment of Targeted Labour.
- d) Produce an acceptable CPG Procurement Plan, which sets out how the Contractor intends to achieve the various CPG targets for Targeted as stated in the Contract Data, complete with dates, work packages and values of work.
- e) Undertake a skills audit of the Targeted Labour and Targeted Enterprises which appear on the respective database(s).
- f) Based on the skills audit, and in consultation with the Employer, Engineer, PLC and PLO, identify the pre-tender training requirements of Targeted Enterprises.
- g) Provide an opportunity to eligible Targeted Enterprises to receive the identified pre-tender training.
- h) Based on the skills audit, and in consultation with the Employer, Engineer, PLC and PLO, identify the training requirements of Targeted Labour to make them more employable. Provide an opportunity to eligible Targeted Labour to receive the identified training to enable them to be more employable.

Notes:

- (i) The accepted CPG Procurement Plan and any amendments thereof shall be made available to the PLC for their monitoring purposes.
- (ii) The Employer and the Engineer shall monitor progress and adherence to the CPG Procurement Plan in the same manner as they would monitor the works programme.
- (iii) It is evident that all training requirements cannot be addressed during the Mobilisation Period and that training will take place over the duration of the Contract. The training provided to both Targeted Enterprises and Targeted Labour during the Mobilisation Period shall therefore be focused on the activities and/or skills required for the commencement of the Works.

D1006 PROJECT MANAGEMENT TEAM (PMT)

The PMT, which consists of the Employer, Engineer, and the Contractor, or their representatives, is a party to the PLC and hence, is co-responsible for successful project Stakeholder and Community liaison. The PMT is also responsible for the successful implementation of the Employer's Targeted Labour and Targeted Enterprise utilisation and development goals.

In terms of implementing the Employer's Targeted Labour and Targeted Enterprise utilisation and development goals, the PMT shall, where required, execute the following duties:

- a) Make recommendations to the Contractor in the identification and structuring of the work packages to be subcontracted to Targeted Enterprises, and agree to the scope and extent of the work packages.
- b) Verify that the Project Database(s) from which Targeted Enterprises will be subcontracted has been updated, prior to the letting of every new set of subcontracts.
- c) Approve all Databases, tender procedures, tender documents, tender submission requirements and adjudication processes for the subcontracting of Targeted Enterprises.
- d) Review all tender adjudication reports and monitor that the criteria and procedures applied by the Contractor to subcontract Targeted Enterprises are executed in a fair and transparent manner, and are within the Employer's and Government's Supply Chain Management Policies.
- e) Approve subcontract agreements and ensure that the conditions of subcontracting with Targeted Enterprises are fair and transparent and within the prescripts of the Contract requirements.
- f) Monitor the management of Targeted Enterprise subcontracts and ensure that conditions such as the application of penalties, the termination of contracts, etc. are applied in a fair and transparent manner and within the prescripts of the agreement.

- g) Verify that the Project Database(s) compiled by the PLO from which Targeted Labour will be employed is updated prior to every new Labour intake.
- h) Monitor that the criteria and procedures applied by the Contractor to employ Targeted Labour are executed in a fair and transparent manner, and is within the Contract requirements.
- i) Monitor that the conditions of employment of Targeted Labour are applied in a fair and transparent manner and within the prescripts of the current and relevant Labour legislation.
- j) Make recommendations to the Contractor in the identification of the training requirements of Targeted Labour and Targeted Enterprises and approve the proposed training programmes.
- k) Monitor that training programmes and support programmes, which the Contractor committed to, are implemented and executed as intended.

D1007 TENDER PROCESS FOR TARGETED ENTERPRISES

While the Contractor shall utilise service providers, sub-contractors and suppliers of its choice and selected via its own internal processes, for subcontracting Targeted Enterprises based on the Employer's Contract Participation Goals, the Contractor shall follow the prescripts of this Section D, with specific reference to D1003 to D1007.

Targeted Enterprise subcontracting is concluded after award of the Contract to the Contractor. The Contractor shall appoint a Targeted Enterprise Procurement Coordinator (TEPC) to facilitate the subcontracting of work to Targeted Enterprises as listed in the Contract Data.

The TEPC shall use the Employer's standard subcontracting proforma when developing and establishing eligibility criteria, prequalification criteria, and tender processes and procedures for subcontracting, which shall be approved by the PMT, endorsed by the PLC, when subcontracting any work to Targeted Enterprises.

The following tasks are expected:

- (i) If not identified yet, identify the work package types (scope of work) and determine the number of work packages to be subcontracted.
- (ii) If not detailed in the Contract Data, identify the Targeted Enterprise types to benefit from the work packages, e.g. CIDB grading, Enterprise size, Enterprise locality, ownership profile, etc.
- (iii) Establish the eligibility criteria for each work package based on subcontract proforma, which includes Target Group criteria such as:
 - a. Requirements for woman, youth, etc. ownership;
 - b. Target Area requirements, etc.
- (vi) Alert Targeted Enterprises to the subcontracting opportunities by making it known in local newspapers, community notice boards, etc.
- (vii) Assist Targeted Enterprises to get their statutory requirements in order, such as registering on the CSD, by establishing a SMME helpdesk.
- (viii) Invite Targeted Enterprises to express their interest and submit their eligibility documents.
- (ix) Compile a Project Database(s) for the respective work package types based on the results of the call for expression of interest and eligibility documents.
- (x) Provide eligible Targeted Enterprises with the opportunity to receive tender training to submit feasible rates and prices.
- (xi) Invite Targeted Enterprises from the Project Database(s) to tender for the respective work packages.
- (xii) Apply the Employer's Supply Chain Management Policy for second tier procurement to appoint the successful Targeted Enterprises.
- (xiii) Assist successful Targeted Enterprises to enter into a subcontract agreement with the Contractor.

The Contractor shall refer to the construction activities that has been identified as being suitable for construction by Targeted Enterprises as listed in D1009 of these Project

Specifications, and to any other construction activities which are required to execute the Works in terms of this Contract, to determine how to unbundle or package subcontracts for Targeted Enterprises.

Following the Stakeholder and Community liaison processes described in D1004, the proposed subcontract packages shall be presented to the PMT for its approval and to the PLC for its endorsement.

Once the subcontract packages have been approved and endorsed, the Contractor shall alert Targeted Enterprises to the subcontract opportunities well in advance and prior to advertising the subcontract tenders. This shall be done by publicly (e.g. local newspapers and public notice boards) make these opportunities known and by providing Targeted Enterprises with assistance to get their statutory requirements in order (e.g. by establishing an SMME helpdesk).

The Contractor shall compile the Targeted Enterprise tender documents for each subcontract package using the Employer's proforma subcontract document.

In compiling the subcontract tender documents, the Contractor shall include in each tender document any Conditions of Tender that may be relevant, and shall also include the FIDIC subcontract agreement. The Contractor shall compile each subcontract tender document in a manner that facilitates the achievement of all objectives and principles pertaining to the development of the Targeted Enterprises.

The draft subcontract tender documents shall be approved by the PMT before their use, and the PMT and the PLC shall be consulted before the Contractor invites tenders from Targeted Enterprises from the relevant Project Database(s).

For each subcontract package, the Contractor shall conduct a compulsory briefing session to explain the Works required, as well as the eligibility and prequalification criteria and tender process, to the Targeted Enterprises.

Tenders for the subcontract packages shall close at a stipulated time and date. Tenders shall be placed in a formal Tender Box, of a design approved by the PMT, and located at the Contractor's site office.

The tender opening shall be conducted by the Contractor and Engineer who shall publicly announce and record the names of all bidders and their tender prices.

The Contractor shall evaluate the tenders and shall submit the tender adjudication report for each subcontract package to the PMT and the PLC for review prior to award of each subcontract.

It shall be a condition of tender that tenders will only be accepted from Targeted Enterprises that fully comply with the definition of a Targeted Enterprise as described in the Contract Data and which appears on the Project Database(s).

It shall also be a condition of tender that Targeted Enterprises include in their tender submission the following documentation (if applicable, based on the CIDB grade required):

- a) A valid letter of good standing from the Department of Labour
- b) Proof of registration on the National Treasury CSD.
- c) A tax compliance status report.
- d) A B-BBEE verification certificate (or sworn affidavit in a prescribed format).
- e) Bank account details certified by the bank.
- f) Proof of registration of the Tenderer in the required CIDB contractor grading designation, confirming the Tenderer's registration Status as "Active" at the closing date of tender (n/a to suppliers).

D1008 GENERAL RESPONSIBILITIES OF THE CONTRACTOR TOWARDS TARGETED ENTERPRISES

The Contractor shall have the responsibilities described in this Section, D1008, towards all Targeted Enterprises subcontracted in terms of the Contract Participation Goals stated in the Contract Data.

The Contractor shall appoint a Targeted Group Development Coordinator (TGDC) to assist with the execution of its responsibilities towards Targeted Enterprises as prescribed in this Section D, with an emphasis on D1008 and D1010. The Contractor shall appoint from his staff a dedicated person in the position of TGDC or hire in a professional TGDC entity if such a person does not exist within the company. The TGDC shall be based on site and available to the contract on a fulltime bases.

The TGDC shall have as a qualification in the management of Civil Engineering construction processes and shall have years' experience in the fields of roads maintenance, new roads construction, roads rehabilitation, structures, etc.

The TGDC shall develop and establish a Targeted Enterprise Training and Support Programme, which shall be approved by the PMT and endorsed by the PLC prior to implementation, and which shall adhere to Government's and the Employer's Transformation and Supply Chain Management Policies and principles.

a) General Obligations

The Contractor shall, with the assistance of the TGDC, comply with the following obligations:

- (i) Assist the Targeted Enterprises in instituting a quality assurance system;
- (ii) Provide adequate training, coaching, guidance, mentoring and any other identified and approved assistance to Targeted Enterprises;
- (iii) Provide support and any other identified and approved assistance to ensure that the Targeted Enterprises meet their obligations and commitments with respect to their subcontracts,
- (iv) Assist with ITIS monthly data capture requirements and
- (v) Ensure that the CPG objectives are achieved.

b) Subcontract Agreements

The Contractor, in liaison with the PMT, shall conclude the subcontract agreements and provide the necessary management support to the Targeted Enterprises. The subcontract agreements shall be in accordance with the provisions of amended sub-clause 4.4 of the Conditions of Contract and shall be consistent with the terms and conditions of this Contract.

A copy of each subcontract agreement shall be filed with the Engineer after the PMT has confirmed that it is in accordance with the provisions of this Contract and after it has been endorsed by the PLC.

Note:

To protect Targeted Enterprises' competitive advantage and/or tender strategy, only the main subcontract agreement shall be available to the PLC for endorsement and not the pricing structure and/or Schedule of Quantities.

The subcontract agreement shall be the FIDIC subcontract agreement, which shall also include for the following:

- (i) An entitlement of the Targeted Enterprise to receive such training as is contemplated in this Contract;
- (ii) An obligation on the Targeted Enterprise to participate and co-operate in such training as is provided for in this Contract;

- (iii) The allowable sources from which Labour may be drawn in terms of the Contract;
- (iv) The terms and conditions relating to the recruitment, employment and remuneration of Labour engaged on the Contract;
- (v) The training to be provided to the Targeted Enterprise's workforce;
- (vi) The terms and conditions relating to payment of the Targeted Enterprise;
- (vii) Sanctions in the event of failure by the Targeted Enterprise to comply with the terms and conditions of the subcontract agreement; and
- (viii) Dispute avoidance and resolution procedures.

c) Quality of Work and Performance of Targeted Enterprises

The Contractor shall closely monitor and supervise all Targeted Enterprises and shall train, coach, guide, mentor and assist each Targeted Enterprise in all aspects of management, execution and completion of its subcontract. This shall typically include assistance with planning of the Works, sourcing and ordering of materials, labour relations, monthly measurements and invoicing procedures. The extent and level of such training, coaching, guidance, mentoring, and assistance to be provided by the Contractor shall commensurate with the level of subcontract applicable and shall be directed at enabling the Targeted Enterprise to achieve the successful execution and completion of its subcontract.

The Contractor shall give reasonable warning to the Targeted Enterprise when any contravention of the terms and conditions of the subcontract has occurred or appears likely to occur. The Contractor shall, whenever feasible, give the Targeted Enterprise reasonable opportunity to make good any such contravention, or to avoid such contravention, and shall render all reasonable assistance to the Targeted Enterprise in this regard.

d) Dispute Avoidance and Resolution Procedures

When taking any disciplinary action or imposing a penalty as provided for in the subcontract, the Contractor shall explain fully to the Targeted Enterprise that such actions are provided for in the subcontract. If such action is contemplated this shall be discussed with the PMT before any action is taken and communicated with the PLC as soon as action has been taken.

If the Targeted Enterprise, in the opinion of the Engineer, fails to comply with any of the criteria listed below, the Engineer shall issue a written warning to the Contractor, stating all the areas of non-compliance. A copy of the letter of warning shall be forwarded to the Employer. The criteria are as follows:

- (i) Acceptable standard of work as set out in the specifications;
- (ii) Progress in accordance with the time constraints in the Targeted Enterprise's tender document;
- (iii) Punctual and full payment of the workforce and suppliers;
- (iv) Site safety; and
- (v) Accommodation of traffic.

The Targeted Enterprise shall have 21 days from the date of receipt of the letter of warning by the Contractor to address and rectify the issues raised by the Engineer, except for sub-clauses (iv) and (v) above, for which the reaction time shall be in accordance with the relevant specifications for those aspects of the Works, but which shall not be longer than 24 hours. Failure by the Targeted Enterprise to comply with a deadline, will be sufficient grounds for the Contractor to apply a penalty or terminate the subcontract provided that the PMT is satisfied that the Contractor has made every effort to correct the performance of the Targeted Enterprise.

The Targeted Enterprise shall have the right to dispute any ruling given or deemed to have been given by the Contractor, Engineer or Employer. Provided that, unless

the Targeted Enterprise shall, within 21 days after his receipt of a ruling or after a ruling shall have been deemed to have been given, give written notice (hereinafter referred to as a Dispute Notice) to the Contractor, referring to the relevant clause(s) in the subcontract agreement, disputing the validity or correctness of the whole or a specified part of the ruling, he shall have no further right to dispute that ruling or the part thereof not disputed in the said notice.

D1009 WORK SUITABLE FOR EXECUTION BY TARGETED ENTERPRISES

The following work items have been identified as suitable for execution by Targeted Enterprises to assist the Contractor in achieving its CPG:

All work items, with the exception of the list below, have been identified as suitable for execution by Targeted Enterprises. Work should be packaged into packages for CIDB CE1 to CE2, 3CE to 5CE and above and should meet the minimum subletting targets and subtargets for Targeted Enterprises as specified in clause D of the Contract Data:

Note:

A Prime Cost Sum for all subcontracting work is allowed for under pay item M920.02.

The following work shall form part of the Main Contractor's works and shall not be sublet. Where a Provisional Sum or a Prime Cost Sum is allowed under these sections it will follow the normal Works Authorisation process.

- M0200 General Requirements and Provisions
- M0300 Contractor's Establishment on Site and General Obligations
- M0400 Route Patrol Services
- M0600 Skills Development
- M7100 Emergency Standby Team
- M7200 All Emergency Normalisation

D1010 TRAINING, COACHING, GUIDANCE, MENTORING AND ASSISTANCE

(a) Purpose of the Training and Skills Development Programme(s)

Skills development forms an integral part of the Employer's Transformation and Community Development Policies and hence, it is important to the Employer that Targeted Labour and Targeted Enterprises be equipped with skills that can be used to gain meaningful future employment and secure subcontracting opportunities.

It is, therefore, a requirement of this Contract that the Contractor provide adequate Training, Coaching, Guidance, Mentoring and assistance to the Targeted Labour and Targeted Enterprises, to ensure skills development within the Construction Industry.

The Contractor shall, in collaboration with the PMT, develop a Training and Skills Development Programme(s) which shall be managed by the Contractor's TGDC.

(b) Skills Audit and Analysis

Prior to developing the Training and Skills Development Programme(s), the Contractor shall conduct a Skills Audit and Analysis of its own employees and those of its Subcontractors to determine their levels of education, existing qualifications, and skills sets. The outcome of the Skills Audit and Analysis shall be used to develop a Training and Skills Development Programme(s) that will benefit both the employee and the Construction Industry at large.

Included in the Skills Audit and Analysis shall be a separate section, analysing the education, qualifications and skills sets of the Targeted Enterprises subcontracted by the Contractor to develop a Training and Skills Development Programme(s) that will develop and improve the ability of small business owners and their supervisory staff to better manage their enterprises.

(c) Developing the Training and Skills Development Programme(s)

The Employer shall be involved in the decision making and quality control pertaining to the development and implementation of the Training and Skills Development Programme(s) facilitated through this Contract.

The Employer has no service agreement or memorandum of understanding with any education and training quality assurance body and, therefore, does not function as the “Employer” as defined under any three-party-agreement between the Learner, the Training Provider and the Employer.

However, the Employer requires similar outcomes to that of formal learnership programmes and the Contractor shall structure a Training and Skills Development Programme(s) in a manner that permits continued access to further learning and qualifications within a defined programme.

The complete Training and Skills Development Programme shall be approved by the PMT and endorsed by the PLC before any training commence.

(d) The Training Service Provider

While the Contractor's TGDC will manage the Training and Skills Development Programme(s), the Contractor shall subcontract a Training Service Provider to implement the training components of the Programme(s) by applying the Employer's Supply Chain Management Policy for second tier procurement.

The Training Service Provider entity shall be accredited, and have in its employ Practitioners, Assessors and Moderators whom are registered, with the Construction Education Training Authority (CETA). Proof of accreditation and registration shall be current, valid and list the NQF levels and Unit Standards for which the entity and its staff are accredited.

The training and competency levels required of the Training Service Provider and its staff are provided in the table below:

TABLE D1010/1: QUALIFICATIONS FOR TRAINING STAFF

Designation	Title and Unit Standard No	NQF Level	Credit
Practitioner	Train the trainer; No 7384	4	16
Assessor	Conduct outcome base assessment; No 115753	5	15
Moderator	Conduct moderation of outcome based assessment; No 115759	6	10

In addition to the above qualifications, and in keeping with current CETA practical experience requirements for registration as a Practitioner, NQF Level 4 Unit Standards shall only be presented by Practitioners with NQF Level 5 (one level up) credentials. The Employer further requires that Assessors and Moderators shall have at least 5 years' experience as a Site Agent, managing construction processes in the fields of roads maintenance, new roads construction, roads rehabilitation, structures, etc.

Elective Unit Standards are typically more vocational orientated and may require specialist input. It is thus not a requirement that individual Practitioners and Assessors shall have all the necessary skills for all the different categories of Unit Standards. The Training Service Provider may and shall therefore, when necessary, appoint Practitioners and Assessors on an ad hoc basis with the levels of experience which are required for the Unit Standards to be presented.

(e) Skills Development Requirements

(i) Contract Skills Development Goals (CSDG)

This section establishes a minimum CSDG which is to be achieved in the performance of a Contract (*as per the CIDB Standard for Developing Skills through Infrastructure Contracts August 2013*) in relation to the provision of different types of workplace opportunities linked to work associated with a Contract which culminate in or lead to:

- a. a part- or full occupational qualification registered on the National Qualification Framework;
- b. a trade qualification leading to a listed trade (GG No. 35625, 31 August 2012);
- c. a national diploma registered on the National Qualification Framework; and
- d. registration in a professional category by one of the professional bodies listed in Table 1 of the Standard.

The Contractor shall achieve or exceed the CSDG in the performance of the Contract. The Contractor may, if need be, devolve their obligations onto Subcontractors with approval from the Employer.

The CSDG shall not be less than the contract amount multiplied by 0.25 percent (%) for Civil Engineering work (CE). For this reason, a PC Sum is inserted under item M060.01(a) for the CSDG amount in the Pricing Schedule.

(ii) Achieving Contract Skills Development Goal (CSDG)

The Contractor shall achieve the CSDG by providing employment opportunities to Learners requiring structured workplace learning using one or a combination of any of the following methods in relation to work directly related to the Contract:

Method 1: Structured workplace learning opportunities for Learners (LoL) towards the attainment of a part or a full occupational qualification;

This training method shall apply to Targeted Enterprises and Targeted Labour.

Method 2: Structured workplace learning opportunities for apprentices or other artisan learners (LoA) towards the attainment of a trade qualification leading to a listed trade (GG No. 35625, 31 August 2012) subject to at least 60% of the artisan learners being holders of public FET college qualifications;

This training method shall apply to Targeted Enterprises and Targeted Labour.

Method 3: Work integrated learning opportunities for University of Technology or Comprehensive University students (LoUS) completing their national diplomas;

This training method shall apply to P1 and P2 learners, or learners with a 240 credits qualification. Both the permanently employed and temporary employed Learners shall be considered under this training method.

Method 4: Structured workplace learning opportunities for candidates (LoC) toward registration in a professional category by a statutory council listed in Table 1 of the Standards.

This training method shall apply to Candidates with 480 credits qualification. Both the permanently employed and temporary employed Learners shall be considered under this training method.

No single method shall contribute more than 75 percent of the CSDG. Permanently employed Learners may not account for more than 33 percent (%) of the CSDG, and not more than one method may be applied to any individual concurrently in the calculation of the CSDG.

(iii) CSDG Credits

The CSDG shall be calculated by multiplying the number of people employed by the Contractor and placed for continuous training opportunities in a three-month period by the notional values contained in Table 3 of the Standard, or as revised in a Gazette notice.

The Contractor may source beneficiaries of the CSDG from a Skills Development Agency (SDA) recognised by the CIDB.

All beneficiaries shall be registered with a construction Skills Development Agency (SDA) recognised by the CIDB.

(iv) Denial of Credits

Credits towards the CSDG shall be denied should the Contractor not fulfil all the requirements listed in clause 3.4 (a) to (f) of the Standards.

(v) Compliance with Requirements

The Contractor shall comply with the requirement as set out in clause 4 of the Standards.

(vi) Records

The Contractor shall submit all the documentation required in terms of clause 4 of the Standards, in a timely manner and according to a prescribed format where applicable.

The Engineer shall certify the value of the credits counted towards the CSDG, if any, whenever a claim for payment is issued to the Employer, and shall notify the Contractor of this amount.

The Contractor shall, upon termination of the opportunities provided to satisfy the CSDG, certify the quantum and nature of the opportunity and submit the certificate, counter-certified by the relevant individual, to the Engineer for record-keeping purposes.

(vii) Sanctions

Failure to achieve the CSDG shall render the Contractor liable for a penalty as prescribed in clause 8.7 of the FIDIC Conditions of Contract. Penalties shall be as follows:

- a. $\text{Penalty} = 0.5 \times \{[\text{LoAs} + \text{LoLs} + \text{LoUSs} + \text{LoCs}]\}$

Where:

LoLs = Monetary Value of the shortfall for structured workplace learning opportunities for Learners towards the attainment of a part or a full occupational qualification;

LoAs = Monetary Value of the shortfall for structured workplace learning opportunities for apprentices or other artisan learners towards the attainment of a trade qualification leading to a listed trade (GG No. 35625, 31 August 2012) subject to at least 60% of the artisan learners being holders of public FET college qualifications;

LoUSs = Monetary Value of the shortfall for work integrated learning opportunities for University of Technology or Comprehensive University students completing their national diplomas (LoUS);

LoCs = Monetary Value of the shortfall for structured workplace learning opportunities for candidates towards registration in a professional category by a statutory council listed in Table 1 of the Standards (LoC), and

- b. Delay the issuing of the Taking Over/Performance Certificate until all the required records described in clause 5 of the Standards are received.

(f) Generic Skills Training

Generic skills shall be taught where the need has been identified.

The Contractor shall make representation to the PMT, who shall approve candidates that should attend such courses as they deem appropriate. Those selected shall receive formal generic skills training in a programmed and progressive manner. The PLC and/or the PMT may also identify a need for generic skills training.

Typical training programmes could comprise some or all of the following modules:

- (i) Basic hygiene and HIV/AIDS awareness;
- (ii) Road safety;
- (iii) Basic management of the environment;
- (iv) Tourism awareness and opportunities;
- (v) Managing personal finance;
- (vi) Adult Basic Education and Training (ABET);
- (vii) Community based training programmes (e.g. knitting, computer skills, plant/ machine operator, etc.).

All generic skills training shall be accredited by the relevant Sector Education and Training Authority (SETA) and shall be provided with accredited entities and/or individuals.

(g) Community Training

Community training shall be taught where the need has been identified.

Community training needs shall be identified by the PLC, who shall submit their proposal to the PMT for consideration and inclusion in to the Contract. While the PMT shall consider the training needs of the Community, the PMT shall inform the PLC of the training limitations, as well as of the training that could be undertaken through the Contract. Candidates shall be identified through the Community structures. The selected candidates shall receive formal skills training in a programmed and progressive manner in compliance with subclause (d). Priority

shall be given to training that will equip the Community with skills that will enhance their employability.

All community skills training shall be accredited by the relevant Sector Education and Training Authority (SETA) and shall be provided with accredited entities and/or individuals.

(h) Training Facilities

The Contractor shall be responsible for providing everything necessary to offer the various training workshops and modules including:

- (i) a suitable venue with sufficient furniture, lighting and power,
- (ii) all necessary stationery consumables and study material,
- (iii) transport for attendees.

Before commencing with any structured training, the Contractor shall submit his intended programme to the PMT for approval of its subject content and proposed trainers, and the Contractor shall, if so instructed by the PMT, alter or amend the programme and/or course content.

D1011 LABOUR ENHANCED CONSTRUCTION

D1012 MEASUREMENT AND PAYMENT

Item **Unit**

M020.05(a) Target Group Participation

- (a) Contract Participation Performance bonus Provisional (Prov) sum

The provisional sum for item M020.05(a) shall cover any CPP bonus due as specified in clause D1003. The provisional sum shall be expended in accordance with clause 13.5 of the FIDIC Conditions of Contract.

Note:

No separate payment shall be made for any costs incurred by the Contractor, whether direct or indirect, for his efforts in accomplishing the specified requirements, and which are not recoverable from the pay-items allowed. Such costs shall be deemed to have been included in the rate offered under pay sub-item M030.03(a), Contractor's Establishment on Site and General Obligations: Time Related Obligations.

Item **Unit**

M020.06 Training, coaching, guidance, mentoring and assistance

- (a) Training Costs
- (i) Accredited generic skills training.....Prime cost (PC) sum
 - (ii) Community skills training Prime cost (PC) sum
 - (iii) Handling cost and profit in respect of subitems
M020.06(a)(i) and (ii) Percentage (%)
- (b) Other costs during trainingProvisional (Prov) sum
- (c) Training venue Lump sum

The prime cost sums under sub-items M020.06(a) shall be paid in accordance with the provisions of sub-clause 13.5 of the FIDIC Conditions of Contract. The prime cost sums shall include all charges for the provision and delivery of the service including an accredited

Training Service Provider (if required), a skills audit and analysis, a training and skills development programme, the selection of Learners, learning material and any other requirement as described in sub-clause D1010.

The rate tendered under sub-item M020.06(a)(iii) shall be deemed to cover all costs required to organise accredited trainers to provide training and shall include the Contractor's handling cost, profit, record keeping, reporting and all other costs associated with sub-items M020.06 (a)(i) and (ii).

The provisional sum under pay item M020.06(b) shall be paid in accordance with the provisions of sub-clause 13.5 of the FIDIC Conditions of Contract. The provisional sum shall cover the Contractor's costs for payment of wages of employed trainees attending training courses during working hours, for the provision of meals to trainees, for provision of transport and for all other incidentals required for the trainees and approved by the Engineer. No mark-up is payable to the Contractor under this item.

The unit of measurement for pay item M020.06(c), shall be the lump sum. The sum tendered shall include full compensation for the provision of the training venue, for all necessary lighting, power, furniture, stationery, consumables and study material and all other costs necessary to maintain the venue for the duration of the contract. Payment of the lump sum shall be made in two instalments as follows:

The first instalment, 75% of the lump sum, shall be paid after the Contractor has met all his obligations regarding the provision of the training venue as specified.

The second and final instalment, 25% of the lump sum, shall be paid after the provision of all the accredited training as specified in the document.

No payment, nor pro rata payment, shall be made for trainees that, once selected, do not attend or only partially complete structured training courses. The Contractor's own staff may attend the courses provided. However, such attendants from the Contractor's staff shall not be considered for measurement and payment purposes unless they also qualify as Targeted Labour.

M030.05 Tender Process for Targeted Enterprises

Item	Unit
(a) Contractor's charge for the management and execution of the Targeted Enterprise procurement process:	
(i) Procurement process for the totality of all tenders concluded for the appointment of Targeted Enterprise subcontractors of CIDB 1CE and 2CE contractor grading	Number (No)
(ii) Procurement process for the totality of all tenders concluded for the appointment of Targeted Enterprise subcontractors of CIDB 3CE to 5CE contractor grading	Number (No)
(iii) Procurement process for the totality of all tenders concluded for the appointment of Targeted Enterprise subcontractors of CIDB 6CE and higher contractor grading	Number (No)

The unit of measurement shall be the number of individual subcontract agreements concluded with Targeted Enterprise subcontractors in accordance with the procurement process described in this Part D.

Each tendered rate shall be in full compensation for the management and execution of the Targeted Enterprise procurement process in the relevant CIDB contractor grading

designation scheduled, including for the appointment of a Targeted Enterprise Procurement Coordinator (if required), the pre-tender training of eligible Targeted Enterprises, the compilation, printing, binding and issue of the tender documents for each tender, for the advertising of each tender, for the provision of the venue and the conducting of each compulsory briefing session for tenderers, for the conducting of each tender opening process, for the adjudication of the tenders received for each tender, for the preparation of each tender adjudication report and the review thereof in conjunction with the PLC and PMT, for the award of each tender and for the conclusion of the subcontract agreement with each successful Targeted Enterprise tenderer, and any other relevant requirement described in this Part D.

Item	Unit
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M030.06 Responsibilities of the Contractor towards Targeted Enterprises

- | | |
|---|-------|
| (a) Contractor's establishment, management, management support, assistance, coaching, guidance, mentoring and supervision of Targeted Enterprises | Month |
|---|-------|

The tendered monthly rate for subitem M030.06(a) shall include full compensation for the registration of all the subcontract agreements and the management of all the Targeted Enterprise subcontracts, including for the provision of the necessary management support, monthly ITIS data capture requirements, coaching, guidance, mentoring and supervision of the Targeted Enterprise subcontractors, including the provision of a fulltime TGDC on the site, to mentor the Targeted Enterprises. The tendered amount shall also include the cost of the provision of a dedicate site office for the sole use of the subcontractors, common camp facilities, medical, security, safety, electricity, water, sewage services, waste disposal and all other camp services

Item	Unit
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M060.01(a) Contract Skills Development Goals (CSDG)

- | | |
|---|---------------------|
| (a) Contract Skills Development Goals | Prime cost (PC) sum |
|---|---------------------|

Expenditure under subitem M060.01(a) shall be in accordance with clause 13.5 of the FIDIC Conditions of Contract.

The prime cost sum for subitem M060.01(a) is provided to cover the cost of the training associated with the achievement of the Contract Skills Development Goal (CSDG) as specified under section D1010.

M920.01 Additional costs for subcontractors

Item	Unit
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- | | |
|---|----------|
| a. Establishment on site and general obligations of subcontracts . | Prov Sum |
|---|----------|

The Establishment on site and general obligations of subcontracts will be capped at 15% of their tendered amount consisting of items M030.01, M030.02 and M030.03. These items will further have individual upper limits of:

- M030.01 - 3.75% of tender amount
- M030.02 - 7.50% of tender amount
- M030.03 - 3.75% of tender amount

The provisional sum under pay item M920.01(a) shall be paid in accordance with the provisions of sub-clause 13.5 of the FIDIC Conditions of Contract. The provisional sum shall cover the costs for payment of up to a 15% P&G allowance as tendered in the sub

contract to Targeted Enterprise subcontractors. The P&G allowance to the subcontractors includes all costs incurred by the subcontractor to make allowance for his Occupational Health and Safety responsibilities relating the Contract.

Item	Unit
M920.02 Construction Works by Targeted Enterprises	
(a) Payments associated with the construction works carried out by Targeted Enterprise subcontractors of all levels of contractor grading designation appointed in terms of Part D	Prime cost (PC) sum
(b) Handling costs and profit in respect of payments Associated with subitem M920.02(a)	Percentage (%)

Expenditure under subitem M920.02(a). shall be in accordance with clause 13.5 of the FIDIC Conditions of Contract.

The prime cost sum for subitem M920.02(a) is provided to cover the cost of the construction works carried out by the Targeted Enterprise subcontractors of all contractor grading designation as certified by the Engineer, in separate payments for each Targeted Enterprise in accordance with Part D.

The tendered percentage for subitem M920.02(b) is the percentage of the amount actually spent under subitems M920.02(a), and shall include full compensation for the Contractor's handling costs, profit or any other costs associated with the work conducted by the Targeted Enterprise subcontractors, which are not provided for in other pay items.

