



**TENDER NO:**

**SCMU10-24/25-0021**

**FOR**

**BRIDGE CONSTRUCTION FOR HAMBURG  
CONSTRUCTION PROJECT FOR A  
PERIOD OF 12 MONTHS**

**VOLUME 3**

**COMPULSORY BRIEFING: 20<sup>TH</sup> FEBRUARY 2025**

**TENDER CLOSING:  
Monday, 10<sup>TH</sup> MARCH 2025 AT 11H00**

**Department of Transport**

**32 Cowan Close**

**Stellenbosch Park Building**

**Schornville**

**Qonce**

**5601**

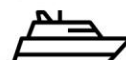
**Company Name of Tenderer:**

.....

.....

**CRS NO.....**

**CSD NO .....**



**PROVINCE OF THE EASTERN CAPE  
DEPARTMENT OF TRANSPORT  
TENDER NO. : SCMU10-24/25-0021**

**BRIDGE CONSTRUCTION FOR HAMBURG CONSTRUCTION  
PROJECT FOR A PERIOD OF 12 MONTHS**

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**PROVINCE OF THE EASTERN CAPE**

**DEPARTMENT OF TRANSPORT**

**TENDER NO. : SCMU10-24/25-0021**

**BRIDGE CONSTRUCTION FOR HAMBURG CONSTRUCTION  
PROJECT FOR A PERIOD OF 12 MONTHS**

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<p><b>THE TENDER</b> <b>PART 1 (OF 2): TENDERING PROCEDURES</b></p>
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- T1.1      Tender Notice and Invitation to Tender**
- T1.2      Tender Data**

# PROVINCE OF THE EASTERN CAPE

## DEPARTMENT OF TRANSPORT

### TENDER NO. : SCMU10-24/25-0021

#### BRIDGE CONSTRUCTION FOR HAMBURG CONSTRUCTION PROJECT FOR A PERIOD OF 12 MONTHS

#### T1.1: TENDER NOTICE AND INVITATION TO TENDER

##### A. TENDER INVITATION:

The Department of Transport of the Province of Eastern Cape hereby invites tenders from experienced Civil Engineering contractors for:

##### **Contract No.: SCMU10-24/25-0021 - BRIDGE CONSTRUCTION FOR HAMBURG CONSTRUCTION PROJECT FOR A PERIOD OF 12 MONTHS**

Tenderers must be registered with the CIDB and have a valid CIDB Contractor grading designation of **GRADE 6 CE** or higher for a CE class of construction work.

In order to be considered for a Contract in terms of this Tender, the tenderer must be able to demonstrate the completion of at least **two (2)** similar in-situ REINFORCED CONCRETE BRIDGE project(s) to a minimum value of R 15 million each in the past ten (10) years within the SADC (South African Development Community) region. Refer to **T1.2: TENDER DATA** of the document for the tender specific definition of a similar in-situ REINFORCED CONCRETE BRIDGE project(s).

In order to be considered for a Contract in terms of this Tender, the tenderer must have in its employment or intend to employ, for the duration of the Contract the following key personnel who comply with the minimum requirements as referred to in **T1.2: TENDER DATA** of this Document:

- A suitably qualified and experienced **Construction Manager** who will be the single point accountable and responsible person for the full time management of the construction works on site, who:
  - is registered with SACPCMP as PrCM or ECSA as a Professional Engineer (Pr Eng) or Professional Engineering Technologist (Pr Tech Eng) or Professional Engineering Technician (Pr Techni Eng) and has a minimum of ten (10) years' experience in **roads and bridge** construction project(s).
- A suitably qualified full time **Construction Health and Safety Officer** with a minimum experience of three (3) years **in roads** construction to manage the contractor's health and safety obligations on road projects and who:
  - is registered with SACPCMP as a Professional Construction Health and Safety Agent (Pr CHSA) or Professional Construction Health and Safety Manager (Pr CHSM) or Professional Construction Health and Safety Officer (Pr CHSO).

Tender documents will be available as of **12h00 on Friday, 07<sup>th</sup> February 2025**. Documents must be downloaded on [www.ectransport.gov.za](http://www.ectransport.gov.za) or National Treasury eTender publication website [www.etenderportal.gov.za](http://www.etenderportal.gov.za).

A compulsory clarification meeting with representatives of the Employer will take place at **HAMBURG HALL (GOOGLE EARTH: 33°17'16"S & 27°27'56E)**, HAMBURG on **20<sup>th</sup> February 2025** at 10h00. No tender documents will be available at the clarification meeting.

Attendees who are 20 minutes late to the Briefing will not be permitted to sign the Attendance Register and therefore will be prohibited from tendering as per clause F.2.7.

Tenderers may seek clarification from the Employer in terms of this tender from the date of advert. However, no clarifications may be sort on the last 7 working days before the tender closing date indicated in the tender data; i.e., the last date for seeking any clarification for this tender will be before **11H00 on the 03<sup>rd</sup> of March 2025**.

Tenderers are required to download any addenda issued by the Employer from the **Eastern Cape Department of Transport** website [www.ectransport.gov.za](http://www.ectransport.gov.za) only. Addenda will only be issued seven (07) days before the Tender Closing date and it is the Tenderers responsibility to check the addenda issued on the departmental website and eTender portal. Please note, ONLY addenda critical to the evaluation will be issued.

This project involves the demolition of the old minor / low level bridge at Nyulutsi, and construction of the new Nyulutsi river bridge. The contract period is **twelve (12) months**, including all special non-working days (gazetted public holidays and contractor's year-end break as determined by SAFCEC) and an estimated period of one (1) month for mobilisation as well as the construction work permit application and approval process.

Furthermore, as a Condition of Contract, the Contactor will be required to achieve minimum Employer's Contract participation goals.

The Employer's contract participation goals are that the appointed Contractor will be required to spend a minimum total of 50% of the final contract price less VAT, allowances for contingencies and contract price adjustment and provisional and prime cost sum amounts on the following contract participation goals within the targeted area(s) of the project:

- **30%** on Targeted subcontractors employed by the Contractor, for the execution of portions of construction works, in the performance of the Contract ;
- **10%** on Targeted suppliers employed by the Contractor, for supplying materials, goods or services, in the performance of the Contract and
- **10%** on Targeted labour employed by the Contractor in the performance of the Contract.

Requirements for sealing, addressing, delivery, opening and assessment of tenders are stated in the Tender Data.

#### **B. TENDER SUBMISSION:**

Completed tender documents as well as any supporting documentation must be placed in sealed envelope clearly marked "TENDER NO: **SCMU10-24/25-0021 BRIDGE CONSTRUCTION FOR HAMBURG CONSTRUCTION PROJECT FOR A PERIOD OF 12 MONTHS**" and deposited in the Tender Box situated at **32 Cowan close, Stellenbosch Park, Schornville, Qonce** not later than **11h00 on 10 March 2025** when tenders will be opened in public.

#### **C. TENDER EVALUATION**

**This bid fill be evaluated in two (2) phases as follows:**

**Phase One:** Compliance responsiveness to the bid rules and conditions and Eligibility Criteria (F2.1) Will be evaluated

**Phase Two:** Responsive tenders will be evaluated on Price & Specific Goals

#### **D. PREFERENTIAL PROCUREMENT POLICY FRAMEWORK ACT (PPPFA) POINTS WILL BE AWARDED AS FOLLOWS:**

Maximum points on Price	-	<b>80 points</b>
Specific Goals	-	<b>20 points</b>
Maximum points	-	<b>100 points</b>

**The points for Specific Goals will be distributed as per the table below.**

**PREFERENTIAL SPECIFIC GOALS POINTS TABLE**

The specific goals allocated points in terms of this tender	Number of points allocated (80/20 system) (To be completed by the organ of state)	Number of points claimed (80/20 system)
<b>Historically Disadvantaged Individuals</b>		
<b>Black ownership</b>	<b>10</b>	
<b>Women ownership</b>	<b>05</b>	
<b>Locality (Eastern Cape Province)</b>	<b>05</b>	

**Historically Disadvantaged Individual (HDI): Black Ownership**

Means a South African Citizen: who, due to the apartheid policy that had been in place, had no franchise in national elections.

Central Supplier Database (CSD) report will be used to calculate % ownership.

Proof of the location of will be taken as the Preferred Address indicated on the Tenderers CSD Report and is to be indicated in **Form C in the Returnable Schedules. Preferred address for the previous 12 months on CSD will be used for Locality points, calculated from the closing date of this Tender.** In case of Joint Venture, Locality Points will be divided or split among Joint Venture partners according to preferred offices on CSD.

**It is the onus of the bidder to provide proof of ownership equity status.**

**E. TENDER SPECIFICATIONS, CONDITIONS AND RULES**

The minimum specifications, Eligibility and other tender conditions and rules are detailed in the bid document.

Note: Tender Validity Period is **90 days**.

**F. TENDER SUBMISSIONS:**

The completed Volume 3 of the tender document as well as any supporting documentation shall be placed in ONE sealed envelope clearly marked "**TENDER NO: SCMU10-24/25-0021: BRIDGE CONSTRUCTION FOR HAMBURG CONSTRUCTION PROJECT FOR A PERIOD OF 12 MONTHS**" and shall be placed in the Tender Box situated at Department of Transport, **32 Cowan Close, Stellenbosch Park, Schornville, Qonce** not later than **11:00am on 10 March 2025** when tenders shall be opened in public. No late tenders will be accepted.

Requirements for sealing, addressing, delivery, opening and assessment of tenders are stated in the Tender Data.

**SCM RELATED ENQUIRIES** - Email is the preferred first contact option.

Mr. P. Nqikashe – Cell No.: 067 419 8001 – Email.: [philasande.nqikashe@ectransport.gov.za](mailto:philasande.nqikashe@ectransport.gov.za)

Ms. A. Mketsu – Cell No.: 067 411 2177 – Email.: [abongile.mketsu@ectransport.gov.za](mailto:abongile.mketsu@ectransport.gov.za)

**TECHNICAL ENQUIRIES** - Email is the preferred first contact option.

Mr. M. Goxa - Cell No.: 064 880 1945 – Email Address: [mvuyisi.goxa@ectransport.gov.za](mailto:mvuyisi.goxa@ectransport.gov.za)

Mr. P. Ngqola – Cell No.: 066 381 7987 – Email.: [phakamisa.ngqola@ectransport.gov.za](mailto:phakamisa.ngqola@ectransport.gov.za)

**NOTE: All materially relevant telephonic discussions will be followed up by an Email to all tenderers**

**FOR COMPLAINTS, FRAUD, & TENDER ABUSE:**

**Call: 0800 701 701**



# PROVINCE OF THE EASTERN CAPE

## DEPARTMENT OF TRANSPORT

### TENDER NO. SCMU10-24/25-0021

#### BRIDGE CONSTRUCTION FOR HAMBURG CONSTRUCTION PROJECT FOR A PERIOD OF 12 MONTHS

#### T1.2: TENDER DATA

The tender conditions are the Standard Conditions of Tender as contained in Annexure F of the CIDB Standard for Uniformity in Construction Procurement as per **CIDB Board Notice No. 136 of 2015** published in **Government Gazette No. 38960 of 10 July 2015** and as amended from time to time. (See [www.cidb.org.za](http://www.cidb.org.za))

The Standard Conditions of Tender make several references to the Tender Data for details that apply specifically to this tender. The Tender Data shall have precedence in the interpretation of any ambiguity or inconsistency between it and the Standard Conditions of Tender.

Each item of data given below is cross-referenced to the clause marked "F" in the above-mentioned Standard Conditions of Tender.

No	Clause	Wording
1	F.1.1	The Employer is the Department of Transport, Province of the Eastern Cape
2	F.1.2	<p>The tender documents issued by the Employer comprise:</p> <p><b>VOLUME 1:</b> The General Conditions of Contract for Construction Works (3<sup>rd</sup> Edition) 2015 are published by the South African Institution of Civil Engineering. This publication is available and tenderers must obtain copies at their own cost from the South African Institution of Civil Engineering (SAICE), Private Bag X200, Halfway House 1685, Tel: (011) 805 5947, Fax (011) 805 5971, email: <a href="mailto:civilinfo@saice.org.za">civilinfo@saice.org.za</a></p> <p><b>VOLUME 2:</b> The Standard Specifications for Road and Bridge Works for State Road Authorities prepared by the Committee of Land Transport Officials. This publication is available and tenderers must obtain copies at their own cost from the South African Institution of Civil Engineering (SAICE), Private Bag X200, Halfway House 1685, Tel: (011) 805 5947, Fax (011) 805 5971, email: <a href="mailto:civilinfo@saice.org.za">civilinfo@saice.org.za</a></p> <p><b>VOLUME 3:</b> The Tender issued by the Employer, which comprises:</p> <p style="text-align: center;"><b><u>THE TENDER</u></b></p> <p><b>PART T1: TENDERING PROCEDURES</b> T1.1: Tender Notice and Invitation to Tender T1.2: Tender Data</p> <p><b>PART T2: RETURNABLE DOCUMENTS</b> T2.1: List of Returnable Documents T2.2: Returnable Schedules</p>

No	Clause	Wording
		<p style="text-align: center;"><b><u>THE CONTRACT</u></b></p> <p><b>PART C1: AGREEMENTS AND CONTRACT DATA</b>  C1.1: Form of Offer and Acceptance  C1.2: Contract Data  C1.3: Deed of Guarantee (pro forma)</p> <p><b>PART C2: PRICING DATA</b>  C2.1: Pricing Instructions  C2.2: Bill of Quantities</p> <p><b>PART C3: SCOPE OF WORKS</b>  C3.1: Description of the Works  C3.2: Engineering  C3.3: Procurement  C3.4: Construction  C3.5: Management</p> <p><b>PART C4: SITE INFORMATION</b>  C4: Site Information</p> <p>Volume 3: Tender Document duly completed, in accordance with F 2.13.3, and returned to the employer before the closing time for receipt of tenders, shall constitute the submission of a tender offer.</p> <p>VOLUME 4: Construction Drawings</p> <p>VOLUME 7: Environmental, Materials &amp; Geotechnical</p>

3	F.1.4	<p>The Employer's agent is Mr Mvuyisi Goxa</p> <p>Name: Department of Transport</p> <p>Address: In-House Construction 32 Cowan Close Stellenbosch Park, Schornville Qonce</p> <p>Tel: 064 880 1945</p>
4	F.1.5.1	<p>The employer may accept or reject any variation, deviation, tender offer, or alternative tender offer, and may cancel the tender process and reject all tender offers at any time before the formation of an Agreement. The employer shall not accept or incur any liability to a tenderer for such cancellation and rejection but will give written reasons for such action upon written request to do so.</p> <p>It is a condition of this contract that the Employer reserves the right to limit the expenditure on the works due to possible budget restraints. Should the tender sum exceed the budgeted amount, the scope of works may be reduced at any time, before or during the contract period, to ensure that the final contract amount does not exceed the budgeted amount.</p> <p>Should these conditions be applied, such adjustments or limitations shall be deemed to be a variation of the form or quantity of the works or any part thereof in terms of Clause 6.3 of the General Conditions of Contract. The validity of the tender, the individual rates or sums tendered shall not be influenced by any such adjustments or limitations and no claim will be considered on the basis of such adjustments or limitations in terms of Clause 6.11 of the General Conditions of Contract.</p> <p>The successful Tenderer will be required to submit a valid and certified copy of their Letter of Good Standing from the <b>Compensation Commissioner</b> or <b>FEMA</b> within 21 days of receipt of their Letter of Award for this Tender.</p> <p>The successful Tenderer will be required to submit a valid and certified copy of their Letter of Good Standing from <b>Bargaining Council for Civil Engineering Industry (BCCEI)</b>, within 21 days of tender award.</p> <p>The Employer further reserves the right not to award Contracts to any Contractor based on a risk assessment of the current workload or past performance of that Contractor.</p>
5	<p>F.2.1</p> <p>F2.1.1</p> <p>F2.1.3</p> <p>F2.1.4</p>	<p><b>ELIGIBILITY:</b></p> <p><i>Delete the clause and replace with the following:</i></p> <p>Tenderers must submit a tender offer that complies in all aspects to the conditions as detailed in this document. Only those tenders that comply in all aspects with the tender conditions, specifications, pricing instructions and contract conditions will be declared responsive.</p> <p><i>Add the following after F.2.1.2:</i></p> <p>Only those tender submissions from which it can be established that a clear and unambiguous offer has been made to Employer, by whom the offer has been made and what the offer constitutes, will be declared responsive.</p> <p>Only those tenderers who satisfy the following eligibility criteria are eligible to submit tenders:</p>

F2.1.4.1	<p><b>[a] CIDB registration</b></p> <p>Registered with the CIDB prior to the award of the tender, in a contractor grading designation equal to or higher than a contractor grading designation determined in accordance with the sum tendered, or a value determined in accordance with Regulation 25 [1B] or 25 [7A] of the Construction Industry Development Regulations, for a CE class of construction work. Note that in terms of CIDB Act 38 of 2000 a registered contractor must apply for renewal of registration three months before the existing registration expires.</p> <ol style="list-style-type: none"> <li>1. Joint ventures are eligible to submit tenders provided that: <ol style="list-style-type: none"> <li>a) every member of the joint venture is registered with the CIDB and in the <b>CE</b> class of work.</li> <li>b) the combined contractor grading designation calculated in accordance with the Construction Industry Development Board Regulations is equal to or higher than a contractor grading designation <b>Grade 6</b> .</li> <li>c) a signed Joint Venture Agreement must be attached with the tender.</li> </ol> </li> <li>2. Tenderers must submit copy of Certificates of Qualifications and Professional Registration, otherwise they will not score the relevant points.</li> <li>3. Failure to comply with the above eligibility criteria will cause the tender to be deemed non-responsive.</li> </ol>
F2.1.4.2	<p><b>Compliance with requirements of Employer’s SCM Policy and procedures</b></p> <ol style="list-style-type: none"> <li>a. Only those tenders that are compliant with the requirements below will be declared responsive: Full name of entity submitting tender to be provided;</li> <li>b. Identification number or company or other registration number to be provided;</li> <li>c. Tax reference number to be provided;</li> <li>d. VAT registration number (if any) to be provided;</li> <li>e. A completed returnable schedule <b>SBD 1: INVITATION TO BID AND TERMS AND CONDITIONS FOR BIDDING</b> to be provided. Failure to provide or comply with any of the particulars of this schedule may render the tender nonresponsive;</li> <li>f. A completed returnable schedule <b>SBD 4: BIDDER’S DISCLOSURE</b> to be provided. In the case of a joint venture (JV), a separate schedule is to be completed and provided by each JV member. Non-compliance with the requirements of the applicable returnable schedule will render the tender nonresponsive. Furthermore, should the declaration prove to be false the Employer may reject or act against the tenderer in terms of clause F.3.7 of the Conditions of Tender;</li> <li>g. A completed returnable schedule <b>T2.2R: COMPULSORY ENTERPRISE QUESTIONNAIRE</b> to be provided. In the case of a joint venture (JV), a separate schedule is to be completed and provided by each JV member;</li> <li>h. A completed <b>CERTIFICATE OF AUTHORITY FOR SIGNATORY</b> to be provided and attached to returnable schedule <b>B: CERTIFICATE OF AUTHORITY FOR SIGNATORY</b>. Compliance with the requirements of the applicable returnable schedule is deemed a material responsiveness criterion.</li> <li>i. A completed returnable <b>schedule L: REGISTRATION ON NATIONAL TREASURY CENTRAL SUPPLIER DATABASE</b> to be provided, including attached printed copy of the Active Supplier Listing on the National Treasury Central Supplier Database. In the case of a joint venture (JV), the tenderer shall provide printed copies of the Active Supplier Listing on the National Treasury Central Supplier Database for each member of the JV;</li> <li>j. In the case of a tender submission by a joint venture (JV). The tenderer must attach a signed copy of the JV Agreement to returnable schedule <b>G: JOINT VENTURE AGREEMENT DISCLOSURE</b>;</li> <li>k. The tenderer or any of its directors is not listed in the Register of Tender Defaulters or the List of Restricted Suppliers managed by the National Treasury (<a href="http://www.treasury.gov.za">www.treasury.gov.za</a>) in terms of the Prevention and Combating of Corrupt Activities Act of 2004 as a person prohibited from doing business with the public sector;</li> <li>l. The tenderer has not abused the Employer’s Supply Chain Management System;</li> <li>m. The tenderer has not failed to perform on any previous contract with the Employer;</li> <li>n. The tenderer’s tax matters with SARS are in order.</li> <li>o. The tenderer has provided a completed and signed Form of Offer in terms of C1.1.1 of <b>PART C1: AGREEMENTS AND CONTRACT DATA</b>, deemed as a material</li> </ol>

		responsiveness criteria.
F2.1.4.3		<p><b>Company Experience in Roads Contract Management:</b></p> <p>Tenderer must have completed at least two (2) <u>in-situ reinforced concrete bridge</u> to the value of at least <b>R 15million</b> and higher in the last 10 years.</p> <p>A similar <u>in-situ reinforced concrete bridge</u> project shall be defined as an in-situ reinforced concrete bridge which is two (2) span (minimum), which may be a stand-alone project or an in-situ bridge may be one of the major or key activities in a roads upgrade project, and if it is one of the major or key activities in a project, the Completion Certificate or attachment thereto, must clearly stipulate the value of such a bridge structure within the project.</p> <p>Such a project(s) shall be located within the SADC (South African Development Community) region.</p> <p>A completed returnable <b>Schedule D: SIMILAR PROJECT(S) COMPLETED BY THE TENDERER</b> to be provided. To demonstrate completion of a similar project(s) as defined in this clause, submit for each project listed a completed returnable <b>Schedule D (A): SIMILAR PROJECT COMPLETED VERIFICATION FORM</b> (respondent's stamp is critical).</p> <p>Furthermore, submit for each project listed a <b>COMPLETION CERTIFICATE</b>.</p> <p>Details of bridge projects &amp; supporting information must be entered in <b>Form D</b> of the Returnable Schedules. Copies of Completion Certificates, appointment letters and reference letter from the client must be attached, in order to qualify for this tender.</p> <p><u>Failure to comply with the requirements or to complete <b>Form D (A)</b> will render the tender non-responsive.</u></p>
F2.1.4.4		<p><b>Key Personnel:</b></p> <p>In order to be considered for a Contract in terms of this Tender, the tenderer must have in its employment or intend to employ, for the duration of the contract the following key personnel who comply with the following minimum requirements:</p> <p>1. A suitably qualified and experienced <b>Construction Manager</b> (GCC 2015 term for Site Agent) who will be the single point accountable and responsible person for the full-time management of the construction works on site, who:</p> <ul style="list-style-type: none"> <li>i) is registered and has a valid registration certificate with ECSA as a Professional Engineer (Pr Eng) or Professional Engineering Technologist (Pr Tech Eng) or Professional Engineering Technician (Pr Techni Eng);</li> </ul> <p>OR</p> <ul style="list-style-type: none"> <li>ii) is registered and has a valid registration certificate with SACPCMP as a Professional Construction Project Manager (Pr CPM) or Professional Construction Manager (Pr CM);</li> </ul> <p>AND</p> <ul style="list-style-type: none"> <li>iii) has a minimum of ten (10) years' experience in roads and bridge construction project(s), <u>CV must include bridges completed.</u></li> </ul> <p>2. A suitably qualified and experienced full time Construction Health and Safety Officer(s) to manage the Contractor's health and safety obligations on site who:</p> <ul style="list-style-type: none"> <li>i) is registered and has a valid registration certificate with SACPCMP as a Professional Construction Health and Safety Agent (Pr CHSA) or Professional Construction Health and Safety Manager (Pr CHSM) or Professional Construction Health and Safety Officer (Pr CHSO);</li> </ul> <p>AND</p> <ul style="list-style-type: none"> <li>ii) has a minimum of three (3) years' experience as a Construction Health and Safety Officer on road projects</li> </ul>

		<p>A completed returnable Schedule <b>H: TENDERER'S KEY PERSONNEL</b> to be provided. Attach to each schedule proof of indicated professional registration with the specified professional body.</p> <p>Where the key personnel are no longer available to undertake the necessary work after the Award of the Tender, the then Contractor shall within a period of fourteen (14) working days replace the key personnel listed in returnable Schedules E with personnel with equivalent competencies, subject to approval by the Employer. Such approval shall not be unreasonably withheld if compliant in terms of the requirements of this clause.</p> <p>Failure to comply with the requirements of this clause and applicable returnable schedule will render the tender non-responsive.</p>
	F2.1.4.5	<p><b>Construction Equipment:</b></p> <p>In order to be considered for a Contract in terms of this Tender, the tenderer must be able to demonstrate his ability to provide (either by means of his own construction equipment or ability to hire construction equipment from others) construction equipment exclusively intended for the execution of the works as specified in the tender document.</p> <p>To demonstrate his ability, the tenderer is required to provide a completed signed declaration in terms of returnable <b>Schedule E: DECLARATION IN RESPECT OF CONSTRUCTION EQUIPMENT.</b></p>
	F2.1.4.6	<p><b>Local Content:</b></p> <p>Only those tenders that are compliant with the requirements of returnable Schedule <b>SBD 6.2: DECLARATION CERTIFICATE FOR LOCAL PRODUCTION AND CONTENT FOR DESIGNATED SECTORS</b> will be declared responsive.</p> <p>For this tender the stipulated minimum threshold(s) for local production and content for "Steel Products and Component for Construction" is 100%.</p> <p>A completed returnable <b>Schedule SBD 6.2: DECLARATION CERTIFICATE FOR LOCAL PRODUCTION AND CONTENT FOR DESIGNATED SECTORS</b> including applicable Annexures to be provided.</p>
	F.2.1.4.7	<p><b>Registration with Bargaining Council:</b></p> <p>Successful tenderer will be required to submit a valid registration certificate with the <b>Bargaining Council for the Civil Engineering Industry (BCCEI)</b> within <b>21 days</b> of receipt of an Award letter.</p> <p>A completed returnable <b>Schedule M: DECLARATION IN RESPECT OF COMPLIANCE WITH LABOUR LEGISLATION</b> to be provided and attach proof of registration with the applicable Bargaining Council to the applicable returnable schedule. In case of joint venture (JV) each member of the JV must provide proof of registration with the applicable Bargaining Council for Civil Engineering Industry.</p>
	F.2.1.4.8	<p><b>Fulfilment of the Construction Regulations, 2014</b></p> <p>Only those tenders submitted by tenderers who demonstrate by means of completing and providing returnable <b>Schedule J: DECLARATION IN RESPECT OF FULFILMENT OF THE CONSTRUCTION REGULATIONS, 2014</b> may be deemed responsive if the tenderer's declaration reasonably satisfy the Employer that the tenderer has, in terms of the Construction Regulations, 2014 of the Occupational Health and Safety Act, 1993, the necessary competencies and resources to carry out the work safely and have included in his tender rates and prices (in the appropriate payment items provided in the Pricing Schedules / Bill of Quantities) for all resources, actions, training and any other costs required for the due fulfilment of the Regulations for the duration of the construction and defects liability period.</p>

	F.2.6	<p><b>Addenda:</b></p> <p>Tenderers are required to download any addenda issued by the Employer from the Eastern Cape Department of Transport Website <a href="http://www.ectransport.gov.za">www.ectransport.gov.za</a> only. Addenda will only be issued seven (7) days before the Tender Closing date and it is the Tenderers responsibility to check the addenda issued in the departmental website and eTender portal. Please note, <b>ONLY</b> addenda critical to the evaluation will be issued.</p> <p>Failure to apply instructions contained in Addenda will render a tenderer's offer non-responsive in terms of Condition of Tender.</p>
6	F.2.7	<p><b>Clarification meeting:</b></p> <p>The clarification meeting will be held on <b>20<sup>th</sup> February 2025</b> at 10h00. The venue for the compulsory clarification meeting will be the HAMBURG HALL (<b>GOOGLE EARTH: 33°17'16"S &amp; 27°27'56E</b>), HAMBURG. No tender documents will be available at the clarification meeting.</p> <p>Attendees who are 20 minutes late to the clarification meeting will not be permitted to sign the Attendance Register and therefore will be prohibited from tendering.</p> <p>Failure to sign the attendance register of the compulsory clarification briefing will be rendered non-responsive.</p>
	F.2.8	<p><b>Seek clarification</b></p> <p><i>Delete the clause and replace with the following:</i> Request clarification of the tender documents, if necessary, by notifying the Employer before <b>03 March 2025</b>.</p> <p>The tenderer declares that it has:</p> <ol style="list-style-type: none"> <li>Inspected the Specifications and read and fully understood the Conditions of Contract.</li> <li>Read and fully understood the whole text of the Specifications and Pricing Schedules and thoroughly acquainted itself with the nature of the goods / services proposed and generally of all matters which may influence the Contract.</li> <li>Visited the site(s) where delivery of the proposed works will take place, carefully examined existing conditions, the means of access to the site(s), the conditions under which the delivery is to be made, and acquainted itself with any limitations or restrictions that may be imposed by the Employer or other authorities in regard to access and transport of materials, plant and equipment to and from the site(s) and made the necessary provisions for any additional costs involved thereby.</li> <li>Requested the Employer to clarify the requirements contained in the Specifications and Pricing Schedules, the exact meaning or interpretation of which is not clearly intelligible to the tenderer.</li> <li>Received any Addenda to the tender documents which have been issued in accordance with the Employer's SCM Policy.</li> </ol> <p>The Employer will therefore not be liable for the payment of any extra costs resulting from any claim submitted by the tenderer arising from any alleged ambiguity or uncertainty contained in the tender document.</p>
7	F.2.12	<p><b>The criteria for alternative tenders are:</b></p> <p>No alternative offers will be considered</p>
	F.2.13	<p><b>Submitting a tender offer</b></p>
9	F.2.13.3	<p><i>Add the following to F.2.13.3 at the end of the first sentence:</i> Parts of each tender offer communicated on paper shall be submitted as an original, plus zero (0) copies.</p>
10	F.2.13.5	<p><i>Add the following to F.2.13.5 at the end of the first sentence:</i> The tender submission details are stated in <b>T1.1: TENDER NOTICE AND INVITATION TO</b></p>

		<b>TENDER.</b>
11	F.2.13.6	A two-envelope procedure <u>will not</u> be followed.
	F.2.13.9	<i>Add the following to F.2.13.9 at the end of the first sentence:</i> Telephonic, telegraphic, telex, facsimile or e-mailed tender offers will not be accepted.
	F.2.13.10	The Employer shall formally issue the <b>Tender Documents as per F.1.2</b> (excluding Volumes 1 and 2) and supporting documentation electronically via download from the Eastern Cape Department of Transport website <a href="http://www.ectransport.gov.za">www.ectransport.gov.za</a> and Department of National Treasury eTender Publication website <a href="http://www.etenders.gov.za">www.etenders.gov.za</a> . The use of electronic tender documents, supporting documentation and addenda shall be subject to the following: <ul style="list-style-type: none"> <li>i) The tenderer is forbidden to make or attempt electronic alteration to the tender documents.</li> <li>ii) Supporting documentation, issued as part of this tender, may be completed electronically. For submission of such supporting documentation the tenderer is required to submit with his tender submission a signed printed copy.</li> <li>iii) The use of electronic signatures is not allowed.</li> <li>iv) Where Addenda have been issued which amend the Pricing Schedules, then the printed Pricing Schedules shall take these into account by attaching the amended page to the front of the original page. The pages of the issued Pricing Schedules should not be removed from the tender document.</li> <li>v) The Employer accepts no responsibility or liability arising from any reliance on or use of the electronic supporting documentation provided in terms of this clause. The tenderer is required to review provided supporting documentation and inform the Employer of any errors or discrepancies found prior to submission of the tender offer.</li> <li>vi) Any non-compliance with these provisions, including effecting any unauthorised alterations to the tender documents as contemplated in F.2.11, shall render the tender non-responsive. The Employer reserves the right to take any action against such tenderer allowed in law including, in circumstances where the tender had already been awarded, the right to cancel the contract.</li> </ul>
12	F.2.15	<b>Closing time:</b> <i>Add the following to F.2.15.1 after the last sentence:</i> The closing time for submission of tender offers is as stated in <b>T1.1: TENDER NOTICE AND INVITATION TO TENDER</b> . It is the responsibility of the tenderer to ensure that tender documents are submitted on or before the closing date and time and at the correct location as the Employer will not take responsibility for any wrong delivery. Telephonic, telegraphic, telex, facsimile or e-mailed tender offers will not be accepted
14	F.2.16	<i>Add the following to F.2.16.1 at the end of the first sentence:</i> The tender offer validity period is <b>90 days</b> .
	F.2.17	<b>Clarification of tender offer after submission:</b> <i>Add the following to F.2.17 at the end of the third sentence:</i> A tender will be rejected as non-responsive if the tenderer fails to provide any clarification or supporting documents requested by the Employer within the time for submission stated in the Employer's written request for such clarification or documents.
15	F.2.19	Access shall be provided for the following inspections, tests, and analysis: Borrow pit testing and any verification of geotechnical data.
	<b>F.3</b>	<b>The Employer's undertakings</b>
16	F.3.1	<b>Respond to requests from the tenderer:</b> <i>Add the follow to F.3.1.1:</i> The Employer will respond to requests for clarification received up to <b>03 March 2025</b> .
	F.3.2	<b>Issue Addenda:</b> <i>Delete the first sentence and replace with the following:</i> If necessary, issue addenda that may amend or amplify the tender documents to each tenderer not later than <b>Monday 03 March 2025</b> .  <i>Add the following to F.3.2 at the end of the paragraph:</i>



		Addenda issued by the Employer (if any) shall be available for download on the Eastern Cape Department of Transport website <a href="http://www.ectransport.gov.za">www.ectransport.gov.za</a> only. Addenda will only be issued seven (7) days before the Tender Closing date and it is the Tenderer's responsibility to check the addenda issued in the departmental website and eTender portal. Please note, ONLY addenda critical to the evaluation will be issued.								
	F.3.4	<p><b>Opening of tender submissions:</b></p> <p><i>Add the following to F.3.4.2 at the end of the paragraph:</i> Tenders will be opened immediately after the closing time of tenders at the location and closing time as stated in <b>T1.1: TENDER NOTICE AND INVITATION TO TENDER.</b></p>								
	F.3.9	<p><b>Arithmetical errors, omissions and discrepancies:</b></p> <p><i>Add the following after clause F.3.9.2:</i> F.3.9.3 In the event of tendered rates or lump sums being declared by the Employer to be unacceptable to it:</p> <ul style="list-style-type: none"> <li>(a) because they are not priced,</li> <li>(b) either excessively low or high,</li> <li>© or not in proper balance with other rates or lump sums,</li> </ul> <p>The tenderer may be required to produce evidence and advance arguments in support of the tendered rates or lump sums objected to. If, after submission of such evidence and any further evidence requested, the Employer is still not satisfied with the tendered rates or lump sums objected to, it may request the tenderer to amend these rates and lump sums along the lines indicated by it.</p> <p>The tenderer will then have the option to alter and/or amend the rates and lump sums objected to and such other related amounts as are agreed on by the Employer, but this shall be done without altering the tender offer in accordance with this clause. Should the tenderer fail to amend his tender in a manner acceptable to and within the time stated by the Employer, the Employer may declare the tender as nonresponsive.</p>								
18	F.3.9.1	<p>Add a new bullet: "In the event of there being any rate or rates which are declared to be an unacceptable commercial risk by the Employer, the Tenderer will be requested –</p> <ul style="list-style-type: none"> <li>(a) to justify any specific rate or rates, i.e., to give a financial breakdown of how such rate or rates were obtained,</li> <li>(b) and subsequently to consider amending and adjusting such rate or rates while retaining the Tender Total derived under sub-clause F.3.9.2 (c) unchanged and fixed. It must be understood that in the event of the tenderer refusing to adjust any rate or rates to the satisfaction of the Employer, such refusal may prejudice acceptance of his Tender." </li></ul>								
19	F.3.11	<p><b>Evaluation of tender offers</b></p> <p>The method for the evaluation of responsive tenders is <b>Method 1 (Price and Preference)</b>. The following formula will be used to calculate the total number of tender evaluation points:  <math>T_{EV} = N_{FO} + N_p</math></p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 80%;"></th> <th style="text-align: right;">Maximum number of tender evaluation points</th> </tr> </thead> <tbody> <tr> <td>Price Component</td> <td style="text-align: right;">80</td> </tr> <tr> <td>Preferential Component (Specific Goals)</td> <td style="text-align: right;">20</td> </tr> <tr> <td><b>Total evaluation points</b></td> <td style="text-align: right;"><b>100</b></td> </tr> </tbody> </table>		Maximum number of tender evaluation points	Price Component	80	Preferential Component (Specific Goals)	20	<b>Total evaluation points</b>	<b>100</b>
	Maximum number of tender evaluation points									
Price Component	80									
Preferential Component (Specific Goals)	20									
<b>Total evaluation points</b>	<b>100</b>									

F.3.11.7

**Calculation of Points for Price**

(Ps)

The points scored for Price will be calculated using the following formula:

$$P_s = 80 \left( 1 - \frac{P_t - P_{min}}{P_{min}} \right) \quad \text{or} \quad P_s = 90 \left( 1 - \frac{P_t - P_{min}}{P_{min}} \right)$$

Where  $P_s$  = points scored for price by tender under consideration  
 $P_{min}$  = price of lowest acceptable tender  
 $P_t$  = price of tender under consideration

Fractions will be rounded off to two places after the decimal comma.

**Preferential Component (Max =20 points) N<sub>EP</sub>**

**Specific Goals**

80/20

(MAX = 20 points)

90/10

(MAX = 10 points)

Tenders will be evaluated in terms of that specified in the Conditions of Tender as well as the Employer's latest Supply Chain Management Policy.

The following preference point systems are applicable to all bids:

- the 80/20 system for requirements with a Rand value of up to R50 000 000 (all applicable taxes included); and
- the 90/10 system for requirements with a Rand value above R50 000 000 (all applicable taxes included).

The value of this bid is estimated **not to exceed** R50 000 000 (all applicable taxes included) and therefore the **80/20** preference point system shall be applicable: or

- The 80/20 preference point system will be applicable to this bid.

F.3.11.8

**PREFERENTIAL PROCUREMENT POLICY FRAMEWORK ACT (PPPFA) POINTS WILL BE AWARDED AS FOLLOWS:**

- Maximum points on price - **80 points**
- Maximum points for specific goals - **20 points**
- Maximum points - **100 points**

The points for specific goals will be distributed as per the table below.

PREFERENTIAL SPECIFIC GOALS POINTS TABLE		
The specific goals allocated points in terms of this tender	Number of points allocated (80/20 system) (To be completed by the organ of state)	Number of points claimed (80/20 system)
<b>Historically Disadvantaged Individuals</b>		
Black ownership	10	% ownership as per CIPC / CSD
Women ownership	05	% ownership as per CIPC / CSD
Locality (EC Province)	05	Preferred address on CSD

**Calculation of Total Points scored**

**Total Score = P<sub>s</sub> + N<sub>EP</sub>**

Central Supplier Database (CSD) report will be used.

To Score points for Black Ownership the following formula will be used to calculate the points out of 20 points Max.

$$SGP = \frac{\%BOE (CIPC/ CSD)}{100} \times MMDI (Max = 10)$$

**Locality (max= 5 points)**

	F.3.11.10	<p><i>Add the following after F.3.11.9:</i></p> <p><b>Risk Analysis</b> Notwithstanding compliance with regard to CIDB registration or any other requirements of The tender, the Employer will perform a risk analysis in respect of the following:</p> <p>a) reasonableness of the financial offer b) reasonableness of unit rates and prices c) as per clause F.1.5.1 (C), the previous and the current contracts performance of the responsive bidders will be used to draw a conclusion to determine the acceptability of the tender offer. The Department reserves the right to consider other similar contracts undertaken by the prospective bidder that do not form part of this proposal. d) The risk analysis will not be limited to a-c above, should there be required information deemed necessary for finalisation of the award, the department will therefore request the information within the time frames stipulated in the tender document.</p> <p>The conclusions drawn from this risk analysis will be used by the Employer in determining the acceptability of the tender offer.</p>
20	F.3.13.1	<p><b>Acceptance of tender offers:</b></p> <p>Tender offers will only be acceptable if:</p> <p>a) Tenderers must be registered on the Central Supplier Database (CSD) at National Treasury prior to submitting a tender, otherwise the tender will be rejected (National Treasury SCM Instruction #4A of 2016/2017: Central Supplier Database), and the tenderer's <b>Tax status must be compliant.</b></p> <p>b) Tenderers must submit proof of registration with <b>Bargaining Council of Civil Engineering Industry (BCCEI)</b> within 21 days of tender award.</p> <p>c) the tenderer must be registered with the Construction Industry Development Board (CIDB) in an appropriate <b>6 CE</b> contractor grading designation or higher (All parties to submit this information in the case of a Joint Venture).</p> <p>d) the tenderer or any of its directors is not listed in the Register of Tender Defaulters or the List of Restricted Suppliers managed by the National Treasury (<a href="http://www.treasury.gov.za">www.treasury.gov.za</a>) in terms of the Prevention and Combating of Corrupt Activities Act of 2004 as a person prohibited from doing business with the public sector.</p> <p>e) the tenderer has not abused the Employer's Supply Chain Management System.</p> <p>f) the tenderer has not failed to perform on any previous Contract with the Employer.</p> <p>g) the tenderer has completed and signed Form B (Certificate of Authority for Signatory) if applicable.</p> <p>h) the Form of Offer is duly completed and signed (Note: <b>Any correction must be signed</b> by the authorised signatory).</p> <p>i) The Pricing Schedule must not be tampered with and must be fully completed.</p> <p>j) the tenderer has <b>completed and signed the Compulsory Enterprise Questionnaire</b> (Form T2.2R) (for each of the participating firms in the case of a joint venture).</p> <p>k) completed and signed all SBD Forms (SBD1; SBD4; SBD6.1; SBD6.2; SBD 7.2)</p> <p>l) has completed and signed Annexure C which goes with SBD 6.2</p> <p>m) all relevant certified information is submitted with the Tender.</p> <p>n) all other Tender Conditions are complied with.</p> <p>o) The tenderers comply with Eligibility criteria as per <b>F2.1</b> in the Tender Data.</p> <p>p) The <b>Form of Offer is duly completed and signed</b> (Note: <b>Any correction must be signed</b> by the authorised signatory)</p> <p>q) <b>Tender completed with the erasable ink will be deemed / declared non-responsive.</b></p> <p><i>Add the following:</i> "Acceptance of the tender offer will be subject to the provisions of Clause F.1.5.1 and F.2.1.", and please note the following:</p> <p>1) The successful Tenderer will be required to submit proof of registration with <b>BCCEI</b> and/</p>

	F.3.17	<p>or a letter confirming the contractor's compliance / good standing with <b>BCCEI</b> within twenty-one (21) days of receipt of Letter of Award</p> <p>2) The successful Tenderer will be required to submit a <b>valid</b> Letter of Good Standing from the <b>Compensation Commissioner</b> or <b>FEMA</b> within twenty-one (21) days of receipt of Letter of Award.</p> <p>Provide copies of the Contract:</p> <p><i>Add the following after the first sentence:</i> The number of paper copies of the signed contract to be provided by the employer is one (1).</p>
F.4	F.4.1	<p><b>ADDITIONAL CONDITIONS OF TENDER</b></p> <p><b>Jurisdiction</b></p> <p>Unless stated otherwise in the tender data, each tenderer and the Employer undertake to accept the jurisdiction of the law courts of the Republic of South Africa.</p>
	F.4.2	<p><b>Employer's Contract Participation Goals</b></p> <p>Employer's contract participation goals are:</p> <p>The appointed Contractor will be required to spend a total of 50% of the accepted tender sum less VAT, allowances for contingencies and contract price adjustment and provisional and prime cost sum amounts in the Eastern Cape as defined in the Contract Data.</p> <p>The 50% Eastern Cape spend will consist of the following:</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> 10% on Targeted suppliers of materials, goods and services (from Local Resources) in terms of the Contract.</li> <li><input type="checkbox"/> 10% on employment and training of Targeted (Local) Labour in terms of the Contract.</li> </ul> <p>It is also a Condition of Tender that the successful tenderer [Contractor] will be required to employ and provide training for Local Labour on the project. A minimum of 10% of the accepted tender sum less VAT, allowances for contingencies and contract price adjustment and provisional and prime cost sum amounts will be required to be spent on the local labour.</p> <p>It is a Condition of Tender that the successful tenderer [Contractor] will be required to engage Local Resources [other than the Principal Contractor and SMME contractors appointed] on the project.</p>

**PROVINCE OF THE EASTERN CAPE**

**DEPARTMENT OF TRANSPORT**

**TENDER NO.  
SCMU10-24/25-0021**

**BRIDGE CONSTRUCTION FOR HAMBURG CONSTRUCTION PROJECT FOR A  
PERIOD OF 12 MONTHS**

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<p><b>THE TENDER</b> <b>PART 2 (OF 2): RETURNABLE DOCUMENTS</b></p>
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**T2.1 List of Returnable Documents**

**T2.2 Returnable Documents**

**Note to Tenderer:**

**The information contained on these forms, plus the supporting information, will be used in the first stages of the evaluation of the Tenders.**

## T2.1 List of Returnable Documents

### 1. Forms to be completed

FORM	DESCRIPTION
SBD 1	INVITATION TO BID
A.	CONTRACTOR'S ESTABLISHMENT ON SITE
B.	CERTIFICATE OF AUTHORITY FOR SIGNATORY
C	INDICATION OF PROOF OF LOCALITY OF OFFICE
D.	SCHEDULE OF BRIDGE CONSTRUCTION WORK CARRIED OUT BY THE TENDERER IN THE PAST 10 YEARS
D(A)	SIMILAR PROJECT COMPLETED VERIFICATION FORM (one verification form required for each listed project)
E.	SCHEDULE OF CONSTRUCTION PLANT
F.	NOTICES TO TENDERERS
G	JOINT VENTURE DISCLOSURE FORM
H	CONTRACTOR'S KEY PERSONNEL AND DETAILED CV'S
I	BANKING AND AUDITOR DETAILS
J	DECLARATION – FULFILLMENT OF THE CONSTRUCTION REGULATIONS, 2014
K	PROOF OF REGISTRATION WITH THE CONSTRUCTION INDUSTRY DEVELOPMENT BOARD
L	CENTRAL SUPPLIER DATABASE CONFIRMATION (CSD)
M	PROOF OF REGISTRATION AND GOOD STANDING WITH THE BARGAINING COUNCIL (BCCEI)
N	RATES FOR SPECIAL MATERIALS
T2.2R	COMPULSORY ENTERPRISE QUESTIONNAIRE
SBD 4	BIDDER'S DISCLOSURE
SBD 5	THE NATIONAL INDUSTRIAL PARTICIPATION PROGRAM
SBD 6.1	PREFERENCE POINTS CLAIM FORM IN TERMS OF THE PREFERENTIAL PROCUREMENT REGULATIONS 2022
SBD 6.2	SBD 6.2: DECLARATION CERTIFICATE FOR LOCAL PRODUCTION AND CONTENT FOR DESIGNATED SECTORS
SBD 7.2	CONTRACT FORM – RENDERING OF SERVICES

### THESE FORMS MUST BE COMPLETED USING **BLACK INK**

Where the space provided in the bound document is insufficient, separate schedules may be drawn up in accordance with the given formats. These schedules shall then be bound together with a suitable contents page and submitted with the tender documents. All such schedules must be signed, and clearly marked as appendices to these relevant forms.

### 2. Other documents that will be incorporated into the Contract.

- C1.1 Offer and Acceptance
- C1.2 Contract Data
- C2.2 Pricing Schedule

## **T2.2 RETURNABLE DOCUMENTS**

**SBD 1: INVITATION TO BID****PART A****YOU ARE HEREBY INVITED TO BID FOR REQUIREMENTS OF THE EASTERN CAPE DEPARTMENT OF TRANSPORT**

BID NUMBER:	SCMU10-24/25-0021	CLOSING DATE:	10 MARCH 2025	CLOSING TIME:	11:00 AM
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DESCRIPTION	BRIDGE CONSTRUCTION FOR HAMBURG CONSTRUCTION PROJECT FOR A PERIOD OF 12 MONTHS
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**BID RESPONSE DOCUMENTS MAY BE DEPOSITED IN THE BID BOX SITUATED AT (STREET ADDRESS)**

32 Cowan Close

Stellenbosch Park

Schornville

Qonce, 5605

**BIDDING PROCEDURE ENQUIRIES MAY BE DIRECTED TO**

CONTACT PERSON	Mr. Philasande Nqikashe
TELEPHONE NUMBER	067 419 8001
FACSIMILE NUMBER	N/A
E-MAIL ADDRESS	philasande.nqikashe@ectransport.gov.za

**TECHNICAL ENQUIRIES MAY BE DIRECTED TO:**

CONTACT PERSON	Mr. Phakamisa Ngqola
TELEPHONE NUMBER	066 381 7987
FACSIMILE NUMBER	N/A
E-MAIL ADDRESS	phakamisa.ngqola@ectransport.gov.za

**SUPPLIER INFORMATION**

NAME OF BIDDER

POSTAL ADDRESS

STREET ADDRESS

TELEPHONE NUMBER

CODE

NUMBER

CELLPHONE NUMBER

FACSIMILE NUMBER

CODE

NUMBER

E-MAIL ADDRESS

VAT REGISTRATION NUMBER

SUPPLIER COMPLIANCE STATUS

TAX COMPLIANCE SYSTEM PIN:

OR

CENTRAL SUPPLIER DATABASE No:

MAAA

ARE YOU THE ACCREDITED REPRESENTATIVE IN SOUTH AFRICA FOR THE GOODS /SERVICES OFFERED?

Yes  No

[IF YES ENCLOSE PROOF]

ARE YOU A FOREIGN BASED SUPPLIER FOR THE GOODS /SERVICES OFFERED?

 Yes No

[IF YES, ANSWER THE QUESTIONNAIRE BELOW]

**QUESTIONNAIRE TO BIDDING FOREIGN SUPPLIERS**

IS THE ENTITY A RESIDENT OF THE REPUBLIC OF SOUTH AFRICA (RSA)?

 YES  NO

DOES THE ENTITY HAVE A BRANCH IN THE RSA?

 YES  NO

DOES THE ENTITY HAVE A PERMANENT ESTABLISHMENT IN THE RSA?

 YES  NO

DOES THE ENTITY HAVE ANY SOURCE OF INCOME IN THE RSA?

 YES  NO

IS THE ENTITY LIABLE IN THE RSA FOR ANY FORM OF TAXATION?

 YES  NO

**IF THE ANSWER IS "NO" TO ALL OF THE ABOVE, THEN IT IS NOT A REQUIREMENT TO REGISTER FOR A TAX COMPLIANCE STATUS SYSTEM PIN CODE FROM THE SOUTH AFRICAN REVENUE SERVICE (SARS) AND IF NOT REGISTER AS PER 2.3 BELOW.**



## PART B TERMS AND CONDITIONS FOR BIDDING

<b>1. BID SUBMISSION:</b>
<p>1.1. BIDS MUST BE DELIVERED BY THE STIPULATED TIME TO THE CORRECT ADDRESS. LATE BIDS WILL NOT BE ACCEPTED FOR CONSIDERATION.</p> <p>1.2. <b>ALL BIDS MUST BE SUBMITTED ON THE OFFICIAL FORMS PROVIDED (NOT TO BE RE-TYPED) OR IN THE MANNER PRESCRIBED IN THE BID DOCUMENT.</b></p> <p>1.3. THIS BID IS SUBJECT TO THE PREFERENTIAL PROCUREMENT POLICY FRAMEWORK ACT, 2000 AND THE PREFERENTIAL PROCUREMENT REGULATIONS, THE GENERAL CONDITIONS OF CONTRACT (GCC) AND, IF APPLICABLE, ANY OTHER SPECIAL CONDITIONS OF CONTRACT.</p> <p>1.4. <b>THE SUCCESSFUL BIDDER WILL BE REQUIRED TO FILL IN AND SIGN A WRITTEN CONTRACT FORM (SBD7).</b></p>
<b>2. TAX COMPLIANCE REQUIREMENTS</b>
<p>2.1 BIDDERS MUST ENSURE COMPLIANCE WITH THEIR TAX OBLIGATIONS.</p> <p>2.2 BIDDERS ARE REQUIRED TO SUBMIT THEIR UNIQUE PERSONAL IDENTIFICATION NUMBER (PIN) ISSUED BY SARS TO ENABLE THE ORGAN OF STATE TO VERIFY THE TAXPAYER'S PROFILE AND TAX STATUS.</p> <p>2.3 APPLICATION FOR TAX COMPLIANCE STATUS (TCS) PIN MAY BE MADE VIA E-FILING THROUGH THE SARS WEBSITE WWW.SARS.GOV.ZA</p> <p>2.4 BIDDERS MAY ALSO SUBMIT A PRINTED TCS CERTIFICATE TOGETHER WITH THE BID.</p> <p>2.5 IN BIDS WHERE CONSORTIA / JOINT VENTURES / SUB-CONTRACTORS ARE INVOLVED; EACH PARTY MUST SUBMIT A SEPARATE TCS CERTIFICATE / PIN / CSD NUMBER.</p> <p>2.6 WHERE NO TCS PIN IS AVAILABLE BUT THE BIDDER IS REGISTERED ON THE CENTRAL SUPPLIER DATABASE (CSD), A CSD NUMBER MUST BE PROVIDED.</p> <p>2.7 NO BIDS WILL BE CONSIDERED FROM PERSONS IN THE SERVICE OF THE STATE, COMPANIES WITH DIRECTORS WHO ARE PERSONS IN THE SERVICE OF THE STATE, OR CLOSE CORPORATIONS WITH MEMBERS PERSONS IN THE SERVICE OF THE STATE."</p>

**NB: FAILURE TO PROVIDE / OR COMPLY WITH ANY OF THE ABOVE PARTICULARS MAY RENDER THE BID INVALID.**

SIGNATURE OF THE BIDDER: .....

CAPACITY UNDER WHICH THIS BID IS SIGNED: .....  
(Proof of authority must be submitted e.g., company resolution)

DATE: .....

**A: CONTRACTOR’S ESTABLISHMENT ON SITE**

Should the combined, extended total tendered for Item B13.01 The contractor’s obligations:

- (a) Fixed obligations
- (b) Value-related obligations
- (c)(i&ii) Time-related obligations

exceed a maximum of **15%** of the tender sum (excluding; provisional and prime cost sums and its related % mark-up amount in the bill of quantities, total amount for Section B1800: Dayworks, allowances for contingencies and contract price adjustments and VAT), **the tenderer shall clearly set out his reasons for tendering in this manner in a letter attached to this returnable schedule.**

The Employer will duly consider these reasons but reserves the right to consider the tendered rates or lump sums to be unacceptable or imbalanced and to deal with them in terms of **clause F.3.9.2 of T1.2: TENDER DATA.**

Total tender for Item B13.01 expressed as a percentage of the tender sum (excluding; provisional and prime cost sums and its related % mark-up amount in the bill of quantities, total amount for Section B1800: Dayworks, allowances for contingencies and contract price adjustments and VAT)%.

The information supplied by the tenderer in this returnable schedule and attached supporting documentation (if applicable) to this returnable schedule will be deemed material to the responsiveness and the Employer’s risk analysis of the tender offer.

**SIGNED ON BEHALF OF THE TENDERER:** .....

**B: CERTIFICATE OF AUTHORITY FOR SIGNATORY**

Signatory for companies shall confirm his/her authority thereto by attaching a duly signed and dated copy on the company letterhead of the relevant resolution of the board of directors to this form.

**Failure to submit a duly signed resolution will render the tender non-responsive.**

**Note: This Form is not applicable if the Signatory to this tender is a Director, a Member, a Sole Proprietor or a Partner.**

***An example is given below:***

“By resolution of the board of directors passed at a meeting held on .....

Mr/Ms ....., whose signature appears below, has been duly authorised.

to sign all documents in connection with **TENDER NO SCMU10-24/25-0021** and any Contract that may arise therefrom on behalf of

(Name of Tenderer in block capitals)

.....

**SIGNED ON BEHALF OF THE COMPANY:** .....

**IN HIS/HER CAPACITY AS:** .....

**DATE:** .....

**SIGNATURE OF SIGNATORY:** .....

**WITNESSES:** 1. ....

2. ....”

**C: INDICATION OF PROOF OF OFFICE IN THE EASTERN CAPE**

The Tenderer must attach proof of head office or satellite office/depot in the Eastern Cape / Outside Eastern Cape. NB: CSD will be used as confirmation – Preferred address for the previous 12 months **MUST** show a place within the borders of the Eastern Cape.

Contract Description	Tendering for:	Office in the Eastern Cape or Outside the Eastern Cape	Proof of Office
<b>BRIDGE CONSTRUCTION FOR HAMBURG CONSTRUCTION PROJECT FOR A PERIOD OF 12 MONTHS</b>	Y <input type="checkbox"/> / N <input type="checkbox"/>	Eastern Cape <input type="checkbox"/> Outside Eastern Cape <input type="checkbox"/>	Y <input type="checkbox"/> / N <input type="checkbox"/>

Proof of Address will be taken as the “Preferred Address” as indicated on the Tenderers CSD Report for the previous 12 months. Inspections will be done to confirm address as the company office.

**SIGNED ON BEHALF OF THE TENDERER:** .....

<b>D: SCHEDULE OF BRIDGE CONSTRUCTION WORK CARRIED OUT BY THE TENDERER IN THE PAST 10 YEARS</b>
---

The tenderer must insert in the spaces provided below a complete list of the latest completed **Bridge** construction contracts successfully completed by the company in the past 10 years. The bidder must attach **Completion Certificates** in the case of completed contracts. This information shall be deemed to be material to the adjudication of the Contract. A copy of the Completion Certificate for each completed project must be attached, failure to attach Completion Certificates shall render **the bid shall be deemed non-responsive**.

Notes to tenderer:

1. The tenderer must provide, in **TABLE A** of this returnable schedule, information of similar project(s) completed by the tenderer as defined in **CLAUSE F.2.1.4.4 OF T1.2: TENDER DATA**.
2. For each similar project listed by the tenderer in **TABLE A**, the tenderer must attach:
  - (a) the **COMPLETION CERTIFICATE** of the project; and
  - (b) a completed and signed returnable schedule **D(A): SIMILAR PROJECT COMPLETED VERIFICATION FORM**.
3. The tenderer shall indicate in **TABLE A**, were applicable, if the similar project was completed as:
  - (a) a principal contractor (PC);
  - (b) a joint venture (JV) member;
4. The tenderer must only list defined similar project(s) completed in **TABLE A** provided. **DO NOT** attach a separate list of projects; and **DO NOT** include projects which are not defined as similar project.
5. The information supplied by the tenderer in **TABLE A** and attached supporting documentation [similar project completed verification form(s) and completion certificate(s)] to this returnable schedule will be deemed material to the responsiveness and the Employer's risk analysis of the tender offer.

**TABLE A: LIST OF SIMILAR PROJECTS COMPLETED FOR RETURNABLE SCHEDULE D**

CONTRACT NAME AND CONTRACT NUMBER	EMPLOYER	WORK DONE AS A <i>(tick applicable box)</i>	SHORT DESCRIPTION OF WORKS COMPLETED	DURATION OF WORKS (months)	VALUE OF WORKS COMPLETED (incl. VAT)	COMPLETION DATE (mm/yyyy)
		<input type="checkbox"/> PC <input type="checkbox"/> JV				
		<input type="checkbox"/> PC <input type="checkbox"/> JV				
		<input type="checkbox"/> PC <input type="checkbox"/> JV				
		<input type="checkbox"/> PC <input type="checkbox"/> JV				
		<input type="checkbox"/> PC <input type="checkbox"/> JV				

**SIGNED ON BEHALF OF THE TENDERER:** .....

**FORM D (A): SIMILAR PROJECTS COMPLETED VERIFICATION FORM (One verification form required for each project)**

**SIMILAR PROJECTS COMPLETED VERIFICATION FORM (QUESTIONNAIRE)**

**FOR TENDER NO. SCMU10-24/25-0021**

**UPGRADING OF MR00522: HAMBURG TO R72 ROAD – BRIDGE CONSTRUCTION FOR HAMBURG CONSTRUCTION PROJECT**

**NAME OF TENDERER:** .....

**VERIFICATION OF TENDERER’S INDICATED SIMILAR PROJECT BY CONSULTING ENGINEER OR EMPLOYER**

(Note: Verification by Consulting Engineer or Employer in terms of the contract for the indicated similar project)

**CONTRACT NUMBER:** .....

**CONTRACT NAME:** .....

.....

**EMPLOYER** : .....

**CONTRACTOR** : .....

**CONSULTING ENGINEER:** .....

**VALUE OF WORKS AT COMPLETION (INCL. VAT):** R.....

**MONTH/YEAR COMPLETED:** .....

In terms of this Tender a similar project is defined as:

The construction of a new reinforced concrete bridge structure project(s) completed in the past seven (7) years to the value of at least R 15 million, located within the SADC (South African Development Community) region, which included as a minimum the following:

- At least one (1) project(s) should demonstrate the construction of a reinforced concrete bridge structure
- Targeted subcontractor management / development

**1. Was a certificate of completion, in terms of the condition of contract, issued to the contractor?**

YES	NO	(TICK APPLICABLE BOX)
-----	----	-----------------------

If **NO**, please state reasons:

.....

.....

.....

**CONTINUE TO NEXT PAGE**

**VERIFICATION OF TENDERER'S INDICATED SIMILAR PROJECT BY CONSULTING ENGINEER OR EMPLOYER**

2. Was the project located within the SADC (South African Development Community) region?

YES	NO	(TICK APPLICABLE BOX)
-----	----	-----------------------

3. Was the value of each of the Works, completed by the Tenderer (then Contractor) more or equal (≥) to R 15 million (incl. VAT)

YES	NO	(TICK APPLICABLE BOX)
-----	----	-----------------------

If NO, please write value below

R
---

4. Did the project include the following works and was the Tenderer (then Contractor) involved with said works?

4.1 Reinforced concrete works

YES	NO	(TICK APPLICABLE BOX)	Involved	YES	NO
-----	----	-----------------------	----------	-----	----

4.2 Targeted subcontractor management / development

YES	NO	(TICK APPLICABLE BOX)	Involved	YES	NO
-----	----	-----------------------	----------	-----	----

**Details of respondent:**

Verification information supplied by:

(state name & surname): .....

Designation on Project: .....

Company: .....

Signature: ..... Date: .....

**Contact Details:**

Tel No.: .....

Email: .....

<p align="center"><b>Company Stamp:</b></p>    
---

*(Please return both pages to Tenderer for submission with his Tender)*



**E: SCHEDULE OF CONSTRUCTION PLANT**

The tenderer shall state below the number of each construction plant to be used on this project and what constructional plant will be immediately available for this contract.

DESCRIPTION, SIZE, CAPACITY	YEAR MODEL	NUMBER

**SIGNED ON BEHALF OF THE TENDERER:** .....

**a) CONSTRUCTIONAL PLANT TO BE HIRED AS AND WHEN REQUIRED IN TERMS OF FRAMEWORK**

The tenderer shall state below the number of each construction plant to be used on this project and what constructional plant will be will be acquired or hired for the work should the tenderer be awarded the contract.

DESCRIPTION, SIZE, CAPACITY	NUMBER	YEAR MODEL

**SIGNED ON BEHALF OF THE TENDERER:** .....

**F: NOTICES TO TENDERERS**

In submitting my/our tender, the tender rates and tender sum given in my/our tender has taken into account the following Notice(s) to Tenderers.

Signed copies of all Notices to Tenderers are to be attached to this page.

Please note that any Notices will be uploaded on the same platforms as where the tender document was downloaded from. It is the onus of the Tenderer to ensure that he has checked for any notices prior to submitting his tender document.

NOTICE NO.	SUBJECT MATTER OF NOTICE

**SIGNED ON BEHALF OF THE TENDERER:** .....

**G: JOINT VENTURE DISCLOSURE FORM**

Tenderers submitting tenders as a joint venture are to attach a signed copy of the Joint Venture Agreement or, if a Joint Venture Agreement has not yet been formalized, then the Tenderer is to attach a Letter of Intent of a Joint Venture Agreement, signed by all parties involved in the Joint Venture Agreement. Should the Joint Venture wish to claim B-BBEE points, then a consolidated B-BBEE Scorecard for the Joint Venture partnership must be attached to completed **Form SBD 6.1**.

The Signatory on behalf of the Joint Venture must be disclosed in **Form B: Certificate of Authority for Signatory** as well as in the Joint Venture Agreement.

2. In case of a JV please note additional requirements in terms of Returnable Schedules:

- B: CERTIFICATE OF AUTHORITY FOR SIGNATORY
- C: REGISTRATION WITH THE CONSTRUCTION INDUSTRY DEVELOPMENT BOARD
- H: REGISTRATION ON NATIONAL TREASURY CENTRAL SUPPLIER DATABASE
- I: DECLARATION IN RESPECT OF COMPLIANCE WITH LABOUR LEGISLATION
- N: TENDERER'S BANKING DETAILS
- P: COMPULSORY ENTERPRISE QUESTIONNAIRE
- SBD 4: DECLARATION OF INTEREST
- SBD 6.1: PREFERENCE POINTS CLAIM FORM IN TERMS OF THE PREFERENTIAL PROCUREMENT REGULATIONS 2022

**SIGNED ON BEHALF OF THE TENDERER:** .....

**H: CONTRACTOR’S KEY PERSONNEL & DETAILED CV’S (including TABLES A and B)**

Notes to tenderer:

1. The tenderer must provide, in **TABLES A and B** of this returnable schedule, required information of the tenderer’s key personnel as defined in **CLAUSE F.2.1.4.5 OF T1.2: TENDER DATA**.
2. For key personnel listed by the tenderer in **TABLES A and B**, the tenderer must attach:
  - (a) proof of required professional registration with the specified professional body and that the professional registration is currently active.
  - (b) if the key personnel listed by the tenderer is not currently in the employment of the tenderer, provide letter of intent as defined in **CLAUSE F.2.1.4.5 OF T1.2: TENDER DATA**.
3. **TABLES A and B** provides space for the tenderer to provide details of the key personnel and define experience required, as defined in **CLAUSE F.2.1.4.5 OF T1.2: TENDER DATA**.
4. The information supplied by the tenderer in **TABLE A and B** and attached supporting documentation [proof of professional registration and letter of intent (if applicable)] to this returnable schedule will be deemed material to the responsiveness and the Employer’s risk analysis of the tender offer.

**SIGNED ON BEHALF OF THE TENDERER:** .....

**TABLE A: TENDERER'S KEY PERSONNEL (CONSTRUCTION MANAGER) FOR returnable schedule H**

NAME	KEY POSITION	ECSA Reg. No	ECSA Category	SACPCMP Reg No	SACPCMP Category	CURRENTLY EMPLOYMENT BE TENDERER (YES or NO)	NO. OF YEARS EXPERIENCE (for defined type of works)
	CONSTRUCTION MANAGER						
List only applicable information relevant to the type and duration of experience required (Start with latest experience)							
CLIENT AND PROJECT NAME	DESCRIPTION OF PROJECT	PROJECT END DATE AND DURATION ON PROJECT	VALUE OF PROJECT	POSITION HELD	CONTACT PERSON AND FIRM	CONTACT NO.	

**SIGNED BY TENDERER:**.....

**TABLE B: TENDERER’S KEY PERSONNEL (CONSTRUCTION HEALTH AND SAFETY OFFICER) FOR RETURNABLE SCHEDULE H**

NAME	KEY POSITION	SACPCMP Reg No	SACPCMP Category	NO. OF YEARS EXPERIENCE (for defined type of works)	CURRENTLY EMPLOYMENT BE TENDERER (YES or NO)	List only applicable information relevant to the type and duration of experience required (Start with latest experience)													
						CLIENT AND PROJECT NAME	DESCRIPTION OF PROJECT	PROJECT END DATE AND DURATION ON PROJECT	VALUE OF PROJECT	POSITION HELD	CONTACT PERSON AND FIRM	CONTACT NO.							
	CONSTRUCTION HEALTH AND SAFETY OFFICER																		

SIGNED BY TENDERER:.....

**I: BANKING AND AUDITOR DETAILS**

The Tenderer shall provide details of his banker and auditing accountant.

**Bank Details -** Bank Name: .....  
Address: .....  
Account Number:.....  
Contact Person: .....  
Tel No.: .....  
Fax No.: .....

**Auditor Details -** Firm Name: .....  
Address: .....  
Account Number:.....  
Contact Person: .....  
Tel No.: .....  
Fax No.: .....

**SIGNED ON BEHALF OF THE TENDERER:** .....



**J: DECLARATION - FULFILMENT OF THE CONSTRUCTION REGULATIONS - 2014**

In terms of regulation 5(1) of the Construction Regulations, 2014 (hereinafter referred to as the Regulations), promulgated on 7 February 2014 in terms of Section 43 of the Occupational Health and Safety Act, 1993 (Act No 85 of 1993) the Employer shall not appoint a contractor to perform construction work unless the Contractor can satisfy the Employer that his/her firm has the necessary competencies and resources to carry out the work safely and has allowed adequately in his/her tender for the due fulfillment of all the applicable requirements of the Act and the Regulations.

Definition of a Competent Person:

“Competent person” means any person having the knowledge, training, experience and qualifications specific to the work or task being performed: Provided that where appropriate qualifications and training are registered in terms of the provisions of the South African Qualifications Authority Act, 1995 (Act No. 58 of 1995), these qualifications and training shall be deemed to be the required qualifications and training.

Tenderers shall answer the questions below:

- 1 I confirm that I am fully conversant with the Regulations and that my company has (or will acquire/procure) the necessary competencies and resources to timeously, safely and successfully comply with all of the requirements of the Regulations. (Tick)

<b>YES</b>	
<b>NO</b>	

Signature :..... : Name : .....

- 2 Indicate which approach shall be employed to achieve compliance with the Regulations (Tick)

Own resources, competent in terms of the Regulations (refer to 3 below)	
Own resources, still to be hired and/or trained (until competency is achieved)	
Specialist subcontract resources (competent) – specify: ..... ..... ..... ..... ..... .....	

- 3 Provide details of proposed key persons, competent in terms of the Regulations, who will form part of the Contract team as specified in the Regulations (CVs to be attached):

.....  
 .....  
 .....  
 .....

4 Provide details of proposed training (if any) that will be undergone:

.....  
.....  
.....

5 List potential key risks identified and measures for addressing risks:

See the Preliminary Hazard Identification and Risk Assessment contained in the attached Health and Safety Specifications.

**Note: The successful tenderer must submit a project specific Occupational Health and Safety Plan approved by the Client within 14 days of being allocated the works assignment /Work Package.**

6 I have fully included in my tender rates and prices (in the appropriate payment items provided in the Bill of Quantities) for all resources, actions, training and any other costs required for the due fulfillment of the Regulations for the duration of the construction and defects repair period.

(Tick)

YES	<input type="checkbox"/>
NO	<input type="checkbox"/>

SIGNATURE OF PERSON AUTHORISED TO SIGN THIS TENDER:

Signature: ..... Name: .....

ID No.: .....

**K: PROOF OF REGISTRATION WITH THE CONSTRUCTION INDUSTRY DEVELOPMENT BOARD (CIDB)**

Notes to tenderer:

- 1. The tenderer shall attached to this returnable schedule a printed copy of the Active Contractor’s Listing off the Construction Industry Development Board (CIDB) website ([www.cidb.org.za](http://www.cidb.org.za)).
- 2. Tenderers whose CIDB registration expires within 21 days after close of tender should attach proof of their application for re-registration.
- 3. In the case of a joint venture (JV):
  - (a) a printed copy of the Active Contractor’s Listing must be provided for each member of the JV; and
  - (b) a signed copy of the JV Agreement must be attached to returnable schedule **G: JOINT VENTURE DISCLOSURE**

**IN CASE OF SINGLE TENDERING ENTITY:**

Name of Contractor: .....

Contractor Grading Designation: ..... **CE** class of construction work

CIDB Contractor Registration Number: .....

Expiry Date: .....

**IN CASE OF A JOINT VENTURE:**

*Lead member if Joint Venture*

Name of Contractor: .....

Contractor Grading Designation: ..... **CE** class of construction work

CIDB Contractor Registration Number: .....

Expiry Date: .....

*Other member(s) of Joint Venture*

Name of Contractor: .....

Contractor Grading Designation: ..... **CE** class of construction work

CIDB Contractor Registration Number: .....

Expiry Date: .....

Name of Contractor: .....

Contractor Grading Designation: ..... **CE** class of construction work

CIDB Contractor Registration Number: .....

Expiry Date: .....

(Attached additional pages if more space is required.)

**SIGNED BY TENDERER:**.....

**L: CENTRAL SUPPLIER DATABASE (CSD)**

Notes to Tenderer:

- 1. The tenderer must be registered the National Treasury Central Supplier Database and tax status must be compliant, in terms of National Treasury requirements. Failure to comply will render the tender offer non-responsive.
- 2. The tenderer shall complete this returnable schedule and attach a printed copy of the Active Supplier Listing on the National Treasury Central Supplier Database ([www.treasury.go.za](http://www.treasury.go.za)). In the case of a joint venture (JV), the tenderer shall provide printed copies of the Active Supplier Listing on the National Treasury Central Supplier Database for each member of the JV.

**IN CASE OF SINGLE TENDERING ENTITY:**

Name of Supplier: .....

Central Supplier Database Supplier Number: .....

**IN CASE OF A JOINT VENTURE:**

*Lead member if Joint Venture*

Name of Supplier: .....

Central Supplier Database Supplier Number: .....

*Other member(s) of Joint Venture*

Name of Supplier: .....

Central Supplier Database Supplier Number: .....

Name of Supplier: .....

Central Supplier Database Supplier Number: .....

(Attached additional pages if more space is required.)

**SIGNED ON BEHALF OF THE TENDERER:** .....

**M: PROOF OF REGISTRATION WITH THE BARGAINING COUNCIL (BCCEI)**

Notes to tenderer:

- 1. The tenderer must be registered with the **Bargaining Council for the Civil Engineering Industry (BCCEI)**.
- 2. The tender must attach to this returnable schedule proof of registration with applicable Bargaining Council. In case of a joint venture (JV) each member of the JV must attach proof of registration.
- 3. The tenderer's declaration in terms of this returnable schedule will be deemed material to the responsiveness and the Employer's risk analysis of the tender offer.

**DECLARATION IN RESPECT OF COMPLIANCE WITH LABOUR LEGISLATION**

..... (name of tenderer) hereby declare the following:

- 1. The tenderer and his subcontractors shall be registered with the **Bargaining Council for the Civil Engineering Industry (BCCEI)** prior to closing of the Tender.
- 2. The tenderer and his subcontractors shall apply the rates for wages and conditions of labour agreed by the **Bargaining Council for the Civil Engineering Industry (BCCEI)**.
- 3. The tenderer has included in the tendered rates and prices of the completed Pricing Schedules for all costs related to applying the rates for wages and conditions of labour agreed by the **Bargaining Council for the Civil Engineering Industry (BCCEI)**.

by (name of tenderer's representative) .....

(signature of tenderer's representative) .....

and that the information provided by the tenderer's representative are correct.

SIGNED BY TENDERER: .....  
SIGNATURE

.....  
NAME (PRINT)

WITNESS: .....  
SIGNATURE

.....  
NAME (PRINT)

**SIGNED ON BEHALF OF THE TENDERER:** .....

<b>N: RATES FOR SPECIAL MATERIALS</b>
---------------------------------------

Notes to tenderer:

1. Each material dealt with as a special material in terms of **CLAUSE 6.8.3 OF C1.2 CONTRACT DATE** is stated by the Employer, in the table below.
2. If **NO** special materials are stated by the Employer, in the table below, then **NO** special materials are applicable to the tender.
3. Where special material is stated by the Employer, in the table below, the tenderer shall provide the unit (indicating whether the material will be delivered in bulk or in containers) and rate for such special materials.
4. Such rates and prices shall not include VAT but shall include all other obligatory taxes and levies.
5. Fuel is **NOT** classified as a special material.
6. When called upon to do so by the Employer, the tenderer shall substantiate the tenderer special material rates and prices with acceptable documentary evidence.
7. Only special material, stated by the Employer, for which the tenderer has provided units, tendered rates and prices in the table below shall be carried forward to **CLAUSE 6.8.3 OF C1.2 CONTRACT DATA (PART 2)**.

SPECIAL MATERIALS	UNIT *	RATE OR PRICE FOR THE BASE MONTH
Bitumen	litre	
Cement	kg	

\* Tenderer to indicate whether the material will be delivered in bulk or in containers.

When called upon to do so, the Contractor shall substantiate the above rates or prices with acceptable documentary evidence.

**SIGNED ON BEHALF OF THE TENDERER:** .....

<b>FORM T2.2R:      COMPULSORY ENTERPRISE QUESTIONNAIRE</b>
---

The following particulars must be furnished. **In the case of a joint venture, separate enterprise questionnaires in respect of each partner must be completed and submitted.**

**Section 1: Name of enterprise:** .....

**Section 2: VAT registration number, if any:** .....

**Section 3: CIDB registration number, if any:** .....

**Section 4: Particulars of sole proprietors and partners in partnerships**

Name*	Identity number*	Personal income tax number*

\* Complete only if sole proprietor or partnership and attach separate page if more than 3 partners

**Section 5: Particulars of companies and close corporations**

Company registration number .....

Close corporation number .....

Tax reference number .....

**Section 6: Record of service with the state**

Indicate by marking the relevant boxes with a cross, if any sole proprietor, partner in a partnership or director, manager, principal shareholder or stakeholder in a company or close corporation is currently or has been within the last 12 months in the service of any of the following:

- |  |   |
|--|---|
| <input type="checkbox"/> a member of any municipal council<br><input type="checkbox"/> a member of any provincial legislature<br><input type="checkbox"/> a member of the National Assembly or the National Council of Province<br><input type="checkbox"/> a member of the board of directors of any municipal entity<br><input type="checkbox"/> an official of any municipality or municipal entity | <input type="checkbox"/> an employee of any provincial department, national or provincial public entity or constitutional institution within the meaning of the Public Finance Management Act, 1999 (Act 1 of 1999)<br><input type="checkbox"/> a member of an accounting authority of any national or provincial public entity<br><input type="checkbox"/> an employee of Parliament or a provincial legislature |
|--|---|

**If any of the above boxes are marked, disclose the following:**

Name of sole proprietor, partner, director, manager, principal shareholder or stakeholder	Name of institution, public office, board or organ of state and position held	Status of service (Tick appropriate column)	
		Current	Within last 12 months

\*Insert separate page if necessary

**Section 7: Record of spouses, children and parents in the service of the state**

Indicate by marking the relevant boxes with a cross, if any spouse, child or parent of a sole proprietor, partner in a partnership or director, manager, principal shareholder or stakeholder in a company or close corporation is currently or has been within the last 12 months been in the service of any of the following:

- a member of any municipal council
- a member of any provincial legislature
- a member of the National Assembly or the National Council of Province
- a member of the board of directors of any municipal entity
- an official of any municipality or municipal entity
- an employee of any provincial department, national or provincial public entity or constitutional institution within the meaning of the Public Finance Management Act, 1999 (Act 1 of 1999)
- a member of an accounting authority of any national or provincial public entity
- an employee of Parliament or a provincial legislature

Name of spouse, child or parent	Name of institution, public office, board or organ of state and position held	Status of service (Tick appropriate column)	
		current	Within last 12 months

\*Insert separate page if necessary

The undersigned, who warrants that he/she is duly authorised to do so on behalf of the enterprise:

- i) authorizes the Employer to obtain a tax clearance certificate from the South African Revenue Services that my / our tax matters are in order.
- ii) confirms that neither the name of the enterprise or the name of any partner, manager, director or other person, who wholly or partly exercises, or may exercise, control over the enterprise appears on the Register of Tender Defaulters established in terms of the Prevention and Combating of Corrupt Activities Act of 2004.
- iii) confirms that no partner, member, director or other person, who wholly or partly exercises, or may exercise, control over the enterprise appears, has within the last five years been convicted of fraud or corruption.
- iv) confirms that I / we are not associated, linked or involved with any other tendering entities submitting tender offers and have no other relationship with any of the tenderers or those responsible for compiling the scope of work that could cause or be interpreted as a conflict of interest.
- iv) confirms that the contents of this questionnaire are within my personal knowledge and are to the best of my belief both true and correct.

Signed \_\_\_\_\_ Date \_\_\_\_\_

Name \_\_\_\_\_ Position \_\_\_\_\_

Enterprise name \_\_\_\_\_

\* The schedule should be used where tenders are subject to the Local Government: Municipal Finance Management Act.



**FORM T2.2R: COMPULSORY ENTERPRISE QUESTIONNAIRE**  
**(for Joint Venture partner if applicable)**

**Section 1: Name of enterprise:** .....

**Section 2: VAT registration number, if any:** .....

**Section 3: CIDB registration number, if any:** .....

**Section 4: Particulars of sole proprietors and partners in partnerships**

Name*	Identity number*	Personal income tax number*

\* Complete only if sole proprietor or partnership and attach separate page if more than 3 partners

**Section 5: Particulars of companies and close corporations**

Company registration number .....

Close corporation number .....

Tax reference number .....

**Section 6: Record of service of the state**

Indicate by marking the relevant boxes with a cross, if any sole proprietor, partner in a partnership or director, manager, principal shareholder or stakeholder in a company or close corporation is currently or has been within the last 12 months in the service of any of the following:

- |  |   |
|--|---|
| <ul style="list-style-type: none"> <li><input type="checkbox"/> a member of any municipal council</li> <li><input type="checkbox"/> a member of any provincial legislature</li> <li><input type="checkbox"/> a member of the National Assembly or the National Council of Province</li> <li><input type="checkbox"/> a member of the board of directors of any municipal entity</li> <li><input type="checkbox"/> an official of any municipality or municipal entity</li> </ul> | <ul style="list-style-type: none"> <li><input type="checkbox"/> an employee of any provincial department, national or provincial public entity or constitutional institution within the meaning of the Public Finance Management Act, 1999 (Act 1 of 1999)</li> <li><input type="checkbox"/> a member of an accounting authority of any national or provincial public entity</li> <li><input type="checkbox"/> an employee of Parliament or a provincial legislature</li> </ul> |
|--|---|

**If any of the above boxes are marked, disclose the following:**

Name of sole proprietor, partner, director, manager, principal shareholder or stakeholder	Name of institution, public office, board or organ of state and position held	Status of service (Tick appropriate column)	
		Current	Within last 12 months

\*Insert separate page if necessary

**Section 7: Record of spouses, children and parents in the service of the state**

Indicate by marking the relevant boxes with a cross, if any spouse, child or parent of a sole proprietor, partner in a partnership or director, manager, principal shareholder or stakeholder in a company or close corporation is currently or has been within the last 12 months been in the service of any of the following:

- a member of any municipal council
- a member of any provincial legislature
- a member of the National Assembly or the National Council of Province
- a member of the board of directors of any municipal entity
- an official of any municipality or municipal entity
- an employee of any provincial department, national or provincial public entity or constitutional institution within the meaning of the Public Finance Management Act, 1999 (Act 1 of 1999)
- a member of an accounting authority of any national or provincial public entity
- an employee of Parliament or a provincial legislature

Name of spouse, child or parent	Name of institution, public office, board or organ of state and position held	Status of service (Tick appropriate column)	
		current	Within last 12 months

\*Insert separate page if necessary

The undersigned, who warrants that he/she is duly authorised to do so on behalf of the enterprise:

- i) authorizes the Employer to obtain a tax clearance certificate from the South African Revenue Services that my / our tax matters are in order.
- ii) confirms that the neither the name of the enterprise or the name of any partner, manager, director or other person, who wholly or partly exercises, or may exercise, control over the enterprise appears on the Register of Tender Defaulters established in terms of the Prevention and Combating of Corrupt Activities Act of 2004.
- iii) confirms that no partner, member, director or other person, who wholly or partly exercises, or may exercise, control over the enterprise appears, has within the last five years been convicted of fraud or corruption.
- iv) confirms that I / we are not associated, linked or involved with any other tendering entities submitting tender offers and have no other relationship with any of the tenderers or those responsible for compiling the scope of work that could cause or be interpreted as a conflict of interest.
- iv) confirms that the contents of this questionnaire are within my personal knowledge and are to the best of my belief both true and correct.

Signed \_\_\_\_\_ Date \_\_\_\_\_

Name \_\_\_\_\_ Position \_\_\_\_\_

Enterprise name \_\_\_\_\_

\* The schedule should be used where tenders are subject to the Local Government: Municipal Finance Management Act

**SBD 4: BIDDER'S DISCLOSURE**

**1. PURPOSE OF THE FORM**

Any person (natural or juristic) may make an offer or offers in terms of this invitation to bid. In line with the principles of transparency, accountability, impartiality, and ethics as enshrined in the Constitution of the Republic of South Africa and further expressed in various pieces of legislation, it is required for the bidder to make this declaration in respect of the details required hereunder.

Where a person/s are listed in the Register for Tender Defaulters and / or the List of Restricted Suppliers, that person will automatically be disqualified from the bid process.

**2. Bidder's declaration**

2.1 Is the bidder, or any of its directors / trustees / shareholders / members / partners or any person having a controlling interest<sup>1</sup> in the enterprise, employed by the state? **YES/NO**

2.1.1 If so, furnish particulars of the names, individual identity numbers, and, if applicable, state employee numbers of sole proprietor/ directors / trustees / shareholders / members/ partners or any person having a controlling interest in the enterprise, in table below.

Full Name	Identity Number	Name of State institution

2.2 Do you, or any person connected with the bidder, have a relationship with any person who is employed by the procuring institution? **YES/NO**

2.2.1 If so, furnish particulars:  
 .....  
 .....

2.3 Does the bidder or any of its directors / trustees / shareholders / members / partners or any person having a controlling interest in the enterprise have any interest in any other related enterprise whether or not they are bidding for this contract? **YES/NO**

<sup>1</sup> the power, by one person or a group of persons holding the majority of the equity of an enterprise, alternatively, the person/s having the deciding vote or power to influence or to direct the course and decisions of the enterprise.

2.3.1 If so, furnish particulars:

.....  
.....

**3 DECLARATION**

I, \_\_\_\_\_ the \_\_\_\_\_ undersigned,  
(name)..... in submitting the  
accompanying bid, do hereby make the following statements that I certify to be true  
and complete in every respect:

- 3.1 I have read, and I understand the contents of this disclosure;
- 3.2 I understand that the accompanying bid will be disqualified if this disclosure is found not to be true and complete in every respect.
- 3.3 The bidder has arrived at the accompanying bid independently from, and without consultation, communication, agreement or arrangement with any competitor. However, communication between partners in a joint venture or consortium<sup>2</sup> will not be construed as collusive bidding.
- 3.4 In addition, there have been no consultations, communications, agreements or arrangements with any competitor regarding the quality, quantity, specifications, prices, including methods, factors or formulas used to calculate prices, market allocation, the intention or decision to submit or not to submit the bid, bidding with the intention not to win the bid and conditions or delivery particulars of the products or services to which this bid invitation relates.
- 3.5 The terms of the accompanying bid have not been, and will not be, disclosed by the bidder, directly or indirectly, to any competitor, prior to the date and time of the official bid opening or of the awarding of the contract.
- 3.6 There have been no consultations, communications, agreements or arrangements made by the bidder with any official of the procuring institution in relation to this procurement process prior to and during the bidding process except to provide clarification on the bid submitted where so required by the institution; and the bidder was not involved in the drafting of the specifications or terms of reference for this bid.
- 3.7 I am aware that, in addition and without prejudice to any other remedy provided to combat any restrictive practices related to bids and contracts, bids that are suspicious will be reported to the Competition Commission for investigation and possible imposition of administrative penalties in terms of section 59 of the Competition Act No 89 of 1998 and or may be reported to the National Prosecuting Authority (NPA) for criminal investigation and or may be restricted from conducting business with the public sector for a period not exceeding ten (10) years in terms of the Prevention and Combating of Corrupt Activities Act No 12 of 2004 or any other applicable legislation.

I CERTIFY THAT THE INFORMATION FURNISHED IN PARAGRAPHS 1, 2 and 3

2 Joint venture or Consortium means an association of persons for the purpose of combining their expertise, property, capital, efforts, skill and knowledge in an activity for the execution of a contract.

ABOVE IS CORRECT.

I ACCEPT THAT THE STATE MAY REJECT THE BID OR ACT AGAINST ME IN TERMS OF PARAGRAPH 6 OF PFMA SCM INSTRUCTION 03 OF 2021/22 ON ENHANCING COMPLIANCE, TRANSPARENCY AND ACCOUNTABILITY IN SUPPLY CHAIN MANAGEMENT SHOULD THIS DECLARATION PROVE TO BE FALSE.

.....  
Signature Date

.....  
Position Name of bidder

This document must be signed and submitted together with your bid
---

## THE NATIONAL INDUSTRIAL PARTICIPATION PROGRAMME

### INTRODUCTION

The National Industrial Participation (NIP) Programme, which is applicable to all government procurement contracts that have an imported content, became effective on the 1 September 1996. The NIP policy and guidelines were fully endorsed by Cabinet on 30 April 1997. In terms of the Cabinet decision, all state and parastatal purchases / lease contracts (for goods, works and services) entered into after this date, are subject to the NIP requirements. NIP is obligatory and therefore must be complied with. The Industrial Participation Secretariat (IPS) of the Department of Trade and Industry (DTI) is charged with the responsibility of administering the programme.

### 1 PILLARS OF THE PROGRAMME

- 1.1 The NIP obligation is benchmarked on the imported content of the contract. Any contract having an imported content equal to or exceeding US\$ 10 million or other currency equivalent to US\$ 10 million will have a NIP obligation. This threshold of US\$ 10 million can be reached as follows:
- (a) Any single contract with imported content exceeding US\$10 million.
  - or
  - (b) Multiple contracts for the same goods, works or services each with imported content exceeding US\$3 million awarded to one seller over a 2 year period which in total exceeds US\$10 million.
  - or
  - (c) A contract with a renewable option clause, where should the option be exercised the total value of the imported content will exceed US\$10 million.
  - or
  - (d) Multiple suppliers of the same goods, works or services under the same contract, where the value of the imported content of each allocation is equal to or exceeds US\$ 3 million worth of goods, works or services to the same government institution, which in total over a two (2) year period exceeds US\$10 million.
- 1.2 The NIP obligation applicable to suppliers in respect of sub-paragraphs 1.1 (a) to 1.1 (c) above will amount to 30 % of the imported content whilst suppliers in respect of paragraph 1.1 (d) shall incur 30% of the total NIP obligation on a *pro-rata* basis.
- 1.3 To satisfy the NIP obligation, the DTI would negotiate and conclude agreements such as investments, joint ventures, sub-contracting, licensee production, export promotion, sourcing arrangements and research and development (R&D) with partners or suppliers.

- 1.4 A period of seven years has been identified as the time frame within which to discharge the obligation.

## **2 REQUIREMENTS OF THE DEPARTMENT OF TRADE AND INDUSTRY**

- 2.1 In order to ensure effective implementation of the programme, successful bidders (contractors) are required to, immediately after the award of a contract that is in excess of R10 million (ten million Rands), submit details of such a contract to the DTI for reporting purposes.

- 2.2 The purpose for reporting details of contracts in excess of the amount of R10 million (ten million Rands) is to cater for multiple contracts for the same goods, works or services; renewable contracts and multiple suppliers for the same goods, works or services under the same contract as provided for in paragraphs 1.1.(b) to 1.1. (d) above.

## **3 BID SUBMISSION AND CONTRACT REPORTING REQUIREMENTS OF BIDDERS AND SUCCESSFUL BIDDERS (CONTRACTORS)**

- 3.1 Bidders are required to sign and submit this Standard Bidding Document (SBD 5) together with the bid on the closing date and time.

- 3.2 In order to accommodate multiple contracts for the same goods, works or services; renewable contracts and multiple suppliers for the same goods, works or services under the same contract as indicated in sub-paragraphs 1.1 (b) to 1.1 (d) above and to enable the DTI in determining the NIP obligation, successful bidders (contractors) are required, immediately after being officially notified about any successful bid with a value in excess of R10 million (ten million Rands), to contact and furnish the DTI with the following information:

- Bid / contract number.
- Description of the goods, works or services.
- Date on which the contract was accepted.
- Name, address and contact details of the government institution.
- Value of the contract.
- Imported content of the contract, if possible.

- 3.3 The information required in paragraph 3.2 above must be sent to the Department of Trade and Industry, Private Bag X 84, Pretoria, 0001 for the attention of Mr Elias Malapane within five (5) working days after award of the contract. Mr Malapane may be contacted on telephone (012) 394 1401, facsimile (012) 394 2401 or e-mail at [Elias@thedti.gov.za](mailto:Elias@thedti.gov.za) for further details about the programme.

## **4 PROCESS TO SATISFY THE NIP OBLIGATION**

- 4.1 Once the successful bidder (contractor) has made contact with and furnished the DTI with the information required, the following steps will be followed:

- a. the contractor and the DTI will determine the NIP obligation;
- b. the contractor and the DTI will sign the NIP obligation agreement;

- c. the contractor will submit a performance guarantee to the DTI;
- d. the contractor will submit a business concept for consideration and approval by the DTI;
- e. upon approval of the business concept by the DTI, the contractor will submit detailed business plans outlining the business concepts;
- f. the contractor will implement the business plans; and
- g. the contractor will submit bi-annual progress reports on approved plans to the DTI.

4.2 The NIP obligation agreement is between the DTI and the successful bidder (contractor) and, therefore, does not involve the purchasing institution.

Bid number .....	Closing date:.....
Name of bidder.....	
Postal address .....	
.....	
Signature.....	Name (in print).....
Date.....	

Js475wc



**PREFERENCE POINTS CLAIM FORM IN TERMS OF THE PREFERENTIAL PROCUREMENT REGULATIONS 2022**

This preference form must form part of all tenders invited. It contains general information and serves as a claim form for preference points for specific goals.

**NB: BEFORE COMPLETING THIS FORM, TENDERERS MUST STUDY THE GENERAL CONDITIONS, DEFINITIONS AND DIRECTIVES APPLICABLE IN RESPECT OF THE TENDER AND PREFERENTIAL PROCUREMENT REGULATIONS, 2022**

**1. GENERAL CONDITIONS**

1.1 The following preference point systems are applicable to invitations to tender:

- the 80/20 system for requirements with a Rand value of up to R50 000 000 (all applicable taxes included); and
- the 90/10 system for requirements with a Rand value above R50 000 000 (all applicable taxes included).

**1.2 To be completed by the organ of state**

*(Delete whichever is not applicable for this tender).*

a) The applicable preference point system for this tender is the 80/20 preference point system.

b) The 80/20 preference point system will be applicable in this tender. The lowest / highest acceptable tender will be used to determine the accurate system once tenders are received.

1.3 Points for this tender (even in the case of a tender for income-generating contracts) shall be awarded for:

Price; and

Specific Goals.

**1.4 To be completed by the organ of state:**

The maximum points for this tender are allocated as follows:

	POINTS
<b>PRICE</b>	<b>80</b>
<b>SPECIFIC GOALS</b>	<b>20</b>
<b>Total points for Price and SPECIFIC GOALS</b>	<b>100</b>

1.5 Failure on the part of a tenderer to submit proof or documentation required in terms of this tender to claim points for specific goals with the tender, will be interpreted to mean that preference points for specific goals are not claimed.

- 1.6 The organ of state reserves the right to require of a tenderer, either before a tender is adjudicated or at any time subsequently, to substantiate any claim in regard to preferences, in any manner required by the organ of state.

## 2. DEFINITIONS

- (a) **“tender”** means a written offer in the form determined by an organ of state in response to an invitation to provide goods or services through price quotations, competitive tendering process or any other method envisaged in legislation.
- (b) **“price”** means an amount of money tendered for goods or services, and includes all applicable taxes less all unconditional discounts.
- (c) **“Rand value”** means the total estimated value of a contract in Rand, calculated at the time of bid invitation, and includes all applicable taxes;
- (d) **“tender for income-generating contracts”** means a written offer in the form determined by an organ of state in response to an invitation for the origination of income-generating contracts through any method envisaged in legislation that will result in a legal agreement between the organ of state and a third party that produces revenue for the organ of state, and includes, but is not limited to, leasing and disposal of assets and concession contracts, excluding direct sales and disposal of assets through public auctions; and
- (e) **“The Act”** means the Preferential Procurement Policy Framework Act, 2000 (Act No. 5 of 2000).

## 3. FORMULAE FOR PROCUREMENT OF GOODS AND SERVICES

### 3.1. POINTS AWARDED FOR PRICE

#### 3.1.1 THE 80/20 PREFERENCE POINT SYSTEMS

A maximum of 80 points is allocated for price on the following basis:

**80/20**

$$Ps = 80 \left( 1 - \frac{Pt - Pmin}{Pmin} \right)$$

Where?

Ps = Points scored for price of tender under consideration

Pt = Price of tender under consideration

Pmin = Price of lowest acceptable tender

## 3.2. FORMULAE FOR DISPOSAL OR LEASING OF STATE ASSETS AND INCOME GENERATING PROCUREMENT

### 3.2.1. POINTS AWARDED FOR PRICE

A maximum of 80 points is allocated for price on the following basis:

**80/20**

$$Ps = 80 \left( 1 + \frac{Pt - Pmax}{Pmax} \right)$$

Where

- Ps = Points scored for price of tender under consideration
- Pt = Price of tender under consideration
- Pmax = Price of highest acceptable tender

**4. POINTS AWARDED FOR SPECIFIC GOALS**

- 4.1. In terms of Regulation 4(2); 5(2); 6(2) and 7(2) of the Preferential Procurement Regulations, preference points must be awarded for specific goals stated in the tender. For the purposes of this tender the tenderer will be allocated points based on the goals stated in table 1 below as may be supported by proof/ documentation stated in the conditions of this tender:
- 4.2. In cases where organs of state intend to use Regulation 3(2) of the Regulations, which states that, if it is unclear whether the 80/20 or 90/10 preference point system applies, an organ of state must, in the tender documents, stipulate in the case of—
  - (a) an invitation for tender for income-generating contracts, that either the 80/20 or 90/10 preference point system will apply and that the highest acceptable tender will be used to determine the applicable preference point system: or
  - (b) any other invitation for tender, that either the 80/20 or 90/10 preference point system will apply and that the lowest acceptable tender will be used to determine the applicable preference point system,
 then the organ of state must indicate the points allocated for specific goals for both the 90/10 and 80/20 preference point system.

**Table 1: Specific goals for the tender and points claimed are indicated per the table below.**

*(Note to organs of state: Where either the 90/10 or 80/20 preference point system is applicable, corresponding points must also be indicated as such.)*

*Note to tenderers: The tenderer must indicate how they claim points for each preference point system.)*

PREFERENTIAL SPECIFIC GOALS POINTS TABLE		
The specific goals allocated points in terms of this tender	Number of points allocated (80/20 system) (To be completed by the organ of state)	Number of points claimed (80/20 system)
<b>Historically Disadvantaged Individuals</b>		
Black ownership	10	% ownership as per CIPC / CSD
Women ownership	05	% ownership as per CIPC / CSD
Locality (EC Province)	05	% Preferred address on CSD

**DECLARATION WITH REGARD TO COMPANY/FIRM**

- 4.3. Name of company/firm.....
- 4.4. Company registration number: .....
- 4.5. TYPE OF COMPANY/ FIRM

- Partnership/Joint Venture / Consortium
- One-person business/sole propriety
- Close corporation
- Public Company
- Personal Liability Company
- (Pty) Limited
- Non-Profit Company
- State Owned Company

[TICK APPLICABLE BOX]

4.6. I, the undersigned, who is duly authorised to do so on behalf of the company/firm, certify that the points claimed, based on the specific goals as advised in the tender, qualifies the company/ firm for the preference(s) shown and I acknowledge that:

- i) The information furnished is true and correct.
- ii) The preference points claimed are in accordance with the General Conditions as indicated in paragraph 1 of this form.
- iii) In the event of a contract being awarded as a result of points claimed as shown in paragraphs 1.4 and 4.2, the contractor may be required to furnish documentary proof to the satisfaction of the organ of state that the claims are correct.
- iv) If the specific goals have been claimed or obtained on a fraudulent basis or any of the conditions of contract have not been fulfilled, the organ of state may, in addition to any other remedy it may have –
  - (a) disqualify the person from the tendering process.
  - (b) recover costs, losses or damages it has incurred or suffered as a result of that person’s conduct.
  - (c) cancel the contract and claim any damages which it has suffered as a result of having to make less favourable arrangements due to such cancellation.
  - (d) recommend that the tenderer or contractor, its shareholders and directors, or only the shareholders and directors who acted on a fraudulent basis, be restricted from obtaining business from any organ of state for a period not exceeding 10 years, after the *audi alteram partem* (hear the other side) rule has been applied; and
  - (e) forward the matter for criminal prosecution, if deemed necessary.

..... <b>SIGNATURE(S) OF TENDERER(S)</b>	
<b>SURNAME AND NAME:</b>	.....
<b>DATE:</b>	.....
<b>ADDRESS:</b>	.....
	.....
	.....
	.....

**SBD 6.2: DECLARATION CERTIFICATE FOR LOCAL PRODUCTION AND CONTENT FOR DESIGNATED SECTORS**
**SBD 6.2**

This Standard Bidding Document (SBD) must form part of all bids invited. It contains general information and serves as a declaration form for local content (local production and local content are used interchangeably).

Before completing this declaration, bidders must study the General Conditions, Definitions, Directives applicable in respect of Local Content as prescribed in the Preferential Procurement Regulations, 2017, the South African Bureau of Standards (SABS) approved technical specification number SATS 1286:2011 (Edition 1) and the Guidance on the Calculation of Local Content together with the Local Content Declaration Templates [Annex C (Local Content Declaration: Summary Schedule), D (Imported Content Declaration: Supporting Schedule to Annex C) and E (Local Content Declaration: Supporting Schedule to Annex C)].

### 1. General Conditions

- 1.1. Preferential Procurement Regulations, 2017 (Regulation 8) make provision for the promotion of local production and content.
- 1.2. Regulation 8.(2) prescribes that in the case of designated sectors, organs of state must advertise such tenders with the specific bidding condition that **only** locally produced or manufactured goods, with a stipulated minimum threshold for local production and content **will be considered**.
- 1.3. Where necessary, for tenders referred to in paragraph 1.2 above, a two stage bidding process may be followed, where the first stage involves a minimum threshold for local production and content and the second stage price and B-BBEE.
- 1.4. A person awarded a contract in relation to a designated sector, may not sub-contract in such a manner that the local production and content of the overall value of the contract is reduced to below the stipulated minimum threshold.
- 1.5. The local content (LC) expressed as a percentage of the bid price must be calculated in accordance with the SABS approved technical specification number SATS 1286: 2011 as follows:

$$LC = [1 - x / y] * 100$$

Where

x is the imported content in Rand

y is the bid price in Rand excluding value added tax (VAT)

Prices referred to in the determination of x must be converted to Rand (ZAR) by using the exchange rate published by South African Reserve Bank (SARB) at 12:00 on the date of advertisement of the bid as indicated in paragraph 4.1 below.

**The SABS approved technical specification number SATS 1286:2011 is accessible on [http://www.thedti.gov.za/industrial\\_development/ip.jsp](http://www.thedti.gov.za/industrial_development/ip.jsp) at no cost.**

- 1.6. **A bid may be disqualified if this Declaration Certificate (SBD6.2) and the Annex C (Local Content Declaration: Summary Schedule) are not submitted** as part of the bid documentation;

**2. The stipulated minimum threshold(s) for local production and content (refer to Annex A of SATS 1286:2011) for this bid is/are as follows:**

<u>Description of services, works or goods</u>	<u>Stipulated minimum threshold</u>
<u>Steel Products and Component for Construction</u>	<u>100%</u>

**3. Does any portion of the goods or services offered have any imported content? (Tick applicable box)**

YES	<input type="checkbox"/>	NO	<input type="checkbox"/>
-----	--------------------------	----	--------------------------

**3.1 If yes, the rate(s) of exchange to be used in this bid to calculate the local content as prescribed in paragraph 1.5 of the general conditions must be the rate(s) published by SARB for the specific currency at 12:00 on the date of advertisement of the bid.**

The relevant rates of exchange information is accessible on [www.reservebank.co.za](http://www.reservebank.co.za)

Indicate the rate(s) of exchange against the appropriate currency in the table below (refer to Annex A of SATS 1286:2011):

<b>Currency</b>	<b>Rates of exchange</b>
US Dollar	
Pound Sterling	
Euro	
Yen	
Other	

NB: Bidders must submit proof of the SARB rate (s) of exchange used.

**4. Where, after the award of a bid, challenges are experienced in meeting the stipulated minimum threshold for local content the dti must be informed accordingly in order for the dti to verify and in consultation with the AO/AA provide directives in this regard.**

**LOCAL CONTENT DECLARATION**  
**(REFER TO ANNEX B OF SATS 1286:2011)**

**LOCAL CONTENT DECLARATION BY CHIEF FINANCIAL OFFICER OR OTHER LEGALLY RESPONSIBLE PERSON NOMINATED IN WRITING BY THE CHIEF EXECUTIVE OR SENIOR MEMBER/PERSON WITH MANAGEMENT RESPONSIBILITY (CLOSE CORPORATION, PARTNERSHIP OR INDIVIDUAL)**

**IN RESPECT OF BID NO. ....**

**ISSUED BY:** (Procurement Authority / Name of Institution):

NB

1 The obligation to complete, duly sign and submit this declaration cannot be transferred to an external authorized representative, auditor or any other third party acting on behalf of the bidder.

2 Guidance on the Calculation of Local Content together with Local Content Declaration Templates (Annex C, D and E) is accessible on [http://www.thdti.gov.za/industrial\\_development/ip.jsp](http://www.thdti.gov.za/industrial_development/ip.jsp). Bidders should first complete Declaration D. After completing Declaration D, bidders should complete Declaration

E and then consolidate the information on Declaration C. **Declaration C should be submitted with the bid documentation at the closing date and time of the bid in order to substantiate the declaration made in paragraph (c) below.** Declarations D and E should be kept by the bidders for verification purposes for a period of at least 5 years. The successful bidder is required to continuously update Declarations C, D and E with the actual values for the duration of the contract.

I, the undersigned, ..... (full names), do hereby declare, in my capacity as ..... of .....(name of bidder entity), the following:

- (a) The facts contained herein are within my own personal knowledge.
- (b) I have satisfied myself that:
  - (i) the goods/services/works to be delivered in terms of the above-specified bid comply with the minimum local content requirements as specified in the bid, and as measured in terms of SATS 1286:2011; and
- (c) The local content percentage (%) indicated below has been calculated using the formula given in clause 3 of SATS 1286:2011, the rates of exchange indicated in paragraph 4.1 above and the information contained in Declaration D and E which has been consolidated in Declaration C:

Bid price, excluding VAT (y)	R
Imported content (x), as calculated in terms of SATS 1286:2011	R
Stipulated minimum threshold for local content (paragraph 3 above)	
Local content %, as calculated in terms of SATS 1286:2011	

**If the bid is for more than one product, the local content percentages for each product contained in Declaration C shall be used instead of the table above. The local content percentages for each product has been calculated using the formula given in clause 3 of SATS 1286:2011, the rates of exchange indicated in paragraph 4.1 above and the information contained in Declaration D and E.**

- (d) I accept that the Procurement Authority / Institution has the right to request that the local content be verified in terms of the requirements of SATS 1286:2011.
- (e) I understand that the awarding of the bid is dependent on the accuracy of the information furnished in this application. I also understand that the submission of incorrect data, or data that are not verifiable as described in SATS 1286:2011, may result in the Procurement Authority / Institution imposing any or all of the remedies as provided for in Regulation 14 of the Preferential Procurement Regulations, 2017 promulgated under the Preferential Policy Framework Act (PPPFA), 2000 (Act No. 5 of 2000).

**SIGNATURE:** \_\_\_\_\_ **DATE:** \_\_\_\_\_

**WITNESS No. 1** \_\_\_\_\_ **DATE:** \_\_\_\_\_

**WITNESS No. 2** \_\_\_\_\_ **DATE:** \_\_\_\_\_

SATS 1286.2011

**Annex C**

**Local Content Declaration - Summary Schedule**

(C1)	Tender No.					
(C2)	Tender description:					
(C3)	Designated product(s)					
(C4)	Tender Authority:					
(C5)	Tendering Entity name:					
(C6)	Tender Exchange Rate:	Pula	EU		GBP	
(C7)	Specified local content %					

Note: VAT to be excluded from all calculations

		Calculation of local content				Tender summary					
Tender item no's	List of items	Tender price - each (excl VAT)	Exempted imported value	Tender value net of exempted imported content	Imported value	Local value	Local content % (per item)	Tender Qty	Total tender value	Total exempted imported content	Total Imported content
	(C9)	(C10)	(C11)	(C12)	(C13)	(C14)	(C15)	(C16)	(C17)	(C18)	(C19)
5200	Gabions							420 m3			
5400	Guardrails							80m			
6300	Reinforcing steel for strctyres							186.1 t			
61.13	Dowel Bars							120kg			
								(C20) Total tender value			

Signature of tenderer from Annex B		(C21) Total Exempt imported content	(C23) Total Imported content
		(C22) Total Tender value net of exempt imported content	(C24) Total local content
Date:		(C25) Average local content % of tender	



**CONTRACT FORM - RENDERING OF SERVICES**

**THIS FORM MUST BE FILLED IN DUPLICATE BY BOTH THE SERVICE PROVIDER (PART 1) AND THE PURCHASER (PART 2). BOTH FORMS MUST BE SIGNED IN THE ORIGINAL SO THAT THE SERVICE PROVIDER AND THE PURCHASER WOULD BE IN POSSESSION OF ORIGINALLY SIGNED CONTRACTS FOR THEIR RESPECTIVE RECORDS.**

**PART 1 (TO BE FILLED IN BY THE SERVICE PROVIDER)**

1. I hereby undertake to render services described in the attached bidding documents to (name of the institution) ..... in accordance with the requirements and task directives / proposals specifications stipulated in Bid Number..... at the price/s quoted. My offer/s remain binding upon me and open for acceptance by the Purchaser during the validity period indicated and calculated from the closing date of the bid.
2. The following documents shall be deemed to form and be read and construed as part of this agreement:
  - (i) Bidding documents, viz
    - Invitation to bid.
    - Proof of tax compliance status.
    - Pricing schedule(s).
    - Filled in task directive/proposal.
    - Preference claim form for Preferential Procurement in terms of the Preferential Procurement Regulations.
    - Bidder’s Disclosure form.
    - Special Conditions of Contract.
  - (ii) General Conditions of Contract; and
  - (iii) Other (specify)
3. I confirm that I have satisfied myself as to the correctness and validity of my bid; that the price(s) and rate(s) quoted cover all the services specified in the bidding documents; that the price(s) and rate(s) cover all my obligations and I accept that any mistakes regarding price(s) and rate(s) and calculations will be at my own risk.
4. I accept full responsibility for the proper execution and fulfilment of all obligations and conditions devolving on me under this agreement as the principal liable for the due fulfillment of this contract.
5. I declare that I have no participation in any collusive practices with any bidder or any other person regarding this or any other bid.
6. I confirm that I am duly authorised to sign this contract.

NAME (PRINT) .....

CAPACITY .....

SIGNATURE .....

NAME OF FIRM .....

DATE .....

WITNESSES	
1	.....
2	.....
DATE:	.....

**CONTRACT FORM - RENDERING OF SERVICES**

**PART 2 (TO BE FILLED IN BY THE PURCHASER)**

1. I.....in my capacity as..... accept your bid under reference number **SCMU10-24/25-0021** dated..... for the rendering of services indicated hereunder and/or further specified in the annexure(s).
2. An official order indicating service delivery instructions is forthcoming.
3. I undertake to make payment for the services rendered in accordance with the terms and conditions of the contract, within 30 (thirty) days after receipt of an invoice.

DESCRIPTION OF SERVICE	PRICE (ALL APPLICABLE TAXES INCLUDED)	COMPLETION DATE	TOTAL PREFERENCE POINTS CLAIMED	POINTS CLAIMED FOR EACH SPECIFIC GOAL

4. I confirm that I am duly authorised to sign this contract.

SIGNED AT .....ON.....

NAME (PRINT) .....

SIGNATURE .....

OFFICIAL STAMP

WITNESSES

1 .....

2 .....

DATE: .....

**PROVINCE OF THE EASTERN CAPE**

**DEPARTMENT OF TRANSPORT**

**TENDER NO.  
SCMU10-24/25-0021**

**BRIDGE CONSTRUCTION FOR HAMBURG CONSTRUCTION PROJECT FOR A  
PERIOD OF 12 MONTHS**

**CONTRACT**  
**PART 1 (OF 4): AGREEMENTS AND CONTRACT DATA**

- C1.1 Form of Offer and Acceptance**
- C1.2 Contract Data**
- C1.3 Form of Security (Pro Forma)**
- C1.4 Occupational Health & Safety Act, Act 85 of 1993  
Contractors 37.2 Mandatory Agreement**
- C1.5 Application for Permit to do Construction Work (Pro Forma)**

PROVINCE OF THE EASTERN CAPE

DEPARTMENT OF TRANSPORT

TENDER NO.
SCMU10-24/25-0021

BRIDGE CONSTRUCTION FOR HAMBURG CONSTRUCTION PROJECT FOR A
PERIOD OF 12 MONTHS

C1.1: FORM OF OFFER AND ACCEPTANCE

1. OFFER

The employer, identified in the acceptance signature block, has solicited offers to enter a contract for the procurement of:

SCMU10-24/25-0021: BRIDGE CONSTRUCTION FOR HAMBURG CONSTRUCTION PROJECT

The Tenderer, identified in the offer signature block, has examined the documents listed in the tender data and addenda thereto as listed in the Returnable Schedules, and by submitting this offer has accepted the tender conditions.

By the representative of the Tenderer, deemed to be duly authorized, signing this part of this Form of Offer and Acceptance, the Tenderer offers to perform all of the obligations and liabilities of the Contractor under the contract including compliance with all its terms and conditions according to their true intent and meaning for an amount to be determined in accordance with the Conditions of Contract identified in the Contract Data.

The offered total of the prices inclusive of Value-Added Tax is:

.....
.....
..... Rand (in words); R..... (in figures)

This offer may be accepted by the Employer by signing the Acceptance part of this Form of Offer and Acceptance and returning one copy of this Form of Offer and Acceptance document including the Schedule of Deviations (if any) to the Tenderer before the end of the period of validity stated in the tender data or other period as agreed, whereupon the Tenderer becomes the party named as the contractor in terms of the Conditions of Contract identified in the Contract Data.

OFFER SIGNATURE BLOCK

Signature(s) .....
Name(s) .....
Capacity .....
for the Tenderer .....
(Name and address of organization)

AS WITNESSES

Witness 1

Signature .....

Date .....

Name .....

Witness 2

Signature .....

Date .....

Name .....

**2. ACCEPTANCE**

By signing this part of this Form of Offer and Acceptance, the employer identified below accepts the Tenderer's offer. In consideration thereof, the employer shall pay the contractor the amount due for respective ad hoc work assignments /work packages in accordance with the conditions of contract identified in the contract data. Acceptance of the Tenderer's offer shall form an agreement between the employer and the Tenderer upon the terms and conditions contained in this agreement and in the contract that is the subject of this agreement.

The terms of the Contract are contained in:

**Part C1: Agreements and Contract Data (which includes this Form of Offer and Acceptance)**

**Part C2: Pricing data**

**Part C3: Scope of Work**

**Part C4: Site Information**

**and drawings and documents or parts thereof, which may be incorporated by reference into Parts C1 to C4 above as well as the Appendices.**

Deviations from and amendments to the documents listed in the tender data and any addenda thereto, as listed in the tender schedules as well as any changes to the terms of the offer agreed by the tenderer and the employer during this process of Offer and Acceptance, are contained in the Schedule of Deviations attached to and forming part of this Form of Offer and Acceptance agreement. No amendments to or deviations from said documents are valid unless contained in this schedule.

The tenderer shall, within two weeks after receiving a completed copy of this agreement including the schedule of Deviations (if any), contact the employer's agent (whose details are given in the contract data) to arrange the delivery of any bonds, guarantees, proof insurance and any other documentation to be provided in terms of the conditions of contract identified in the Contract Data. Failure to fulfil any of these obligations in accordance with those terms shall constitute a repudiation of this agreement.

Notwithstanding anything contained herein, this agreement comes into effect on the date when the tenderer receives one fully completed copy of this Form of Offer and Acceptance including the Schedule of Deviations (if any). Unless the tenderer (now contractor), within five (5) working days of the date of such receipt, notifies the employer in writing of any reason why he cannot accept the contents of this agreement, this agreement shall constitute a binding contract between the parties.

<u>ACCEPTANCE SIGNATURE BLOCK</u>	
<b>SCMU10-23/24-0021: BRIDGE CONSTRUCTION FOR HAMBURG CONSTRUCTION PROJECT FOR A PERIOD OF 12 MONTHS</b>	
Signature(s)	.....
Name(s)	.....
Capacity	.....
for the <b>Employer:</b>	<b>Department of Transport Province of the Eastern Cape Private Bag X0023, BHISHO, 5605</b>
Name of witness	.....
Signature of witness	.....
	Date .....

**3. SCHEDULE OF DEVIATIONS**

**BRIDGE CONSTRUCTION FOR HAMBURG CONSTRUCTION PROJECT FOR A PERIOD OF 12 MONTHS**

**Notes:**

- 1. The extent of deviations from the tender documents issued by the employer before the tender closing date is limited to those permitted in terms of the tender conditions.
- 2. Any other matter arising from the process of Offer and Acceptance either as a confirmation, clarification or change to the tender documents, and which it is agreed by the parties becomes an obligation of the contract, shall also be recorded here.
- 3. Any change or addition to the tender documents arising from the above agreements and recorded here, shall also be incorporated into the final draft of the contract.

A tenderer's covering letter shall not be included in the final contract document. Should any matter in such letter, which constitutes a deviation as aforesaid, be the subject of agreements reached during the process of offer and acceptance, the outcome of such agreement shall be recorded here.

- 1. Subject .....  
Details .....
- 2. Subject .....  
Details .....
- 3. Subject .....  
Details .....
- 4. Subject .....  
Details .....
- 5. Subject .....  
Details .....

By the duly authorized representatives signing this Agreement with schedule of deviations (if any), the employer and the tenderer agree to and accept the foregoing schedule of deviations as the only deviations from and amendments to the documents listed in the tender data and addenda thereto as listed in the tender schedules, as well as any confirmation, clarification or changes to the terms of the Offer agreed by the tenderer and the employer during this process of offer and acceptance.

It is expressly agreed that no other matter whether in writing, oral communication or implied during the period between the issue of the tender documents and the receipt by the tenderer of a completed signed copy of this Agreement shall have any meaning or effect in the contract between the parties arising from this Agreement.

**SCHEDULE OF DEVIATIONS SIGNATURE BLOCK**

**For The Tenderer:**

Signature(s) .....

Name(s) .....

Capacity .....

for the **Tenderer** .....  
(Name and address of organization)

Name and signature of witness ..... Date .....

**For the Employer:**

Signature(s) .....

Name(s) .....

Capacity .....

for the **Employer:** **Department of Transport**  
**Province of the Eastern Cape**  
**Private Bag X0023,**  
**BHISHO,**  
**5605**

Name and signature of witness ..... Date .....



**4. CONFIRMATION OF RECEIPT**

The Tenderer, (now Contractor), identified in the Offer part of this Agreement hereby confirms receipt from the Employer, identified in the Acceptance part of this Agreement, of one fully completed original copy of this Agreement, including the Schedule of Deviations (if any) today:

the ..... (day)

of ..... (month)

20 ..... (year)

at ..... (place)

**For the Contractor:**

Signature: .....

Name: .....

Capacity: .....

**Signature and name of witness:**

Signature: .....

Name: .....

## PROVINCE OF THE EASTERN CAPE

## DEPARTMENT OF TRANSPORT

## TENDER NO. SCMU10-24/25-0021

## BRIDGE CONSTRUCTION FOR HAMBURG CONSTRUCTION PROJECT FOR A PERIOD OF 12 MONTHS

## PART 1: DATA PROVIDED BY THE EMPLOYER

## C1.2: CONTRACT DATA (PART 1)

## CONDITIONS OF CONTRACT

The General Conditions of Contract for Construction Works (Third Edition 2015) [hereinafter referred to as GCC2015], published by the South African Institution of Civil Engineering (SAICE) are applicable to this contract.

## CONTRACT SPECIFIC DATA

The following contract specific data, amendments, additions, or omissions are applicable to this Contract.

No.	Clause	Description
1	1.1.1.11	The Contract Sum will be as per the Form of Offer.
1	1.1.1.13	The Defects Liability Period is 12 months measured from the date of the Certificate of Completion for each works assignment.
2	1.1.1.14	The time for completing the works is twelve (12) Months including all relevant special non-working days.
3	1.1.1.15	The Employer is THE DEPARTMENT OF TRANSPORT, EASTERN CAPE
4	1.1.1.16	The Employer's Agent is the Chief Engineer – Infrastructure Design, to act on behalf of the Department, duly authorised to this position in writing.
6	1.1.1.26	The Pricing Strategy is a <b>Re-measurement Contract</b>
7	1.1.1.35	Add the following Clause 1.1.1.35 "Value of Works" means the value of Works certified by the Employers Agent as having been satisfactorily executed and shall include the value of the work done, the value of the materials and/or goods and Contract Price Adjustments.
8	1.2.1.2	The Employer's address for receipt of communications and notices at <b>Tender Stage</b> is: Facsimile: N/A E-mail: mvuyisi.goxa@ectransport.gov.za Address (Physical): Mr M. Goxa Department of Transport Pick and Pay Building Bhisho

9	1.2.1.2	<p>The Employer’s address for receipt of communications and notices at <b>Construction Stage</b> is:</p> <p>Name: Mr M. Goxa</p> <p>Telephone: 064 880 1945 Facsimile:</p> <p>E-mail: mvuyisi.goxa@ectransport.gov.za</p> <p><b>Address (Postal)</b>          Department of Transport          Province of the Eastern Cape          Private Bag X0023,          Bisho          5605</p> <p><b>Address (Physical)</b>          Department of Transport          Old Pick n Pay Building,          Bisho</p> <p>Or any or a partner/director/member of any firm appointed during the duration of the Agreement to act on behalf of the Department, duly authorised to this position in writing.</p>
10	1.3.6	<p>Add the following as 1.3.6</p> <p>“The Contractor hereby indemnifies the Employer against any action, claim, damages or legal cost that may be instituted against the Employer on the grounds of an alleged infringement of any copyright or any other intellectual property right in connection with the Works outlined in this Contract.”</p>
11	1.3.7	<p>Add the following as 1.3.7</p> <p>“All information, documents, recommendations, programmes and reports collected or compiled must be regarded as confidential and may not be communicated or made available to any person outside the Employer's service and may not be published either during the currency of this Contract or after termination thereof without the prior written consent of the Employer.”</p>
12	2.4.1	<p>Add the following:</p> <p>“In the event of any ambiguity, conflict, or discrepancy between the various contract documents, lists and schedules, the order of precedence (from highest to lowest) shall be as follows:</p> <ol style="list-style-type: none"> <li>1. Form of Offer and Acceptance and Schedule of Deviations</li> <li>2. Contract Data</li> <li>3. General Conditions of Contract (GCC 2015)</li> <li>4. Project Specifications</li> <li>5. Working Drawings</li> <li>6. Standard Specifications of Roads and Bridgeworks (1998)</li> <li>7. Departmental guidelines and manuals/prescripts</li> <li>8. Schedule of Quantities</li> </ol>
13	3.2.3	<p>The Employers Agent shall obtain specific approval from the Employer before executing any of his functions or duties according to the following Clauses of the General Condition of Contract:</p> <ul style="list-style-type: none"> <li>• Nominating the Employers Agent’s Representative in terms of Clause 3.2.1</li> <li>• The issuing of instructions for dealing with fossils and the like in terms of Clause 4.7</li> <li>• Authorising the Contractor to repair and make good, excepted risks in terms of Clause 7.5.5</li> <li>• The issuing of variation orders in terms of Clause 6.3.2</li> <li>• The Suspension of the Works in terms of clause 5.11.2</li> <li>• The issuing of an instruction to accelerate progress in terms of Clause 5.12.4</li> <li>• The approval of any extension of time for completion in terms of Clause 5.12.1</li> <li>• The reduction of a penalty for delay in terms of Clause 5.13.2</li> <li>• The issuing of penalties in terms of Clause 5.13</li> <li>• The determination of additional or reduced costs arising from changes in legislation in terms of Clause 6.8.4</li> <li>• The giving of a ruling on a Contractor’s claim in terms of Clause 10.1.5</li> <li>• The agreeing of the adjustment of the sums for general items in terms of Clause 6.11</li> </ul>
14	3.2.4	Delete the last sentence of the Clause
15	3.3.6	Add the following:

		“The time limit for referring the matter to the Employers Agent by the Contractor shall be twenty-one (21) days after the decision in question was given by the Employers Agent’s Representative”.
16	4.3.1.2	<p>Add the following new sub-clause</p> <p>“The Employer and the Contractor hereby agree, in terms of the provisions of section 37 (2) of the Occupational Health &amp; Safety Act, 1993 (Act 85 of 1993, hereinafter referred to as ‘the Act’), that the following arrangements and procedures shall apply between them to ensure compliance by the Contractor with the provisions of the Act, namely:</p> <p>(a) The Contractor undertakes that the appropriate officials and employees of the Contractor will fully acquaint themselves with all relevant provisions of the Act and the Regulations promulgated in terms of the Act;</p> <p>(b) The Contractor undertakes that all relevant duties, obligations and prohibitions imposed in terms of the Act and regulations will be fully complied with;</p> <p>(c) The Contractor hereby accepts sole liability for such due compliance with the relevant duties, obligations and prohibitions imposed by the Act and Regulations, and expressly absolves the Employer from itself being obliged to comply with any of the aforesaid duties, obligations, and prohibitions; with the exception of such duties, obligations and prohibitions expressly assigned to the Employer in terms of the Act and its associated Regulations.</p> <p>(d) The Contractor agrees that any duly authorised official of the Employer shall be entitled (although not obliged) to take such steps as may be necessary to ensure that the Contractor has complied with his undertakings as set out more fully in paragraphs (a) and (b) above, which steps may include, but will not be limited to, the right to inspect any appropriate site or premises occupied by the Contractor, or to inspect any appropriate records or Safety Plans held by the Contractor;</p> <p>(e) The Contractor shall be obliged to report forthwith to the Employer any investigation, complaint or criminal charge which may arise as a consequence of the provisions of the Act and regulations, pursuant to work performed in terms of this Contract, and shall, on written demand, provide full details in writing of such investigation, complaint or criminal charge.</p> <p>(f) The Contractor shall furthermore, in compliance with the Constructional Regulations of 2014 to the Act :</p> <p>(i) Acquaint himself with the requirements of the Employer’s Health and Safety Specification as laid down in regulation 4(1)(a) of the Construction Regulation of 2014, and prepare a suitably and sufficiently documented Health and Safety Plan as contemplated in regulation 5(1) of the Construction Regulation of 2014 for approval by the Employer or his assigned agent. The Contractor’s Health and Safety Plan and risk assessment shall be submitted to the employer for approval within 14 days from the date of signing the Form of Acceptance and shall be implemented and maintained from the Commencement of the Works.</p> <p>(ii) The Employer, or his assigned agent, reserves the right to conduct periodic audits, as contemplated in the Construction Regulations 2014, to monitor that the Contractor is compliant in respect of his obligations. Failure by the Contractor to comply with requirements of these Regulations shall entitle the Employer’s Agent, at the request of the Employer or his Agent, to suspend all or any part of the Works, with no recourse whatsoever by the Contractor for any damages incurred as a result of such suspension, such time as the Employer or his Agents are satisfied that the issues in which the Contractor has been in default have been rectified.”</p>
17	4.3.3	<p>Add the following new sub-clause:</p> <p>“4.3.3 The Contractor shall assume responsibility for compliance with the Environmental Management Programme (EMPR) in respect of the sites and shall ensure that the sites are rehabilitated before the conclusion of the Works assignment.”</p>
18	4.9.2	<p>Add the following as 4.9.2</p> <p>“In order to preclude seizure by the owner of any constructional plant being held by the Contractor on a hire or hire-purchase agreement for the purposes of the Contract, the Employer shall be entitled to pay any such owner the amount of any outstanding instalment or other sum owing under any hire or hire-purchase agreement and in the event of his doing so, any amount thus paid by him shall be a debt payable to the Employer by the Contractor and</p>

		may be deducted by the Employer from any moneys owing or that may become owing to the Contractor in terms of the Contract, or be recovered at law from the Contractor by the Employer.”
19	4.9.3	Add the following as 4.9.3 “When entering into any subcontract for the execution of any part of the works, the Contractor shall incorporate in such subcontract, by reference or otherwise, the provisions of Clauses 4.9.1 and 4.9.2 in respect of constructional plant brought to the site by the subcontract.”
20	5.3.1	Works assignments will be allocated to the Contractor as and when required. The duration of each assignment will be formulated prior to award of each assignment. The Department will first allocate works to the first preferred service provider (the service provider that scores the highest points in the tender evaluation). The documentation required <b>before commencement of the Works</b> are: An approved, Works Assignment specific Health and Safety Plan (Refer Clause 4.3) Works Assignment Construction programme (Refer Clause 5.6) Security/Performance Guarantee for the Works Assignment (Refer Clause 6.2) Insurances (Refer Clause 8.6) for the Works Assignment Signed agreement in terms of Section 37.2 of the OHS Act, 1993 Proof of registration on the Central Suppliers Database with “ <b>Tax Compliant</b> ” status A valid Letter of Good Standing from the Compensation Commissioner or FEMA A valid Letter of Good Standing from the Bargaining Council (BCCEI)
21	5.3.2	The time to submit the documentation required before commencement with Works Assignment is within 14 days of being Awarded a Works Assignment
22	5.8.1	The special non-working days are statutory public holidays, Saturdays, Sundays and the year-end break, as determined by SAFCEC. These days will be included for time calculations. Due to the contract being a maintenance contract, the contractor shall provide a full service during all special non-working days.
23	5.8.2	Add the following to Clause 5.8.2: “The cost of supervision by the Employers Agent or his representatives outside of normal (Monday to Friday) working hours as defined in Government Gazette 42391 of 12 April 2019 shall be to the Contractor’s account.”
24	5.11.1	<i>In the third line, after the word “progress”, insert “or alter the order”.</i>
25	5.12.1	Delete the contents of the Clause and replace with the following: “There will be no extension of time unless agreed to by all parties in writing.”
26	5.12.2.2	Add to Clause 5.12.2.2: “The time period specified as the time for completion includes allowances for those days on which it is expected that work, on the critical path items of the works, would be prevented due to weather conditions such as wind, rain falling or the subsequent waterlogged condition. Based on average weather conditions of wind, rain and sunshine the allowances are: <ul style="list-style-type: none"> <li>• 2 working days per month for the months of May to October</li> <li>• 3 working days per month for the months of November to April</li> </ul> It should be noted that due to the Contract being a fixed term contract, there will be no extension of time awarded. The recording of abnormal climate conditions is for record purposes only.”
27	5.13	Add the following new sub-clauses: “5.13.3 The provisions of sub-clause 5.13.1 shall also apply to completion of a specified stage of work as described in the Tender Forms, the Agreement, and the Contract Scope of Works. Where a penalty is enforced by the Employer for late completion of any stage of work, the penalty shall not be refundable even if subsequent stages of completion are achieved on schedule. If late completion of more than one stage occurs, the total penalty per day shall not exceed the penalty for late completion of the contract as defined in the Tender Forms,

		<p>the Agreement or the Contract Scope of Works.</p> <p>5.13.4 All penalties for which the Contractor becomes liable in terms of Sub-clauses 5.13.1 to 5.13.4 shall be deducted on a monthly basis from the Payment Certificates and will be accumulative. The Employer may, without prejudice to any other method of recovery, deduct the amounts of all such penalties from any monies in his possession that are or may become due to the Contractor.</p> <p>5.13.5 The imposition of any penalties in terms of Sub-clauses 5.13.1 to 5.13.4 shall not limit the Employer's Agent nor Employer's right to act in terms of Sub-clause 9.2.</p> <p>5.13.6 The Contractor should notice that the following fines apply for non-conformance with the Project Specifications:</p> <ul style="list-style-type: none"> <li>• As per Clause C3.3.2.2 for Establishment and Late Completion</li> <li>• As per Clause B1502 (j) for Accommodation of Traffic.</li> <li>• As per Clause B13011 for Occupational Health and Safety nonconformities.</li> <li>• As per Clause B12016 for Environmental nonconformities</li> <li>• As per clause C3.3.2.3 for utilization of ME's</li> <li>• As per clause C3.3.2.4 for utilization of Local Labour</li> </ul>
28	5.14.5.5	Delete Clause 5.14.5.5 and replace with: "Insurance of the works shall continue until the certificate of completion for the Works assignment under consideration is completed."
29	5.16.3	The Latent Defects Liability Period is 10 years measured from the date of the Certificate of Completion.
30	6.2.1	Delete Clause 6.2.1 and replace with: "A Performance Guarantee is required prior to commencement of any Works ONLY for assignments exceeding R 10m awarded from this Framework Appointment, unless specifically requested by the Employer."
31	6.3.1	<i>In the fifth line, after the word "shall", insert "with the approval of the Employer".</i>
32	6.3.4	Add the following new sub-clause 6.3.4: "The quantities indicated in the Schedule of Quantities are fictitious and only included to obtain a competitive price. The actual scope of works and quantities will be determined on an "ad-hoc" basis for each works assignment. No claims regarding the deviations of quantities indicated in the Schedule of Quantities will be entertained."
33	6.5.1.2.3	The percentage allowances to cover all overhead charges are limited to a maximum of 20% of each works assignment (excluding VAT).
34	6.6.1.2	After all references to the word "sums", insert "excluding VAT"
35	6.8.1	Add the following: "The tender rates and prices shall also be exclusive of Value Added Tax (VAT). Provision is made for the addition of VAT in the summary of the Bill of Quantities.  In the event that rates are required for items not included in the Schedule of Quantities, rates may be requested from the Contractor and approved if they are in line with "market related prices".  Materials contained in the payment items included in the Schedule of Quantities, labelled with the prefix " <b>ECB</b> " must be procured within the boundaries of the Eastern Cape"
36	6.8.2	The value of the certificates issued shall be adjusted in accordance with the Contract Price Adjustment Schedule with the following values: The value of "x" is 0.10. The values of the coefficients are: a = [0.40] (labour) b = [0.25] (contractor's equipment) c = [0.15] (material) d = [0.2] (fuel)  The base month and year are the month prior to the month in which tenders close.

37	6.10.1.5	The percentage advance on materials not yet built into the Permanent Works is 80%
38	6.10.1.9	Add the following new clause: "The Contractor is required to submit completed, accurate and signed monthly Expanded Public Works Programme (EPWP) reports, attached to this tender document as Appendix C, together with all monthly payment certificates. Payment to the Contractor will not be processed until the EPWP reporting for a specific month is provided.
39	6.10.2	Add the following: "Payment for materials on site will only be considered for those materials which are physically on site. Any statement in which a claim for materials off site is included, shall have attached a declaration that the materials listed in the statement are owned by the Contractor, accompanied by proof of ownership. The ownership of materials shall be transferred to the Employer in accordance with the relevant pro-forma"
40	6.10.3	The percentage retention on the amounts due to the Contractor is <b>10%</b> to the maximum of <b>5%</b> of the Contract Price (excluding VAT) per works assignment and 50% is to be released at the completion which will be deemed to be the end of the 36-month framework period and the further 50% at the end of the six-month defects liability period.
41	6.11.1.3	<i>Delete the words "15 percent and replace with "30 percent".</i> Note "Contract Sum" pertains to the Works Assignment awarded and is not based on the fictitious quantities contained in this original Framework tender for <i>ad hoc</i> maintenance.
42	7.2.1	Add the following at the end of the paragraph: "subject to approval of the Employers Agent".
43	7.8.2.2	In subsubclause 7.8.2.2 add the following: ", subject to such work being done on a written instruction by the Employer's Agent."
44	8.2.2.3	Add the following to the end of Clause 8.2.2.3 "risk arising from political riot and malicious damage, unless these risks are insurable with The South African Special Risk Insurance Association at the time of tendering, and it is stipulated in the Contract that the Contractor is to effect insurance against these risks".
45	8.3	Add the following : "COVID19 is not considered an Excepted risk and allowances must be made by the Contractor in his Tender."
45	8.6	Delete Clause 8.6 and replace it with:  (1) Without limiting his obligations in terms of the Contract, the Contractor shall before commencement of the Works assignment effect and maintain the following insurances covering the respective interests of the Contractor and the Employer: (a) Insurance of the Works and of all movables on the Site intended for incorporation in the Works against damage or physical loss from whatsoever cause arising (other than causes set out in Clause 8.3.1) (i) for the period for which the Contractor is responsible for the Works in terms of Clause 8.2, and (ii) for a sum insured which shall, unless otherwise specified in the Contract, be the aggregate of (aa) the Value of the works set out, (bb) a sum to cover the value (specified at the time of delivery to the Contractor) of (cc) a sum to cover professional fees, not included in the Contract Price, payable in respect of the repair or reinstatement of damage to the Works or said movables. (b) A Coupon Policy for Special Risks Insurance issued by the South African Special Risks Insurance Association is required. (c) Public Liability insurance from the Commencement Date for the Works assignment to the date of the Certificate of Completion (applicable to a specific awarded Works assignment) or the end of the Defects Liability Period (if any) for a minimum limit of indemnity of <b>R 20 000 000</b> , with no limitation on the number of accidents in any one year, covering the Employer and the Contractor against their respective liability for the death of or injury to any person or loss of or damage to any property (other than property while it is insured in terms of paragraph (a)) arising out of or in the course of

		<p>the performance of the Contract:</p> <p>Provided that</p> <p>(i) the insurance shall not be required to cover any liability arising out of any of the matters referred to in the provisos of Clause 8.3.1 (Excepted Risks), and</p> <p>(ii) the insurance shall include a cross-liability clause such that the insurance shall apply to the Contractor and to the Employer as separate insured parties.</p> <p>(2) Save as otherwise provided in the Contract, nothing herein contained shall oblige the Contractor to effect any insurance which is not generally obtainable from a registered insurer in the Republic of South Africa.</p> <p>(3) The insurances referred to in Sub-Clause (1) shall be effected with an insurance company registered in the Republic of South Africa and the terms thereof shall be subject to approval by the Employer, which approval shall not be unreasonably withheld.</p> <p>(4) The Contractor shall produce to the Employer the policies by which the insurances are affected and proof of the due payment of all premiums thereunder and of the continuity of the policies for the required period within 14 days of receipt of the Letter of Acceptance for a specific Works assignment.</p> <p>(5) The Contractor and the Employer shall comply with the terms and conditions of the insurance policies.</p> <p>(6) If the Contractor shall fail to effect and keep in force any of the insurances referred to in Sub-Clause (1), the Employer may effect and keep in force such insurance and pay such premium or premiums as may be necessary for the purpose and the Contractor shall refund the amounts of such premiums to the Employer.</p> <p>(7) The Contractor shall provide proof that he has paid all contributions required in terms of the Compensation for Occupational Injuries and Diseases Act, No. 130 of 1993, and that he has complied with the provisions of the Occupational Health and Safety Act, No. 85 of 1993.</p>
46	9.2	<p><i>DELETE AND REPLACE WITH:</i></p> <p>"9.2 Termination by Employer:</p> <p>9.2.1 If:</p> <p>9.2.1.1 Application is made for the sequestration of the Contractor's estate, or if the Contractor publishes a notice of surrender of his estate, or presents a petition for the acceptance of the surrender of his estate as insolvent, or (being a company or close corporation) goes into liquidation, whether provisionally or finally (other than a voluntary liquidation for the purpose of amalgamation or reconstruction), or is placed under business rescue (whether by resolution or court order);</p> <p>9.2.1.2 The Contractor makes a compromise with his creditors, or assigns in favour of his creditors, or agrees to carry out the Contract under the supervision of a committee representing his creditors, or if the Contractor assigns the Contract without having first obtained the Employer's written consent, or if execution is levied on his goods, then the Employer may (with specific reference to this Clause) terminate the Contract."</p> <p>9.2.2 If:</p> <p>9.2.2.1 After giving effect to Clause 3.2.2, the Employer's Agent certifies, in writing, to the Employer and to the Contractor, with specific reference to this Clause, that the Contractor;</p> <p>9.2.2.2 Has abandoned the Contract; or</p> <p>9.2.2.3 Has failed, in terms of Clause 5.3.2, to submit documentation in time, or to submit acceptable documentation; or</p> <p>9.2.2.4 Has failed to commence the Works in terms of Clause 5.3 hereof, or has suspended the progress of the Works (other than in terms of Clause 5.11.1) for fourteen (14) consecutive days after receiving from the Employer's Agent written notice to proceed; or</p> <p>9.2.2.5 Has failed to proceed with the Works in accordance with the approved programme, or in the absence of an approved programme, in the Employer's agent's opinion; or</p> <p>9.2.2.6 Has failed to remove Plant or materials from Site, or to demolish and redo work, within fourteen (14) days after receiving from the Employer's Agent written notice that the said Plant, materials, or work have been condemned and rejected by the Employer's Agent in terms of these conditions; or</p>



		<p>9.2.2.7 Is not carrying out the Works in accordance with the Contract, or is neglecting to carry out his obligations under the Contract; or</p> <p>9.2.2.8 Anyone, on his behalf has paid, offered, or offer as payment, to any person in the employ of the Employer or to the Employer's Agent, or any person in the employ of the Employer's Agent, a gratuity or reward or commission; or</p> <p>9.2.2.9 Has furnished inaccurate information in the returnable documents completed at tender stage and forming part of the Contract;</p> <p>then the Employer may, after giving fourteen (14) days written notice to the Contractor, (with specific reference to this Clause) to remedy the default, terminate the Contract."</p> <p>9.2.3 When the Contract is terminated, the Employer may order the Contractor to vacate the Site and hand it over to the Employer. The Employer may then enter the Site and the Works and expel the Contractor therefrom without thereby affecting the rights and powers conferred on the Employer or the Employer's Agent by the Contract. The Employer may complete the Works himself, or may employ another contractor to complete the Works, and the Employer, or such other contractor, may use for such completion as much of the Construction Equipment, Temporary Works and materials brought onto the Site by the Contractor as the Employer may think proper. If, Clause 9.2.1.1 is not applicable, the Employer may at any time sell any of the said Construction Equipment, Temporary Works and unused materials and apply the proceeds of sale towards payment of any sums that may be due or become due to the Employer by the Contractor under the Contract. In such circumstances, the Contractor shall forthwith vacate the Site and shall not be entitled to remain on the Site based on a right of retention until amounts due to him have been paid and neither will the Contractor be entitled to any further payments in terms of this Contract.</p> <p>9.2.4 Should the amounts the Employer must pay to complete the Works exceed the sum that would have been payable to the Contractor on due completion by him, the Contractor shall, upon demand, pay to the Employer the difference. This sum shall legally be deemed a debt due by the Contractor to the Employer and shall be recoverable accordingly;</p> <p>provided that, should the Contractor on demand not pay the amount of such excess to the Employer, such sum may be determined and deducted by the Employer from any sum due to or that may become due to the Contractor under this or any previous or subsequent contract between the Contractor and the Employer.</p> <p>9.2.4 If the provisions of Clause 9.2.11 apply, any notice or order referred to in this Clause shall be delivered to the trustee or liquidator or business rescue practitioner, and the rights and obligations vested in, or binding on the Contractor, shall vest in or be binding on the estate under sequestration, liquidation, or business rescue."</p>
47	9.2.1.3.6	<p>Add the following at the end of the paragraph:</p> <p>On completion of each works assignment, the Contractor will be evaluated by a panel consisting of the Director, Project Manager and Head of Supply Chain in the specific District. Should the work not have been conducted to a satisfactory standard (within time, budget and to the required specifications) the Department shall have the right to decide not to award any further Work assignments to the said contractor and remove said contractor from this Framework Appointment.</p>
48	10.5.2	<p>Disputes shall be referred to <i>ad hoc</i> Adjudication.</p>

PROVINCE OF THE EASTERN CAPE

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BRIDGE CONSTRUCTION FOR HAMBURG CONSTRUCTION PROJECT FOR A PERIOD OF 12 MONTHS

**C1.2: CONTRACT DATA (PART 2)**

**PART 2: DATA PROVIDED BY THE CONTRACTOR**

No.	Clause	Description						
1	1.1.1.9	The Contractor is ..... [The Legal name of the Contractor].						
2	1.2.1.2	The Contractor's address for receipt of communications and notices is : Telephone: ..... Facsimile: ..... E-mail: ..... Address (Postal): ..... Address (Physical): ..... ..... ..... .....						
3	6.2.1	The security to be provided by the Contractor shall be: <table border="1" style="width: 100%;"> <tr> <td><b>Type of Security</b></td> </tr> <tr> <td>Performance Guarantee of <b>10%</b> of the Contract Sum for Works awarded from this Agreement and which shall not exceed R 10 million, which shall be released once the Works is complete.</td> </tr> </table>	<b>Type of Security</b>	Performance Guarantee of <b>10%</b> of the Contract Sum for Works awarded from this Agreement and which shall not exceed R 10 million, which shall be released once the Works is complete.				
<b>Type of Security</b>								
Performance Guarantee of <b>10%</b> of the Contract Sum for Works awarded from this Agreement and which shall not exceed R 10 million, which shall be released once the Works is complete.								
4	6.5.1.2.3	The percentage allowance to cover all overhead charges for each works assignment is 20%						
5	6.8.3	The variation in cost of special materials is (if applicable) <table border="1" style="width: 100%; text-align: center;"> <tr> <td><b>Type of special material</b></td> <td><b>Unit</b></td> <td><b>Rate</b></td> </tr> <tr> <td colspan="3"><u>Not Applicable</u></td> </tr> </table>	<b>Type of special material</b>	<b>Unit</b>	<b>Rate</b>	<u>Not Applicable</u>		
<b>Type of special material</b>	<b>Unit</b>	<b>Rate</b>						
<u>Not Applicable</u>								

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BRIDGE CONSTRUCTION FOR HAMBURG CONSTRUCTION PROJECT FOR A PERIOD OF 12 MONTHS

**C1.3: PERFORMANCE GUARANTEE (PRO FORMA)**

GUARANTOR DETAILS AND DEFINITIONS

"Guarantor" means: .....

Physical address: .....

"Employer" means: THE DEPARTMENT OF TRANSPORT, EASTERN CAPE

"Contractor" means: .....

"Employers Agent" means: .....

"Works" means: BRIDGE CONSTRUCTION FOR HAMBURG CONSTRUCTION PROJECT FOR A PERIOD OF 12 MONTHS

"Site" means: .....

"Contract" means: The Agreement made in terms of the Form of Offer and Acceptance and such amendments or additions to the Contract as may be agreed in writing between the parties.

"Contract Sum" means: The accepted amount for Works assignment inclusive of tax of R.....

Amount in words: .....

"Guaranteed Sum" means: The maximum aggregate amount of R.....

Amount in words: .....

"Expiry Date" means: The date of issue by the Employers Agent of the Certificate of Completion of the Works.

CONTRACT DETAILS Employers Agent issues: Interim Payment Certificates, Final Payment Certificate and the Certificate Completion of the Works as defined in the Contract.

PERFORMANCE GUARANTEE

- 1 The Guarantor's liability shall be limited to the amount of the Guaranteed Sum.
- 2 The Guarantor's period of liability shall be from and including the date of issue of this Performance Guarantee and up to the date of issue by the Employers Agent of the Certificate of Completion of the Works. The Employers Agent and/or the Employer shall advise the Guarantor in writing of the date on which the Certificate of Completion of the Works has been issued.  
The Guarantor hereby acknowledges that
- 3.1 any reference in this Performance Guarantee to the Contract is made for the purpose of convenience and shall not be construed as any intention whatsoever to create an accessory obligation or any intention whatsoever to create a suretyship;
- 3.2 Its obligation under this Performance Guarantee is restricted to the payment of money.
- 3 Subject to the Guarantor's maximum liability referred to in 1, the Guarantor hereby undertakes to pay the Employer the sum certified upon receipt of the documents identified in 4.1 to 4.3:
- 4.1 A copy of a first written demand issued by the Employer to the Contractor stating that payment of a sum certified by the Employers Agent in an Interim or Final Payment Certificate has not been made in terms of the Contract and failing such payment within seven (7) calendar days, the Employer intends to call upon the Guarantor to make payment in terms of 4.2;

- 4.2 A first written demand issued by the Employer to the Guarantor at the Guarantor's physical address with a copy to the Contractor stating that a period of seven (7) days has elapsed since the first written demand in terms of 4.1 and the sum certified has still not been paid;
- 4.3 A copy of the aforesaid payment certificate which entitles the Employer to receive payment in terms of the Contract of the sum certified in 4.
- 4 Subject to the Guarantor's maximum liability referred to in 1, the Guarantor undertakes to pay to the Employer the Guaranteed Sum or the full outstanding balance upon receipt of a first written demand from the Employer to the Guarantor at the Guarantor's physical address calling up this Performance Guarantee. such demand stating that:
  - 5 5.1the Contract has been terminated due to the Contractor's default and that this Performance Guarantee is called
  - 6 5.2a provisional or final sequestration or liquidation court order has been granted against the Contractor and that
  - 7 5.3the aforesaid written demand is accompanied by a copy of the notice of termination and/or the provisional/fin
- 8 It is recorded that the aggregate amount of payments required to be made by the Guarantor in terms of 4 and 5 shall not exceed the Guarantor's maximum liability in terms of 1.
- 9 Where the Guarantor has made payment in terms of 5, the Employer shall upon the date of issue of the Final Payment Certificate submit an expense account to the Guarantor showing how all monies received in terms of this Performance Guarantee have been expended and shall refund to the Guarantor any resulting surplus. All monies refunded to the Guarantor in terms of this Performance Guarantee shall bear interest at the prime overdraft rate of the Employer's bank compounded monthly and calculated from the date payment was made by the Guarantor to the Employer until the date of refund.
- 10 Payment by the Guarantor in terms of 4 or 5 shall be made within seven (7) calendar days upon receipt of the first written demand to the Guarantor.
- 11 Payment by the Guarantor in terms of 5 will only be made against the return of the original Performance Guarantee by the Employer.
- 12 The Employer shall have the absolute right to arrange his affairs with the Contractor in any manner which the Employer may deem fit and the Guarantor shall not have the right to claim his release from this Performance Guarantee on account of any conduct alleged to be prejudicial to the Guarantor.
- 13 The Guarantor chooses the physical address as stated above for the service of all notices for all purposes in connection herewith.
- 14 This Performance Guarantee is neither negotiable nor transferable and shall expire in terms of 2, where after no claims will be considered by the Guarantor, The original of this Guarantee shall be returned to the Guarantor after it has expired.
- 15 This Performance Guarantee, with the required demand notices in terms of 4 or 5, shall be regarded as a liquid document for the purposes of obtaining a court order.
- 16 Where this Performance Guarantee is issued in the Republic of South Africa the Guarantor hereby consents in terms of Section 45 of the Magistrate's Courts Act No 32 of 1944, as amended, to the jurisdiction of the Magistrate's Court of any district having jurisdiction in terms of Section 28 of the said Act, notwithstanding that the amount of the claim may exceed the jurisdiction of the Magistrate's Court.

Signed at ..... Date.....

Guarantor's signatory (1) .....	Capacity.....
Guarantor's signatory (2) .....	Capacity.....
Witness signatory (1) .....	Witness signatory (2).....

PROVINCE OF THE EASTERN CAPE

DEPARTMENT OF TRANSPORT

TENDER NO. SCMU10-24/25-0021

BRIDGE CONSTRUCTION FOR HAMBURG CONSTRUCTION PROJECT FOR A PERIOD OF 12  
MONTHS

**C1.4 : OCCUPATIONAL HEALTH AND SAFETY ACT, ACT 85 OF 1993  
CONTRACTORS 37.2 AGREEMENT**

**AGREEMENT WITH MANDATORY**

**In terms of Section 37(1) and (2)**

**WRITTEN AGREEMENT ENTERED INTO AND BETWEEN**

**DEPARTMENT OF TRANSPORT, PROVINCE OF THE EASTERN CAPE**

**(Hereinafter referred to as the “Client”)**

**AND**

\_\_\_\_\_  
**PRINCIPAL CONTRACTOR**

**(Hereinafter referred to as the “Principal Contractor”)**

**Compensation Fund Number: \_\_\_\_\_**

**Valid Letter of Good Standing to be attached to this Mandatory Document**

**PRINCIPAL CONTRACTOR'S UNDERTAKING AND INDEMNITY**

1. The Principal Contractor hereby agrees and undertakes, in terms of Section 37(2) of the Act, to accept full responsibility for all health and safety matters for the duration of its carrying out the work, including but not limited to:-
  - 1.1 providing for the health and safety of its personnel and ensuring that its personnel at all times adhere to the provisions of the Act and the terms and conditions of the Agreement; and
  - 1.2 ensuring that no third party's health and safety is endangered in any way by the Principal Contractor's activities or conduct on the Clients premises.
2. The Principal Contractor hereby indemnifies and holds the Client harmless against any loss, action, expense, claim, harm or damage of whatsoever nature suffered or sustained by the Client pursuant to a breach by the Principal Contractor or its Personnel and/or Contractors, of the provisions of the agreement and the Act.

**The Principal Contractor's obligations include, without limitation, the following: -**

1. The Principal Contractor shall not cause, as far as is reasonably practicable, any harm to or endanger any Clients personnel or other persons on the Clients premises at which the Principal Contractor is carrying out the work.
2. The Principal Contractor shall ensure that its personnel have access to an updated edition of the OHS Act at all times.
3. The Principal Contractor agrees to co-operate with the Client and provide the Client with all information relating to occupational health and safety issues where the Client requests such information, including any non-compliance with the requirements of the Act.
4. The Principal Contractor shall ensure that the Personnel, when on Clients premises, at all times adhere to the standard health, safety and security procedures and guidelines as laid down by the Client for its own personnel in terms of the Act, as varied and conveyed by the Client to the Principal Contractor from time to time.
5. The Principal Contractor shall ensure that, where applicable in terms of the Act, members of its personnel involved in carrying out the work undergo thorough medical examinations prior to commencing any activity on the Clients premises and continue to undergo routine medical examinations for the duration of the work.
6. The Principal Contractor shall ensure that the work carried out on The Client premises shall be carried out under strict supervision by qualified members of the Principal Contractors personnel who are trained to understand the hazards associated with the work and who are authorized to take such precautionary measures as are necessary. Further, the Principal Contractor shall enforce disciplinary measures where any members of its Personnel do not comply with the provisions of the Act.
7. The Principal Contractor shall ensure that all members of its personnel report any unsafe or unhealthy work situations to the Principal Contractor immediately. The Principal Contractor will in turn report such situations to the Client's appointed Agent immediately.
8. In the event of an incident occurring on the Client premises, the Principal Contractor shall immediately notify the Client thereof and shall inform the relevant provincial director at the Department of Labour thereof within 7 (seven) days of the incident occurring. The Client reserves the right to retain an interest in any such incident. Accordingly, the Principal Contractor shall provide the Client with copies of all documentation relating to the incident and any formal investigations or inquiries conducted in terms of the OHS Act.
9. The Principal Contractor shall under no circumstances bring any intoxicating substances onto The Client premises. Where the Client has reason to believe that any member of the Principal Contractors personnel is under the influence of an intoxicating substance, the Client shall be entitled to deny such person access to or remove such person from the Clients premises.

10. In terms of Section 10(4) of the Act, the Principal Contractor undertakes that where it uses an article sourced from a third party in the course of carrying out the work, it shall ensure that such article complies with the prescribed requirements.
11. The Principal Contractor undertakes that all vehicles used on the Clients premises shall be in a roadworthy condition and shall be fully licensed and adequately insured. The Principal Contractor undertakes further that it shall use suitably skilled and licensed drivers/operators for such vehicles and that no passengers shall be carried in these vehicles unless the vehicle in question has been specifically designed for carrying passengers. Further, the Principal Contractor shall comply with the requirements of the Hazardous Substances Act No 15 of 1973, as amended from time to time, where hazardous substances are carried on any of its vehicles.
12. The Principal Contractor undertakes, at all times, to adhere to the minimum requirements for environmental standards as set out in the OHS Act, including but not limited to lighting requirements, thermal requirements, ventilation, flooding precautions, fire precautions and noise conservation and further undertakes not to cause any impairment to the existing environmental conditions on The Clients premises.
13. The Principal Contractor shall at all times have an adequate supply of fire protection equipment at the Clients premises on which the work is in progress. The Principal Contractor shall also ensure that all personnel on the Clients premises are familiar with the Client's fire precautions and procedures; including alarm signals and emergency exits and that they adhere to such precautions.
14. The Principal Contractor shall provide and maintain in good condition, a satisfactorily equipped first aid box where there are more than five personnel members at the Clients premises.
15. The Principal Contractor shall ensure that all personnel are trained and provided with instructions and information on health and safety aspects relating to the work and that they understand the hazards associated with the work being carried out on the Clients premises, if applicable.
16. The Principal Contractor shall ensure that where needed, health and safety equipment shall be provided or installed.
17. The Principal Contractor shall further ensure that all personnel using any machinery or other equipment are properly trained and qualified to use such machinery or other equipment and that precautionary measures are taken when using any machinery or equipment.
18. The Principal Contractor shall not permit any person to enter the Clients premises where the work is being carried out where the health and safety of such person is at risk or may be at risk. Where the Client deems it necessary, the Principal Contractor agrees to post a notice at the Clients premises prohibiting the entry of unauthorized persons onto the premises.
19. If the Principal Contractor is to engage in construction work on the Client premises and if the nature of such construction work falls within the ambit of Section 3 of the Construction Regulations to the OHS Act, it shall inform the relevant provincial director at the Department of Labour thereof and provide the provincial director with the information required in the aforementioned Section 3.
20. The Principal Contractor shall at all times allow inspectors access to The Client premises and shall allow them to inspect the work. The Principal Contractor shall not prevent any inspector from removing any article, substance, machinery or documentation and shall allow an inspector to provide assistance where such inspector deems necessary.
21. Should the Client at any time have reason to believe that any member of the Principal Contractors personnel is failing to comply with the provisions of the OHS Act or that such Personnel-member poses a threat or risk to the Client, the Client shall be entitled to deny such personnel-member access to any or all of the Client's premises and require the Principal Contractor to replace such member of its personnel without delay.

## Principal Contractor WARRANTIES

The Principal Contractor hereby warrants that it shall at all times:-

1. comply with all provisions of the OHS Act and the Regulations thereto;
2. be in possession of all required permits to carry out the work, such permits to remain valid for the full duration of the work;
3. be in possession of a valid registration with the Compensation Commissioner in terms of the Compensation for Occupational Injuries Act No 130 of 1993 and have paid all monies due to the Compensation Commissioner. The Principal Contractor must ensure that its cover under the abovementioned OHS Act remains in force for the duration of the work;
4. be in possession of and present to the Client on signing hereof, a letter of Good Standing from the Compensation Commissioner;
5. have correctly trained personnel with the required certifications and qualifications as prescribed by the Act;
6. maintain acceptable levels of hygiene and cleanliness in carrying out the work;
7. carry out and comply with all requirements prescribed in terms of the General Safety Regulations in the Act, including but not limited to:-
  - 7.1 using adequate personal protective equipment where applicable; and
  - 7.2 using machinery which is in good order and is fit for the purpose for which it is intended; and
8. as far as reasonably practicable, ensure that any persons other than the Personnel who may be directly affected by the Principal Contractor activities shall not be exposed to health and safety dangers as a result of the work which the Contractor is carrying out.



**ACCEPTANCE BY MANDATORY**

**SIGNED** at ..... on ..... 20.....

\_\_\_\_\_  
For and on behalf of the **Client**

\_\_\_\_\_  
Name & Office

**WITNESSES:**

1 \_\_\_\_\_  
Signature

\_\_\_\_\_  
Name

2 \_\_\_\_\_  
Signature

\_\_\_\_\_  
Name

**SIGNED** at ..... on ..... 20.....

\_\_\_\_\_  
For and on behalf of the **Contractor**

\_\_\_\_\_  
Name & Office

**WITNESSES:**

1 \_\_\_\_\_  
Signature

\_\_\_\_\_  
Name

2 \_\_\_\_\_  
Signature

\_\_\_\_\_  
Name

PROVINCE OF THE EASTERN CAPE

DEPARTMENT OF TRANSPORT

TENDER NO. SCMU10-24/25-0021

BRIDGE CONSTRUCTION FOR HAMBURG CONSTRUCTION PROJECT FOR A PERIOD OF 12 MONTHS

C1.5 : APPLICATION FOR PERMIT TO DO CONSTRUCTION WORK (PRO FORMA)

ANNEXURE 1

APPLICATION FOR A PERMIT TO DO CONSTRUCTION WORK

In terms of Regulation 3(2) of Construction Regulations, 2014

This application must be submitted with the following documents

- 1. Health and Safety Specification
- 2. Health and Safety Plan
- 3. Baseline Risk Assessment

1. Name, Postal Address and Telephone Numbers of the Client:

.....

.....

2. Details of the Construction Health and Safety Agent:

- a) Title, Surname and Initials: .....
  - b) Identity Number / Passport Number .....
  - c) Registration Number with SACPCMP: .....
  - d) Office Tel. Number and / or Mobile Number: .....
  - e) Postal Address: .....
- .....

3.Name, Postal Address and Telephone Numbers of the appointed Principal Contractor:

.....

.....

4.Name, Postal Address and Telephone Numbers of Designer of the Project:

.....

.....

5.Name, Postal Address and Telephone Numbers of the following Persons:

- a) Construction Manager: CR 8.1 .....
- .....

- b) Construction Health and Safety Manager: .....
- .....
- c) Construction Health and Safety Officer: CR 8.5 .....
- .....

6. Exact Physical Address of Construction Site and Site Office: .....

.....

.....

7. Nature of Construction Work: .....

.....

.....

8. Expected Commencement Date: .....

9. Expected Completion Date: .....

10. Estimated Maximum Number of Persons on the Construction Site: .....

11. Planned Number of Contractors on Site accountable to the Principal Contractor: .....

12. Names of Contractors Appointed:

.....

.....

.....

.....

.....

.....

.....

13. Signature of Client / Client's CHS Agent

.....

14. Signature of Principal Contractor

FOR OFFICE USE ONLY					
Authorization / Unique Number		Labour Centre		Official Approval Stamp	
15. Date of Application: .....					
16. Submitted Documents Prescribed in Construction Regulation 5.4 (Please Tick ✓)					
CR 5.1(a)		CR 5.1 (b)		CR 5.1 (c – s)	
17. Result of the Application (Please Tick ✓)			<b>Approved</b>	<b>Declined</b>	
18. Reason for Declining the Application: ..... ..... ..... ..... .....					
19. Signature of Supervisor .....					
20. Signature of Revoking Officer / Inspector .....					

Construction Regulations 2014

THIS DOCUMENT IS TO BE FORWARDED TO THE OFFICE OF THE DEPARTMENT OF LABOUR  
**30 DAYS PRIOR TO COMMENCEMENT** OF WORK ON SITE

PROVINCE OF THE EASTERN CAPE

DEPARTMENT OF TRANSPORT

TENDER NO. SCMU10-24/25-0021

UPGRADING OF DR00522: HAMBURG TO R72 ROAD – CONSTRUCTION OF NYULUTSI RIVER BRIDGE

**C1.6 : CERTIFICATE OF AUTHORITY FOR SIGNATORY TO AGREEMENT IN TERMS OF THE CONSTITUTION OF THE REPUBLIC OF SOUTH AFRICA, NATIONAL ENVIRONMENTAL MANAGEMENT ACT, MINERAL AND PETROLEUM RESOURCES DEVELOPMENT ACT, NATIONAL WATER ACT, NATIONAL FORESTS ACT AND NATIONAL HERITAGE RESOURCES ACT**

The signatory for the company in terms of the above-mentioned Act shall confirm his or her authority thereto by attaching to this page a duly signed and dated copy of the relevant resolution of the Board of Directors.

An example is given below:

“By resolution of the Board of Directors passed at a meeting held on .....

Mr./Ms ..... whose signature appears below, has been duly authorised to sign the AGREEMENT IN TERMS OF THE CONSTITUTION OF THE REPUBLIC OF SOUTH AFRICA, ENVIRONMENTAL CONSERVATION ACT AND NATIONAL ENVIRONMENTAL MANAGEMENT ACT on behalf of .....(the Contractor)

SIGNED ON BEHALF OF THE COMPANY .....

IN HIS/HER CAPACITY AS .....

DATE .....

SIGNATURE OF SIGNATORY .....

Witness .....

Witness .....

Name .....

Name .....

PROVINCE OF THE EASTERN CAPE

DEPARTMENT OF TRANSPORT

TENDER NO. SCMU10-24/25-0021

UPGRADING OF DR00522: HAMBURG TO R72 ROAD – CONSTRUCTION OF NYULUTSI RIVER BRIDGE

**C1.7 : AGREEMENT IN TERMS OF THE CONSTITUTION OF THE REPUBLIC OF SOUTH AFRICA, NATIONAL ENVIRONMENTAL MANAGEMENT ACT, MINERAL AND PETROLEUM RESOURCES DEVELOPMENT ACT, NATIONAL WATER ACT, NATIONAL FORESTS ACT AND NATIONAL HERITAGE RESOURCES ACT**

THIS AGREEMENT made at.....

on this the .....day of ..... in the year.....

between the, DEPARTMENT OF TRANSPORT: PROVINCE OF THE EASTERN CAPE (hereinafter called "the Employer") of the one part,

herein represented by ..... in his capacity as .....

and delegate of the Employer in terms of the Employer's standard powers of delegation

and .....

(hereinafter called "the Mandatory") of the other part,

herein represented by ..... in his capacity as .....

and being duly authorised by virtue of a resolution appended hereto as Annexure B;

WHEREAS the Employer is desirous that certain works be constructed, viz.

**CONTRACT No: SCMU10-24/25-0021 : BRIDGE CONSTRUCTION FOR HAMBURG CONSTRUCTION PROJECT FOR A PERIOD OF 12 MONTHS** and has accepted a tender by the Mandatory for the construction, completion & maintenance of such works, and whereas the Employer and the Mandatory have agreed to certain arrangements and procedures to be followed in order to ensure compliance by the Mandatory with the provisions of the Constitution of the Republic of South Africa, the Environmental Conservation Act and the National Environmental Management Act;

**NOW THEREFORE THIS AGREEMENT WITNESSES AS FOLLOWS:**

1. The Mandatory shall execute the work in accordance with the contract documents pertaining to this Contract.
2. This Agreement shall hold good from its commencement date, which shall be the date determined under Clause 5.4.1 of the Contract Data to either:
  - a) the date of the final certificate issued in terms of Clause 5.16.1 of the General Conditions of Contract (hereinafter referred to as "the GCC"), as contained in this volume of the contract documents pertaining to this Contract, or
  - b) the date of termination of the Contract in terms of Clause 9.2.1 of the GCC.
3. The Mandatory declares himself to be conversant with the following:-

All the requirements, regulations and standards of Section 24 of the Constitution of the Republic of South Africa (Act No 108 of 1996)<sup>2</sup> \*, the National Environmental Management Act (Act No 107 of



PROVINCE OF THE EASTERN CAPE

DEPARTMENT OF TRANSPORT

TENDER NO.  
SCMU10-24/25-0021

BRIDGE CONSTRUCTION FOR HAMBURG CONSTRUCTION PROJECT FOR A PERIOD OF 12  
MONTHS

**CONTRACT**  
**PART 2 (OF 4): PRICING DATA**

**C2.1 Pricing Instructions**

**C2.2 Bill of Quantities**



PROVINCE OF THE EASTERN CAPE

DEPARTMENT OF TRANSPORT

TENDER NO.  
SCMU10-24/25-0021

BRIDGE CONSTRUCTION FOR HAMBURG CONSTRUCTION PROJECT FOR A PERIOD OF 12 MONTHS

**C2.1: PRICING INSTRUCTIONS**

C2.1.1 For the purposes of this 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 Project Specifications.

Quantity: The number of units of work for each item.

Rate: The payment per unit of work for which the Tenderer tenders to do the work.

Amount: The product of the quantity and the rate tender for an item.

Lump Sum: An amount tender for an item, the extent of which is described in the Bill of Quantities, the Specifications or elsewhere, but of which the quantity of work is not measured in units.

C2.1.2 This Bill of Quantities forms part of the contract documents and must be read in conjunction with all the other documents comprising the contract documents.

C2.1.3 The quantities set out in the Bill of Quantities are only approximate quantities. The quantities of work finally accepted and certified for payment, and not the quantities given in the Bill of Quantities, will be used to determine payments to the Contractor.

The validity of the contract shall in no way be affected by differences between the quantities in the Bill of Quantities and the quantities finally certified for payment. Work is valued at the rates or lump sums tender, subject only to the provisions of subclause 1209(a) of the Standard Specifications.

C2.1.4 Rates and lump sums shall include full compensation for overheads, profits, incidentals, tax (other than VAT), etc. and for the completed items of work as specified, all in accordance with subclause 1209(b) of the Standard Specifications. Full compensation for completing and maintaining, during the defects liability period, all the work shown on the drawings and specified in the Standard Specifications and Project Specifications and for all the risks, obligations and responsibilities specified in the General Conditions of Contract, Special Conditions of Contract, Standard Specifications and Project Specifications shall be considered as provided for collectively in the items of payment given in the Bill of Quantities, except in so far as the quantities given in the Bill of Quantities are only approximate.

C2.1.5 The Tenderer shall fill in a rate or a lump sum for each item where provision is made for it even where no quantities are given. Items against which no rate or lump sum has been entered in the tender will not be paid for when the work is executed, as payment for such work will be regarded as being covered by other rates or lump sums in the Bill of Quantities.

The Tenderer shall fill in a rate against all items where the words "rate only" appear in the amount column. Although no work is foreseen under such item and no quantities are consequently given in the quantity column, the tender rate shall apply should work under this item actually be required. Tenderers should note the provisions of paragraph 14 of this preamble.

If the Tenderer should group a number of items together and tender one lump sum for each group of items, this single tender lump sum shall apply to that group of items and not to each individual item, or should he indicate that full compensation for any item has been included in the rate for another item, the rate for the item included in another item shall be deemed to be nil.

The tender lump sums and rates shall be valid irrespective of any change in the quantities during the execution of the contract.

- C2.1.6 The works executed are measured for payment in accordance with the methods described in the contract documents under the various payment items, notwithstanding any custom to the contrary. Attention is directed to the provisions of Clause 1220 of the Standard Specifications regarding the measurements of quantities for payment. Except where specified otherwise than in Clause 1220, the nett measurement or mass of the finished work in place shall be taken for payment, and any volume or mass of work in excess of that prescribed, shall be excluded.
  
- C2.1.7 The works executed are measured for payment in accordance with the methods described in the contract documents under the various payment items, notwithstanding any custom to the contrary. Attention is directed to the provisions of Clause 1220 of the Standard Specifications regarding the measurements of quantities for payment. Except where specified otherwise than in Clause 1220, the nett measurement or mass of the finished work in place shall be taken for payment, and any volume or mass of work in excess of that prescribed, shall be excluded.
  
- C2.1.8 The amount of work or the quantities of material stated in the Bill of Quantities **shall not be considered as restricting or extending** the amount of work to be done or quantity of material to be supplied by the Contractor.
  
- C2.1.9 The statement of quantities of material or the amount of work in the Bill of Quantities shall not be regarded as authorisation for the Contractor to order material or to execute work. The Contractor shall obtain the Engineer's detailed instructions indicating applicable payment item(s) for all work before ordering any materials or executing work or making arrangements in this regard.
  
- C2.1.10 The short descriptions of the payment items in the Bill of Quantities are only given to identify the items and to provide specific details. Reference shall, inter alia, be made to the drawings, COLTO Standard Specifications for Road and Bridge Works for State Road Authorities, Project Specifications, General Conditions of Contract and Special Conditions of Contract for more detailed information regarding the extent of work entailed under each item.
  
- C2.1.11 The provisions of Clause 6.6 of the General Conditions of Contract shall apply to provisional sums and prime cost sums.
  
- C2.1.12 Subject to the conditions stated in paragraph C2.1.13 below, the rates and lump sums filled in by the Tenderer in the Bill of Quantities shall be final and binding with regard to submitting the tender and may not be adjusted should there be any mistakes in the extensions thereof and in the total sums appearing in the tender. Adjustment of the rates to minimise commercial risk will take place prior to the signing of the contract. In their own interest Tenderers must make doubly sure of the correctness of their tender rates, the extensions and the Tender Sum.

Arithmetical errors of responsive tenders will be corrected as per CIDB Practice Note #2 (February 2008).

- C2.1.13 A tender may be rejected if the unit rates or lump sums for some of the items in the Bill of Quantities are, in the opinion of the Employer, unreasonable or out of proportion, and if the Tenderer fails, within a period of seven (7) days of having been notified in writing by the Employer or the Employer's Agent to adjust the unit rates or lump sums for such items, to make such adjustments.

- C2.1.14 The units of measurement indicated in the Bill of Quantities are metric units

The following abbreviations are used in the Bill of Quantities:

mm	=	millimetre
m	=	metre

km	=	kilometre
km-pass	=	kilometre-pass
m <sup>2</sup>	=	square metre
m <sup>2</sup> -pass	=	square metre pass
ha	=	hectare
m <sup>3</sup>	=	cubic metre
m <sup>3</sup> -km	=	cubic metre kilometre
l	=	litre
kl	=	kilolitre
kg	=	kilogram
t	=	ton (1000 kg)
No	=	number
MN	=	Mega Newton
MN-m	=	Mega Newton-metre
%	=	percent
KW	=	kilowatt
KN	=	kilonewton
PC sum	=	prime cost sum
Prov sum	=	provisional sum

- C2.1.15 All rates and sums of money quoted in the Bill of Quantities shall be in Rands and whole cents. Fractions of a cent shall be discarded.
- C2.1.16 The item numbers appearing in the Bill of Quantities refer to the corresponding item numbers in the COLTO Standard Specifications for Road and Bridge Works for State Road Authorities. Item numbers prefixed by the letter B refer to payment items described under Part B of the Project Specifications, those with C to payment items described under Part C, and so on for further parts of the project specifications.

**TENDER NO.  
SCMU10-24/25-0021**

**BRIDGE CONSTRUCTION FOR HAMBURG CONSTRUCTION PROJECT FOR A  
PERIOD OF 12 MONTHS**

**C2.2: BILL OF QUANTITIES**

Payment Item	LIC Items	Description	Unit	Billed Quantity	Rate	Final Amount
12,00		<b>SECTION 1200: GENERAL REQUIREMENTS AND PROVISIONS</b>				
B12.03		Relocation and reinstatement of water and sewer lines belonging to the local authority Payment to authorities	Prov Sum	1,00	12 000,00	12 000,00
B12.05		Allowance for audits by the Employer's agents. (a)(i) Occupational Health & Safety audits (a)(ii) Environmental Management audits	Prov Sum Prov Sum	1,00 1,00	570 000,00 495 000,00	570 000,00 495 000,00
		(b) Handling costs and profit in respect of B 12.05 (a)	%	1 065 000,00		
B12.06		Provision of community liaison officer a) Wages, salary, allowances, etc	Prov Sum	1,00	112 000,00	112 000,00
		(b) Handling costs and profit in respect of B12.06(a)	%	112 000,00		
B12.08		Project Steering Committee and disbursements to members of the PSC a) Direct payments for expenses to members. (b) Handling costs and profit in respect of B 12.08 (a)	Prov Sum %	1,00 70 000,00	70 000,00	70 000,00
B12.10		Provision for Training a) Management skills, including tendering b) Bridge construction methods and skills c) Trade Skills Training d) Concrete technology for contractors. e) Accountancy - Invoicing, Certificates Payroll UIF and VAT etc f) Hiv and Aids Training g) Generic occupational health & safety training	Prov Sum Prov Sum Prov Sum Prov Sum Prov Sum Prov Sum Prov Sum	1,00 1,00 1,00 1,00 1,00 1,00 1,00	90 000,00 75 000,00 75 000,00 25 000,00 35 000,00 50 000,00 60 000,00	90 000,00 75 000,00 75 000,00 25 000,00 35 000,00 50 000,00 60 000,00
		(h) Handling costs and profit in respect of B 12.10 (a), (b), (c), (d), (e), (f) and (g) above	%	410 000,00		
B12.11		Specific training in CIDB registration for SMME sub-contractors. a) Payment to authorised training provider. (b) Handling costs and profit in respect of B12.11 (a)	Prov Sum %	1,00 65 000,00	65 000,00	65 000,00
B12.12		Payment for Plant and Material on behalf of SMMEs a) Payment to suppliers (b) Handling costs and profit in respect of B12.112 (a)	Prov Sum %	1,00 1 000 000,00	1 000 000,00	1 000 000,00
1200		<b>SECTION 1200: GENERAL REQUIREMENTS AND PROVISIONS</b>	To Summary Page			

13.00	<b>SECTION 1300: CONTRACTOR'S ESTABLISHMENT ON SITE AND GENERAL OBLIGATIONS</b>				
B13.01	Contractor's general obligations				
	a) Fixed obligations	Lump Sum	1,00		
	b) Value-related obligations	Lump Sum	1,00		
	c) Time-related obligations				
	(i) During Construction Period	Month	10,00		
	(ii) During Mobilisation Period	Month	2,00		
B13.02	Provision for Mentorship and SMME Procurement				
	(a) Supervision and Site Mentoring - On site PM QS QA ETC	Month	10,00		
1300	<b>SECTION 1300: CONTRACTOR'S ESTABLISHMENT ON SITE AND GENERAL OBLIGATIONS</b>	To Summary Page			

14.00	<b>SECTION 1400: HOUSING, OFFICES AND LABORATORIES FOR THE ENGINEER'S SITE STAFF</b>				
14.02	Office and laboratory furniture				
	(a) Chairs	No.	6,00		
	(b) Draughtman's Stools	No.	2,00		
	(c) High chairs for Laboratory	No.	2,00		
	(d) Desks complete with drawers and locks	No.	2,00		
	(e) Drawing Tables	No.	2,00		
	(e) Conference Tables	No.	1,00		
B14.03	Office and Laboratory fittings, installations and equipment				
	(b) General fittings and service installations	Lump Sum	1,00		
14.04	Car ports				
	a) Car ports, 60% shade cloth on front and sides, at offices and laboratory buildings	No	3,00		
14.08	Services				
	a) Services at office				
	1) Fixed costs	Sum	1,00		
	2) Running costs	Month	14,00		
	c) Services for Prefabricated housing				
	1) Fixed costs	Sum	1,00		
	2) Running costs	Month	14,00		
14,09	Combined Office and Store Establish Offices	Lump Sum	1,00		
B14.11	Provision of semi-skilled labour for use by the engineer				
	a) Wages, salaries and allowances plus handling costs	Month	14,00		
B14.15	Provision of vehicles and travel costs				
	a) Travel costs and mileage				
	i) Engineer's site vehicle kms and public transport costs including contractor's handling costs	km	35 000,00		
	b) Laboratory Vehicles	veh-month	14,00		
B14.16	Salaries and allowances for the Engineer's site staff				
	i) Payment for the Engineer's Representative on site	Month	14,00	160 000,00	2 240 000,00
	ii) Payment for the Assistant to the Engineer's Representative on site	Month	14,00	120 000,00	1 680 000,00
	ii) Payment for the Senior Material Technician	Month	14,00	90 000,00	1 260 000,00
	ii) Payment for the Trainee Technicians	Man-Month	28,00	12 000,00	336 000,00
B14.18	Engineer's Construction Management and Contract Administration (ECSA Fees)				
	(i) Construction Management and Contract Administration during the Construction Phase	Month	14,00	55 489,03	776 846,42
	(ii) Engineer's Design Team Input and Support	Prov. Sum	1,00	3 000 000,00	3 000 000,00
1400	<b>SECTION 1400: HOUSING, OFFICES AND LABORATORIES FOR THE ENGINEER'S SITE STAFF</b>	To Summary Page			

15.00		<b>SECTION 1500: ACCOMMODATION OF TRAFFIC</b>				
B15.01		Accommodating traffic and maintaining temporary deviations	Month	12,00		
15.03		Temporary traffic control facilities				
	LI	a) Flagmen	Man-day	1 000,00		
		b) Portable STOP and GO-RY signs	No	6,00		
		d) Amber flicker lights	No	20,00		
		e) Road signs, R- and TR- series, (900 mm series)	No	10,00		
		f) Road signs, TW-series	No	10,00		
		g) Road signs, STW-, DTG-, TGS- and TG-series (excluding delineators and barricades)	m2	5,00		
		h) Delineators (DTG 50J) (800 x 200 mm):				
		1) Single	No	35,00		
		2) Mounted back to back	No	20,00		
		i) Moveable barricade/road sign combination (8 m wide road closed type)	No	4,00		
		j) Traffic cones (750 mm high)	No	75,00		
B15.15		Provision of traffic safety equipment for use by the Engineer				
		a) Safety jackets	No	3,00		
		b) Rotating amber lights for the Engineer's vehicles	No	1,00		
		c) First aid boxes for the Engineer's vehicles	No			
		d) Hard hats	No	3,00		
B15.16		Traffic safety officer	month	12,00		
1500		<b>SECTION 1500: ACCOMMODATION OF TRAFFIC</b>	To Summary Page			



ITEM	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
<b>B1700</b>	<b>CLEARING AND GRUBBING</b>				
<b>B17.01</b>	Clearing and grubbing	ha	1		
<b>B17.02</b>	<b>Removal and grubbing of large trees and tree stumps</b>				
	(a) Girth exceeding 1m up to and including 2m	No	2		
	(b) Girth exceeding 2m up to and including 3m	No	2		
<b>B17.08</b>	<b>Demolition of existing low level bridge</b>				
	(a) Reinforced concrete	m <sup>3</sup>	250		
<b>17/B16.02</b>	<b>Overhaul on material hauled in excess of 1 km (ordinary overhaul)</b>	m <sup>3</sup> .km	1000		
<b>TOTAL CARRIED FORWARD TO SUMMARY</b>					

ITEM	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
<b>3400</b>	<b>SECTION 3400: PAVEMENT LAYERS OF GRAVEL MATERIAL</b>				
<b>34.01</b>	<b>Pavement layers constructed from gravel taken from cut, borrow pit or commercial sources including free haul up to 7km:</b>				
	<b>a) Gravel selected lower layer (G7) compacted to:</b>				
	ii) 95% of modified AASHTO density 150mm thick (level tolera	m³	420		
	<b>d) Gravel subbase (G5) compacted to:</b>				
	ii) 98% of modified AASHTO density 150mm thick (level tolerance 20mm)	m³	400		
<b>34.10</b>	<b>Compacting the floors of pavement excavations (+5 roller passes) with:</b>				
	a) Vibratory (Smooth drum) rollers	m²	2880		
	b) Padfoot rollers	m²	2880		
	c) Pneumatic rollers	m²	2880		
<b>34.11</b>	<b>Watering the pavement excavation floor</b>	kl	33		
<b>34.12</b>	<b>Variations in the number of roller passes applicable to item 34.10</b>				
	a) Vibratory (Smooth drum) rollers	m²	8640		
	b) Padfoot rollers	m²	8640		
	c) Pneumatic rollers	m²	8640		
<b>3400</b>	<b>SECTION 3400: PAVEMENT LAYERS OF GRAVEL MATERIAL</b>				
<b>3600</b>	<b>SECTION 3600: CRUSHED STONE</b>				
<b>36.01</b>	<b>Crushed-stone base</b>				
	c) Constructed from type G2 material obtained from commercial sources and compacted to 85% of bulk relative density (150mm layer thickness with 20mm tolerance level)	m³	400		
<b>36.02</b>	<b>Additional compaction</b>				
	b) Extra over subitem 36.01(c) for compaction to 86% or higher to bulk relative density	m²	2880		
<b>36.11</b>	<b>Compacting the floors of pavement excavations (+5 roller passes) with:</b>				
	a) Vibratory (Smooth drum) rollers	m²	2880		
	b) Padfoot rollers	m²	2880		
	c) Pneumatic rollers	m²	2880		
<b>36.12</b>	<b>Water for compacting the pavement excavation floor</b>	kl	40		
<b>3600</b>	<b>CRUSHED STONE BASE</b>				
<b>4100</b>	<b>SECTION 4100: PRIME COAT</b>				
<b>41.01</b>	<b>Prime Coat</b>				
	c) MC-30 cut back bitumen	litre	2100		
<b>4100</b>	<b>PRIME COAT</b>				
<b>4200</b>	<b>SECTION 4200: ASPHALT BASE AND SURFACING</b>				
<b>42.04</b>	<b>Tack coat of 30% stable-grade emulsion</b>	litre	1		R/O
<b>42.05</b>	<b>Binder variations:</b>				
	a) A-E2 modified bitumen	t	1		R/O
<b>42.08</b>	<b>100 mm cores in asphalt paving</b>	No	5		
<b>42.09</b>	<b>Asphalt surfacing on bridge decks</b>				
	a) 50 mm Continuously graded				
	i) medium grade asphalt surfacing using B12 road grade bitu	m³	10		
<b>4200</b>	<b>SECTION 4200 : ASPHALT BASE AND SURFACING</b>				

4600	<b>SECTION 4600: BITUMINOUS SINGLE SEAL WITH SLURRY (CAPE SEAL)</b>			
46.01	Bituminous single seal with 19 mm Grade 1 aggregate and slurry (2 coats of slurry) on roadway with:			
	a) 70/100 penetration grade bitumen in tack coat and 65% cati	m <sup>2</sup>	2600	
46.03	<b>Bituminous binder variations:</b>			
	f) Spray-grade emulsion (65% bitumen)	litre	3640	
46.04	<b>Aggregate variations:</b>			
	b) 19 mm Nominal sized aggregate	m <sup>3</sup>	35	
46.05	Variations in the rate of application of the slurry	m <sup>3</sup>	50	
46.10	Second application of binder consisting of 35% spray grade ca	m <sup>2</sup>	2600	
4600	<b>SECTION 4600: BITUMINOUS SINGLE SEAL WITH</b>			
5700	<b>SECTION 5700: ROAD MARKING</b>			
57.03	<b>Road-marking paint:</b>			
	a) White lines (broken or unbroken) 100mm thick	km	0.32	
	b) Yellow lines (broken or unbroken) 100mm thick	km	0.64	
57.06	Setting out and pre-marking the lines	km	0.96	
5700	<b>SECTION 5700: ROAD MARKING</b>			

ITEM	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
	<b>STRUCTURES: HAMBURG BRIDGE</b>				
<b>5200</b>	<b>SECTION 5200 : GABIONS</b>				
52.01	Foundation trench excavation and backfilling (b) In all other classes of material	m <sup>3</sup>	120		R -
52.02	Surface preparation for bedding the gabions	m <sup>2</sup>	240		R -
52.03	Gabions (a) Galvanised gabion boxes with 1,0m diaphragm spacings 8,0m long by 1,0m wide by 2,0m deep, 80 x 100 mesh with 2,5mm diameter wire.	m <sup>3</sup>	420		R -
52.04	Filter fabric (a) Grade 3	m <sup>2</sup>	600		R -
<b>5200</b>	<b>GABIONS</b>				
<b>5400</b>	<b>SECTION 5400 : GUARDRAILS</b>				
54.01	Guardrails on timber posts: (a) Galvanized	m	80		
<b>5400</b>	<b>GUARDRAILS</b>				
<b>6100</b>	<b>SECTION 6100 : FOUNDATIONS FOR STRUCTURES</b>				
61.01	Additional foundation investigations	Prov Sum	1	R 350 000,00	R 350 000,00
61.02	Excavation  (a) Excavating soft material situated within the following successive depth ranges: (i) 0m up to 2m (ii) 2m up to 4m (iii) 4m up to 6m  (b) Extra over subitem 61.02(a) for excavation in hard material irrespective of depth  (c) Extra over subitem 61.02(a) for additional excavation required by the engineer after the excavation has been completed  (d) Extra over subitem 61.02(a) for excavation by hand	m <sup>3</sup> m <sup>3</sup> m <sup>3</sup> m <sup>3</sup> m <sup>3</sup> m <sup>3</sup>	700 1500 800 500 300 300		
61.03	Access and drainage (a) Access (b) Drainage where no access has been provided	Lump Sum Lump Sum	1 1		
61.04	Backfill to excavations utilising: (a) Material from the excavation (b) Imported material (c) Soil cement	m <sup>3</sup> m <sup>3</sup> m <sup>3</sup>	410 500 210		
61.05	Fill within a restricted area (extra over item 33.01):	m <sup>3</sup>	400		
61.08	Foundation fill consisting of: (a) Rockfill (d) Mass concrete (class 15/19) (e) Concrete screed (75mm thick, class 15/19)	m <sup>3</sup> m <sup>3</sup> m <sup>3</sup>	140 180 50		
61.09	Establishment on the site for the drilling of holes (a) Rock drilling (i) 40 mm diameter	L/sum	1		R/O
61.10	Moving to and setting up the equipment at each hole to be drilled (i) Abutment ( 40 mm) (ii) Piers (40 mm)	No. No.	36 16		R/O R/O
61.11	Drilling of holes (c) Rock drilling (i) 40 mm diameter	m	78		R/O
<b>6100</b>	<b>Amount Carried Forward to Next Page</b>				

6100	Amount Brought Forward from Previous Page				
<b>6100</b>	<b>SECTION 6100 : FOUNDATIONS FOR STRUCTURES</b>				
61,12	Grouting 5 Star fluid grout or similar approved by the engineer.	l	250		R/O
61,13	Dowel bars (b) High tensile bars (i) 25 mm diameter	kg	1210		R/O
61,14	Foundation lining (a) 250 Um PVC dampproof membrane under approach slab	m <sup>2</sup>	345		R/O
61,15	Establishment on the site for Piling	L Sum	1		
61,16	Moving to and setting up the equipment at each position for installing the piles	No	62		
61,17	Bored holes for piles with diameter of 600mm through material situated within the following depths:				
	a.) 0-10m	m	520		
	b.) Exceeding 10m and up to 15m	m	60		
61,21	Extra over 61.17, irrespective of depth, to form Bored pile holes through identified obstructions consisting of:				
	a.) Course gravel	m	60		
	b.) Boulders max size 2.5m diameter	m	20		
	c.) Rock (class R2)	m	32		
	d.) Rock (class R3)	m	12		
61,22	Forming bored holes through unidentified obstructions	L Sum	1		
61,27	Socketing piles into rock formation (Class R2 rock with 0.8m socket)	No	62		
61,3	Steel reinforcement in cast insitu piles:				
	a.) Mild steel bars	t	3		
	b.) High-yield-stress steel bars	t	50		
61,31	Cast insitu concrete in piles Class:30MPa	m <sup>3</sup>	160		
61,32	Extra over item 61.31 for concrete cast under water	m <sup>3</sup>	12		
61,34	Stripping the pile heads	No	62		
61,35	Establishing on site for the load testing of piles	Sum	1		
61,36	Load testing of piles	No	6		
<b>6100</b>	<b>SUB-TOTAL : FOUNDATIONS FOR STRUCTURES</b>				

6200	<b>SECTION 6200 : FALSEWORK, FORMWORK AND CONCRETE FINISH</b>				
62,02	Vertical formwork to provide:				
	(a) Class F1 surface finish to:				
	(i) Abutment and piers	m <sup>2</sup>	75		
	(ii) Abutment walls	m <sup>2</sup>	100		
	(iii) Approach slab sides	m <sup>2</sup>	12		
	(iv) Construction joints to the deck	m <sup>2</sup>			
	(v) Deck Cantilever Edges	m <sup>2</sup>	21,6		
	(b) Class F2 surface finish to:				
	(i) Abutment walls and wingwalls (sides and front faces)	m <sup>2</sup>	100		
	(ii) Piers	m <sup>2</sup>	200		
	(iii) Deck edges	m <sup>2</sup>	45		
	(iv) Deck ends	m <sup>2</sup>	24		
62,03	Horizontal formwork to provide:				
	(a) Class F2 surface finish to:				
	(i) Deck	m <sup>2</sup>	900		
62,04	Inclined formwork to provide:				
	(a) Class F1 surface finish to:				
	(i) Abutments	m <sup>2</sup>	34,5		
	(ii) Wingwalls		4		
62,06	Formwork to form open joints				
	(a) Between vertical and horizontal surfaces at the deck ends and the abutments	m <sup>2</sup>	48		
	(b) Between horizontal surfaces at piers and deck soffits	m <sup>2</sup>			R/O
6200	<b>SUB-TOTAL FALSEWORK, FORMWORK AND CONCRETE FINISH</b>				

<b>6300</b>	<b>SECTION 6300 : STEEL REINFORCEMENT FOR STRUCTURES</b>				
63,01	Steel reinforcement for:				
	(a) Abutment walls and wingwalls and bases				
	(i) Mild steel bars	t	1,5		
	(ii) High yield stress steel bars	t	30		
	(c) Pier columns and bases				
	(i) Mild steel bars	t	1		
	(ii) High yield stress steel bars	t	12		
	(c) Approach slabs				
	(i) Mild steel bars	t	0,2		
	(ii) High yield stress steel bars	t	1		
	(d) Deck				
	(i) Mild steel bars	t	2		
	(ii) High yield stress steel bars	t	50		
	(e) Parapets and end blocks				
	(i) Mild steel bars	t	2		
	(ii) High yield stress steel bars	t	5		
	(e) Sidewalk				
	(i) Welded steel fabric, Ref: 193	kg	1100		
	(f) Apron				
	(i) Mild steel bars	t	1,2		
	(ii) High yield stress steel bars	t	1,2		
<b>6300</b>	<b>SUB-TOTAL STEEL REINFORCEMENT FOR STRUCTURES</b>				

<b>6400</b>	<b>SECTION 6400 : CONCRETE FOR STRUCTURES</b>				
64,01	Cast insitu concrete (a) Class 30/19 in:				
	(i) Abutment walls and wingwalls	m <sup>3</sup>	360		
	(ii) Approach slabs	m <sup>3</sup>	18		
	(iii) Pier columns	m <sup>3</sup>	120		
	(iv) Deck	m <sup>3</sup>	330		
64,06	Demolishing existing concrete (b) Reinforced concrete in:				
	(i) River Causeway	m <sup>3</sup>	210		
B64.07	Hot weather concreting	Lump sum	1,0		
64/16.02	Overhaul on material hauled in excess of 1.0 km (ordinary overhaul)	m <sup>3</sup> km	32500		
B64.07	Bus Shelters				
	(a) Precast concrete bus shelter with sidewalls	PC sum	1,0		
	(b) Handling cost and profit in respect of subitem B64.07(a)	%			
<b>6400</b>	<b>SUB-TOTAL CONCRETE FOR STRUCTURES</b>				



<b>6600</b>	<b>SECTION 6600 : NO-FINES CONCRETE, JOINTS, BEARINGS, PARAPETS AND DRAINAGE FOR STRUCTURES</b>					
66,05	Expansion joints: (a) Concrete nosing with silicone seal deck joints as shown on the drawings	m	26			
66,06	Filled joints: (a) 12mm wide joints as shown on the drawings (i) Centrally in the abutment walls, above bases (ii) Between the abutments and wingwall, above bases	m <sup>2</sup> m <sup>2</sup>	16 11			
66,07	Unfilled joints: (a) Between the abutment and wingwall bases, as shown on the drawings	m <sup>2</sup>	4			
66,08	Sealing joints with: (a) Silicone seal as shown on the drawings, for the exposed joints in the front faces of the abutments and the adjacent wingwalls (b) Bituthene or similar approved seals as shown on the drawings, for concealed earth faces of the joints in the abutments and the adjacent wing walls	m m	15 15			
66,09	Proprietary bearings: (a) Prime cost sum allowed for purchasing and taking delivery of bearings of specifications indicated in 66.10 (a) (b) Percentage on prime cost sum for charges and profit.	PC Sum %	1 80000	R	80 000,00	R 80 000,00
66,1	Installing the proprietary bearings (a) Laminated Elastomeric Bearings (i) Multidirectional	No	25			
66,11	Bearings (a) (200mm x 250mm TYPE B Elastomeric Bearings)	No.	27			
66,14	Dowels / Guides (R12 dowels wrapped in deonso tape as per the drawings)  (a) At abutments	No	28			
66,15	Concrete parapets	m	60			
66,17	End blocks on abutments	No.	6			
66,18	Numbers for structures: (c) Numbers formed in concrete	No.	3			
66,19	Drainage pipes and weepholes:  (a) Drainage pipes: (i) 65mm dia perforated drainage pipes  (ii) Deck scuppers (100mm dia uPVC pipes)  (iii) Type UPVC size 200mm in abutment seats as detailed on the drawings	m No. No	75 40 75			
<b>6600</b>	<b>Amount Carried Forward to Next Page</b>					

6600	Amount Brought Forward from Previous Page			
	(b) Weep holes: (i) 50mm dia uPVC weepholes at 1,8 m c/c	No.	86	
	(c) 300mm wide drainage filter elements	m	100	
66,21	Synthetic fibre filter fabric Grade 1	m <sup>2</sup>	120	
B66.28	Supply and place bridge deck walkway including: sand infill, asphalt surfacing, 110mm dia service ducts and precast concrete kerb, as per drawings.	m	80	
6600	SUB-TOTAL NO-FINES CONCRETE, JOINTS, BEARINGS, PARAPETS AND DRAINAGE FOR STRUCTURES			

8100	<b>SECTION 8100 : TESTING MATERIALS AND WORKMANSHIP</b>				
81,02	Other special tests requested by the Engineer				
	(a) Provision for cost of testing materials	P C Sum	1	R 25 000,00	R 25 000,00
	(b) Handling costs and profit in respect of subitem B81.02(a)	%	R 25 000,00		R -
8100	<b>SUB-TOTAL TESTING MATERIALS AND WORKMANSHIP</b>				

Item	Payment	Description	Unit	Billed Quantity	Rate	Estimated Amount
C3-6		<b>SECTION 1001 : CONTRACTOR'S OBLIGATIONS IN TERMS OF HEALTH &amp; SAFETY ITEMS</b>				
C3-6 / 01		Preparation of site specific Health & Safety Plan	Lump Sum	1,00		
C3-6 / 02		Principal contractor's initial obligations in respect of the Occupational Health & Safety Act and Construction Regulations.	Lump Sum	1,00		
C3-6 / 03		Principal contractor's time related obligations in respect of the Occupational Health & Safety Act and Construction Regulations.	Month	12,00		
C3-6 / 04		a) Provision of full time Construction Occupational Health & Safety Officer	Month	12,00		
C3-6 / 05		Provision of personal protective equipment (PPE)				
		a) Reflective Overall	No	100,00		
		b) Reflective Vests/Bibs	No	100,00		
		c) Hard hats	No	150,00		
		d) Protective foot wear	No	120,00		
		e) Steel toed gumboots	No	80,00		
		f) Earplugs	No	120,00		
		g) Dust masks - FF2 standard	No	240,00		
		h) Gloves	Pair	100,00		
		i) Safety Harnesses	No.	50,00		
C3-6 / 06		Cost of medical certificates and medical surveillance				
		a) Initial (baseline) medical examinations	No	150,00		
		b) Exit examinations	No	150,00		
		d) Periodic annual screenings for all workers, including audiograms and lung function testing.	No			
C3-6 / 07		Induction training	No	120,00		
C3-6 / 08		Environmental monitoring - tests in respect of general health hazards as required by the OHS Act and by Mine Health & Safety Act.	Lump Sum	1,00		
C3-6 / 11		Provision of First Aid Boxes	No	4,00		
C3-6 / 12		Compliance with Covid-19 Regulations	Month	12,00		
C3-6		<b>SECTION C3-6 : CONTRACTOR'S OBLIGATIONS IN TERMS OF HEALTH &amp; SAFETY</b>	To Summary Page			

Item	Payment	Description	Unit	Billed Quantity	Rate	Estimated Amount
<b>C3-5</b>		<b>ENVIRONMENTAL MANAGEMENT</b>				
		Penalties in respect of environmental violations.				
C3-5 / 01		Penalty for unnecessary removal or damage to trees for the following girth sizes.				
		a) 2600 mm girth or less	No		-5000	
		b) Greater than 2600 mm but less than 6180 mm	No		-10000	
		c) Greater than 6180 mm girth	No		-30000	
C3-5 / 02		Penalty for serious violations				
		a) Hazardous chemical/oil spill and/or dumping in non-approved sites	No		-10000	
		b) General damage to sensitive environments	No		-5000	
		c) Damage to cultural and historic sites	No		-5000	
		d) Pollution of water sources	No		-10000	
		e) Unauthorised blasting activities	No		-5000	
		f) Uncontrolled / unmanaged erosion (Rehabilitation will be at Contractor's expense)	No		-5000	
		g) Damage to sensitive vegetation in no-go areas. (Rehabilitation will be at Contractor's expense)	m2		-2000	
C3-5 / 03		Penalty for less serious violations				
		a) Littering on site	No		-1000	
		b) Lighting of illegal fires on site	No		-1000	
		c) Persistent or un-repaired fuel and oil leaks	No		-1000	
		d) Any person related to the contractor's operations found within designated no-go areas.	No		-500	
		e) As per (d) above but for vehicles or equipment	No		-3000	
		f) Excess dust or noise emanating from the site	No		-1000	
		g) Dumping of milled materials in side drains or on grassed areas	No		-1000	
		h) Possession or use of intoxicating substances on site	No		-500	
		i) Vehicles driven in excess of designated speed limit	No		-500	
		j) Removal and/or damage to flora cultural or heritage objects on site, and/or killing of wildlife	No		-2000	
		k) Illegal hunting	No		-2000	
		l) Urination or defecation except in proper latrines	No		-500	
C3-5		ENVIRONMENTAL MANAGEMENT		To Summary Page		

<b>SUMMARY OF SCHEDULE OF QUANTITIES</b>		
	<b>SCHEDULE A</b>	<b>Estimate amount</b>
1200	GENERAL REQUIREMENTS AND PROVISIONS	-
1300	CONTRACTOR'S ESTABLISHMENT ON SITE AND GENERAL OBLIGATIONS	-
1400	HOUSING, OFFICES AND LABORATORIES FOR THE ENGINEER'S SITE STAFF	-
1500	ACCOMMODATION OF TRAFFIC	-
1700	CLEARING & GRUBBING	
3400	PAVEMENT LAYERS OF GRAVEL MATERIAL (BRIDGE APPROACHES)	
3600	CRUSHED STONE BASE (BRIDGE APPROACHES)	
4100	PRIME	
4200	ASPHALT BASE & SURFACING	
4600	BITUMINOUS SINGLE SEAL WITH SLURRY	
5700	ROAD MARKING	-
	<b>SCHEDULE B</b>	<b>Estimate amount</b>
5200	GABIONS	-
5400	GUARDRAILS	-
6100	FOUNDATIONS FOR STRUCTURES	-
6200	FALSEWORK, FORMWORK AND CONCRETE FINISH	-
6300	STEEL REINFORCEMENT FOR STRUCTURES	-
6400	CONCRETE FOR STRUCTURES	-
6600	NO-FINES CONCRETE, JOINTS, BEARINGS, PARAPETS AND DRAINAGE FOR STRUCTURES	-
8100	TESTING MATERIALS AND WORKMANSHIP	-
12100	ACCESS FOR BRIDGE	-
		-

		-
	<b>SCHEDULE C</b>	<b>Estimate amount</b>
C3-6	OCCUPATIONAL HEALTH & SAFETY	-
C3-5	<b>SCHEDULE D</b>	
	ENVIRONMENTAL MANAGEMENT	-
	<b>SUBTOTAL 1 : SCHEDULE A + B + C + D</b>	-
	Contingencies - 10.0% of Sub-Total 1	-
	<b>SUBTOTAL 2</b>	-
	Contract Price Adjustment - 10% of Sub-Total 1	-
	<b>SUBTOTAL 3</b>	-
	VAT @ 15 %	-
	<b>ESTIMATED CONTRACT SUM</b>	<b>-</b>

SIGNED ON BEHALF OF TENDERER: .....

PROVINCE OF THE EASTERN CAPE

DEPARTMENT OF TRANSPORT

TENDER NO. SCMU10-24/25-0021

BRIDGE CONSTRUCTION FOR HAMBURG CONSTRUCTION PROJECT FOR A PERIOD OF 12  
MONTHS

# THE CONTRACT

## PART 3 (OF 4): SCOPE OF WORKS



**PROVINCE OF THE EASTERN CAPE**  
**DEPARTMENT OF TRANSPORT**  
**TENDER NO. SCMU10-24/25-0021**

**BRIDGE CONSTRUCTION FOR HAMBURG CONSTRUCTION PROJECT FOR A PERIOD OF 12 MONTHS**

<p><b>THE CONTRACT</b>  <b>PART 3 (OF 4): SCOPE OF WORKS</b></p>
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SECTION	DESCRIPTION	PAGE
<b><u>THE CONTRACT</u></b>		
<b>PART 3</b>	<b>SCOPE OF WORKS (PART 3 of 4)</b>	
C3.1	SECTION A: STANDARD AMENDMENTS ISSUED BY COLTO	C3.3
C3.2	SECTION B: PROJECT SPECIFICATION AMENDMENTS	C3.4
C3.3	SECTION C: OCCUPATIONAL HEALTH AND SAFETY SPECIFICATIONS	C3.103
C3.5	SECTION D: EMPLOYMENT AND TRAINING OF LOCAL LABOUR SPECIFICATIONS	C3.143
C3.6	SECTION E: ENVIRONMENTAL MANAGEMENT PLAN IMPLEMENTATION SPECIFICATIONS	C3.156
C3.7	SECTION F1: ENGAGEMENT AND DEVELOPMENT OF SMME CONTRACTORS SPECIFICATIONS	C3.180
C3.8	SECTION F2: ENGAGEMENT OF LOCAL RESOURCES / SUPPLIERS SPECIFICATIONS	C3.189
C3.9	SECTION G: QUALITY ASSURANCE FRAMEWORK FOR ROAD WORKS	C3.198
<b>PART 4</b>	<b>SITE INFORMATION (PART 4 of 4)</b>	<b>C4.1</b>

PROVINCE OF THE EASTERN CAPE

DEPARTMENT OF TRANSPORT

TENDER NO. SCMU10- 24/25-0021

BRIDGE CONSTRUCTION FOR HAMBURG CONSTRUCTION PROJECT FOR A PERIOD OF 12  
MONTHS

## **THE CONTRACT**

### **PART 3 (OF 4) : SCOPE OF WORKS**

- C3.1 SECTION A: STANDARD AMENDMENTS ISSUED BY COLTO**
- C3.2 SECTION B: PROJECT SPECIFICATION AMENDMENTS**
- C3.3 SECTION C: OCCUPATIONAL HEALTH AND SAFETY SPECIFICATIONS**
- C3.4 SECTION D: EMPLOYMENT AND TRAINING OF LOCAL LABOUR SPECIFICATIONS**
- C3.5 SECTION E: ENVIRONMENTAL MANAGEMENT PLAN IMPLEMENTATION SPECIFICATIONS**
- C3.6 SECTION F1: ENGAGEMENT AND DEVELOPMENT OF SMME CONTRACTORS SPECIFICATIONS**
- C3.7 SECTION F2: ENGAGEMENT OF LOCAL RESOURCES / SUPPLIERS SPECIFICATIONS**
- C3.8 SECTION G: QUALITY ASSURANCE FRAMEWORK FOR ROAD WORKS**

PROVINCE OF THE EASTERN CAPE

DEPARTMENT OF TRANSPORT

TENDER NO. SCMU10- 24/25-0021

BRIDGE CONSTRUCTION FOR HAMBURG CONSTRUCTION PROJECT FOR A PERIOD OF 12

MONTHS

**C3.1 SECTION A: STANDARD AMENDMENTS ISSUED BY COLTO**

Notes to Tenderer

1. The Standard Specifications for Road and Bridge Works for State Road Authorities 1998, prepared by the Committee of Land Transport Officials, (COLTO), as amended, shall apply to this contract. The amendments are those issued by COLTO and reproduced in Section A, together with additional amendments as set out in Section B.
2. Where reference is made to the General Conditions of Contract and Sub-Clauses thereof in the abovementioned Standard Specifications, they refer to the appropriate edition of the 'General Conditions of Contract for Road and Bridge Works for State Road Authorities,' issued by COLTO (Clause 1115 of the Standard Specifications refers).  
  
The General Conditions of Contract applicable to this contract are the "Conditions of Contract for Construction Works (Third Edition) 2015, as published by the South African Institute of Civil Engineering (SAICE) and the necessary amendments to the Standard Specifications have been made and included in the Project Specifications contained in this document.
3. The terms "Schedule of Quantities", (used throughout the Standard Specifications) and "Bill of Quantities", (used in all other documents forming part of this contract), and "Pricing Schedule" are synonymous.
4. The term "Engineer" used throughout the Standard Specifications is synonymous with "Employer's Agent"
5. The terms "Resident Engineer" and "Engineer's Representative" are synonymous with "Employer's Agent's Representative on Site".  
As at 1 February 2019 no amendments have been issued.

PROVINCE OF THE EASTERN CAPE

DEPARTMENT OF TRANSPORT

TENDER NO. SCMU10- 24/25-0021

**C3.2 SECTION B: PROJECT SPECIFICATION AMENDMENTS**

**BRIDGE CONSTRUCTION FOR HAMBURG CONSTRUCTION PROJECT FOR A PERIOD OF 12 MONTHS**

Notes to Tenderer:

1. In certain clauses the Standard Specifications allow a choice to be specified in the project specifications between alternative materials or methods of construction and for additional requirements to be specified to suit a particular contract. Details of such alternatives or additional requirements applicable to this contract are contained in this part of the project specifications. It also contains some additional specifications required for this particular contract.
2. The number of each clause and each payment item in this part of the project specifications consists of the prefix B followed by a number corresponding to the number of the relevant clause or payment item in the standard specifications. The number of a new clause or a new payment item which does not form part of a clause or a payment item in the standard specifications and which is included here, is also prefixed by B followed by a new number. The new numbers follow on the last clause or item number used in the relevant section of the standard specifications.
3. The Tenderer shall note that the COLTO Standard Specifications are based on the General Conditions of Contract for Road and Bridge Works for State Road Authorities (1998 Edition) (COLTO), prepared by the Committee of Land Transport Officials. Reference to specific clauses in this COLTO General Conditions of Contract shall need to be exchanged for the equivalent clause in the General Conditions of Contract for Construction Works (Third Edition) 2015 (SAICE), as published by the South African Institute of Civil Engineering, as amended in the Contract Data (C1.2) of this document. The Employer assumes/accepts no responsibility for the Contractors' interpretation of which is the correct relevant clauses.

## PROVINCE OF THE EASTERN CAPE

## DEPARTMENT OF TRANSPORT

## TENDER NO. SCMU10- 24/25-0021

## BRIDGE CONSTRUCTION FOR HAMBURG CONSTRUCTION PROJECT FOR A PERIOD OF 12 MONTHS

## SECTION B: PROJECT SPECIFICATION AMENDMENTS

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<b>SECTION 1100</b>	<b>DEFINITIONS AND TERMS</b>
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Add the following additional clauses:

**B1111 CULVERT**

Add the following to this clause:

"Culverts are specified either as being prefabricated or of cast in situ concrete. Prefabricated culverts, together with their associated inlet and outlet structures are specified under Section 2200 while cast in situ concrete culverts are treated as structures subject to the 6000 Series."

**B1156 ACCEPTANCE CONTROL**

Acceptance control means whatever testing the Employers Agent carries out over and above the process control testing already carried out in order to decide on the acceptability of any work submitted by the Contractor. Such testing will be carried out at the cost of the Employer in a laboratory approved by him.

**B1157 COMMERCIAL SOURCE**

An off-site source of materials chosen by the Contractor will also be viewed as a commercial source. The Contractor shall take full responsibility for the quality of all materials and services supplied from commercial sources.

**B1158 PROCESS CONTROL**

Process control means all testing required to be carried out by the Contractor on the works in order to ensure that the completed permanent works comply with the specifications and drawings. All such testing will be subject to inspection and approval by the Employers Agent."

**B1115 GENERAL CONDITIONS OF CONTRACT**

*Replace Clause 1115 with the following:*

"The General Conditions of Contract for Construction Works (third edition) 2015 (SAICE), published by the South African Institute of Civil Engineering, as amended in the Contract Data (C1.2) form part of this contract.

All references in the Standard Specifications for Road and Bridge Works for State Road Authorities COLTO are to the General Conditions of Contract for Road and Bridge Works for State Road Authorities COLTO. Consequently all references in the COLTO Standard Specifications have to be amended accordingly to reflect the SAICE General Conditions of Contract that is applicable to this contract. The COLTO Standard Specifications have been scrutinized and the clauses, which refer to the COLTO General Conditions of Contract, were identified. Each COLTO clause reference is tabulated in Table 1115/1 below (context of reference is also given) together with the relevant equivalent clause in the SAICE General Conditions of Contract that is applicable to this contract.

Whereas every effort has been made to include all of the affected clauses in the table, there may be some omissions. In every case, however, the SAICE General Conditions of Contract, as amended in the Contract Data (C1.2), shall apply and the Contractor shall be responsible for interpretation of the equivalent clause.

Tables B1115A: COLTO GCC to GCC 2015

Reference to a Clause that refers to, or defines, a contractual term in either the COLTO General Conditions of Contract for Road and Bridge Works for State Road Authorities 1998 (COLTO GCC 1998) for the Standard Specifications for Road and Bridge Works for State Road Authorities 1998.		Equivalent reference to a Clause that refers to, or defines, a contractual term in General Conditions of Contract for Construction, 3rd edition (2015) (GCC 2015), applicable to this Contract	
COLTO GCC Clause No	Referenced COLTO GCC defined term	GCC 2015 Clause No	GCC 2015 defined term
1(1)(b)	appendix	1.1.1.8	Contract Data
1(1)(f)	Construction Plant	1.1.1.6	Construction Equipment
1(1)(n)	Engineer	1.1.1.16	Employer's Agent
1(1)(o)	Engineer's Representative	1.1.1.17	Employer's Agent Representative
1(1)(p)	Letter of Acceptance	1.1.1.20	Form of Offer and Acceptance
4(3)	Letter of Acceptance, (Written proof) of delivery of		Confirmation of Receipt (pro-forma appearing with the Form of Offer and Acceptance in GCC 2015)
1(1)(q)	Permanent Works	1.1.1.22	Permanent Works
1(1)(q)	Permanent Works	1.1.1.23	Plant
1(1)(s)	Project Specifications	1.1.1.28	Scope of Work
1(1)(t)	Schedule of Quantities	1.1.1.2	Bill of Quantities
1(1)(t)	Schedule of Quantities	1.1.1.25	Pricing Data
1(1)(w)	Special Conditions	1.1.1.8	Contract Data
1(1)(x)	Specifications	1.1.1.28	Scope of Work
1(1)(x)	Specifications	1.1.1.30	Site Information

Tables B1115B: COLTO STANDARD SPECIFICATION TO GCC 2015

COLTO Standard Specifications		COLTO General Conditions of Contract		SAICE General Conditions of Contract	
Clause No	Page No	Clause No	Description or Reference	Clause No	Description or Reference
1115	1100-2		Definition of COLTO		Definition of SAICE
1204	1200-2	15	Construction programme	5.6.1	Programme of the Works
1204	1200-2		General reference to COLTO		Applicable to SAICE
1206	1200-3	14	Setting out of works		Omitted
1209(a)	1200-4		General references to COLTO		Applicable to SAICE
1209(e)	1200-5	52(2)	Valuation of material brought onto site	6.10.2	Valuation of material brought onto site
1210	1200-5	54	Certificate of practical completion	5.14.1	Practical Completion
1212(1)	1200-7	49 (2)	CPA on alternative designs	6.8.2	Application of the CPA factor
1215	1200-9	45	Extension of time for completion due to abnormal rainfall.	5.12	Extension of time for practical completion
1217	1200-10	35	Care of the works	8.2	Care of the works
1303(ii)	1300-1		General reference to COLTO		Applicable to SAICE

COLTO Standard Specifications		COLTO General Conditions of Contract		SAICE General Conditions of Contract	
Clause No	Page No	Clause No	Description or Reference	Clause No	Description or Reference
1303(iii)	1300-1	49	Price adjustment Item 13.01 (a)	6.8	Price adjustment Item 13.01 (a)
1303 (iii)	1300-2	49	Price adjustment Item 13.01 (b)	6.8	Price adjustment Item 13.01 (b)
1303 (iii)	1300-1	53	Variations exceeding 20%	6.11	Variations exceeding 15%
1303 (iii)	1300-2	53	Variations exceeding 20%		Variations exceeding 15%
1303	1300-2	12	Payment Item 13.01 (c)	5.3	Commencement of the Works
1303	1300-2	45	Payment Item 13.01 ( c )	6.8	Payment Item 13.01 ( c )
1403(c) (ii)	1400-4	40 (1)	Variation for rented accommodation	6.4.1	Variation for rented accommodation
1505	1500-3	40 (1)	Variation for temporary drainage	6.4.1	Variation for temporary drainage
Item 15.08	1500-8	48	Payment of Provisional Sum	6.6.1	Payment of Provisional Sum
Item 15.09	1500-8	48	Payment of Provisional Sum	6.6.1	Payment of Provisional Sum
Item 15.11	1500-8	48	Payment of Provisional Sum	6.6.1	Payment of Provisional Sum
Note (2)	3100-4	40	Payment for prospecting for materials	6.4	Payment for prospecting for materials
3204(b) (iii)	3200-2	40	Payment for oversize material	6.4	Payment for oversize material
3303(b)	3300-2	2	Engineer's decisions, with reference to materials classification	3.1	Engineer's decisions, with reference to materials classification
Item 44.06	4400-3		General reference to COLTO, PC Sums	6.6.2	Prime Cost Sums in SAICE
Item 45.06	4500-3		General reference to COLTO, PC Sums	6.6.2	Prime Cost Sums in SAICE
5803 (c)	5800-3	40	Variation, for landscaping	6.4	Variation, for landscaping
5805 (d)	5800-4	40	Variation, for grassing	6.4	Variation, for grassing
Item 58.10	5800-10	48	Payment for Extra Work	6.10	Payment for Extra Work
8103 (c )	8100-1	40	Variation, for testing material	6.4	Variation, for testing material
Item 81.02	8100-26		General reference to COLTO, Provisional Sums		Applicable to SAICE, Provisional Sums
Item 81.03	8100-26	22	Clearance of site on completion, with reference to core drilling	5.15	Clearance of site on completion, with reference to core drilling

**SAICE General Conditions of Contract 2015: subclause 1.1 Definitions**

Add the following new definitions:

- “1.1.1.35 **“Project Specifications”** means any specifications appearing under this heading and forming part of the Contract, and containing any amendments to, omissions from or additions to the Standard Specifications that may be required in connection with a specific project.”
- “1.1.1.36 **“Special Conditions”** means any addition to, departure from or amendment of the General Conditions of Contract as set out in the Contract Data forming part of the Tender Documents.”
- “1.1.1.37 **“Works Specifications”** means all specifications forming part of the Contract whether they appear in the Standard Specifications, the Project Specifications or on the Drawings, or be they instructions given to the Contractor, or any other specifications referred to in the abovementioned Specifications.



### **B1155 WORK IN RESTRICTED AREAS**

*Delete the contents of clause 1155 and replace with the following:*

"Any omission of pay items from the Pricing Schedules with regard to additional or extra over payment for work in restricted areas should be regarded as deliberate and any additional cost incurred shall be included in the bulk rates tendered. (Refer also to clause B1209(j))."

*Add the following clauses:*

### **B1156 PROCESS CONTROL**

Process control is the responsibility of the Contractor and refers to all testing required to be carried out on the Works in order to ensure that the completed permanent works comply with the specifications and drawings. All such testing will be subject to inspection and approval by the Employer's Agent.

Process control will be carried out at the cost of the Contractor.

### **B1157 ACCEPTANCE CONTROL**

Acceptance control means whatever testing the Employer's Agent carries out over and above the process control testing already carried out in order to decide on the acceptability of any work submitted by the Contractor.

Process control tests can be used as acceptance control if the Employer's Agent is satisfied with the results as presented to him.

### **B1158 VALUE OF WORK DONE**

The value of work done referred to in Section 1300 shall be defined as the total of the work done measured in the Pricing Schedules including items 13.01(a) to (c) (when calculated to include themselves), all daywork done, all work done due to variation orders and eighty percent of the value of all materials on site but excluding any payment made for Contract Price Adjustment and VAT.

### **B1159 COMMERCIAL SOURCE**

A commercial source is a source of material for which the Contractor is responsible for proving compliance with all relevant specifications. The tendered rate shall include full compensation for all required testing, transport and processing. No overhaul will be paid.

Should the Contractor elect not to utilise material for the proposed sources and instead utilise an alternative source then all material products from such source shall be deemed to be as from a "commercial source" for purposes of responsibility of specification compliance and payment."

### **B1160 TESTING SPECIFICATIONS**

In December 2016 the THM1 ceased to exist and was replaced by SANS 3001. All site Laboratories are required to perform testing according to the SANS 3001 test methods.

### **B1161 SABS SPECIFICATIONS**

Where reference is made in this specification or the standard specifications to SABS specifications, the latest published national standard shall be applicable. Use:

[https://www.sabs.co.za/content/uploads/files/SABS%20Catalogue%20February%202012%20\(abridged\).pdf](https://www.sabs.co.za/content/uploads/files/SABS%20Catalogue%20February%202012%20(abridged).pdf) for the most up-to-date versions of the various standards.

### **B1162 AGGREGATE SIZE**

Where reference is made in this specification or the standard specifications to aggregate size, nominal aggregate size or maximum aggregate size, the aggregate size as listed shall be replaced with the new corresponding aggregate size as indicated in the following table:

Aggregate size	New aggregate size
26.5	28
19	20
31.2	14
9.5	10
6.7	7
4.75	5
2.36	2
1.18	1

**B1163 COMPACTION**

In December 2016 the THM1 ceased to exist and was replaced by SANS 3001. All site Laboratories are required to perform testing according to the SANS 3001 test methods.

Therefore, the standard for compaction efforts changed from Modified AASHTO Density as per TMH1 Test Method to Maximum Dry Density (MDD) as per SANS 3001. Where reference is made to compaction or of Modified AASHTO Density in the tender documentation or the standard specifications or wherever there is conflict between the tender documentation and the standard specifications, the SANS 3001 specification and terminology shall govern.”

<b>SECTION 1200:</b>	<b>GENERAL REQUIREMENTS AND PROVISIONS</b>
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**B1202 SERVICES**

*Add the following to the second paragraph:*

"All the known services inside the limits of the works are indicated in this clause or drawings issued to the Contractor by the Employer's Agent. The Contractor shall however, immediately inform the Employer's Agent's representative of any underground service which is not indicated in this section and which he discovers during the contract."

*Insert the following paragraphs after the fifth paragraph:*

"All services which exist or are presumed to exist by the Contractor or the Employer's Agent must be searched for and exposed by the Contractor so that the Employer's Agent can take a final decision about possible protection or shifting.

It is also a condition of this contract that the Contractor notify the Employer's Agent in writing at least one week in advance of the intention to search and expose any existing services. During this period the Contractor must assist the Employer's Agent in gathering any information about these services."

*Add the following after the sixth paragraph of clause 1202 of the Specifications:*

"The Contractor's attention is drawn to the relevant clauses of the General and Special Conditions of Contract regarding liability for damage to the works, or property, or injury to persons arising from the construction of the works. His attention is also drawn to Clause 8.6 of the General Conditions of Contract regarding insurance to be effected by the Contractor. Special attention is drawn to the exclusions in this insurance policy and particularly to the exclusions regarding consequential damage."

Any cost of repairs, replacement and/or installation of services and equipment resulting from the Contractor's negligence or unauthorised action shall be to the Contractor's account."

*Add the following:*

"The cost of alterations to services necessitated by the construction of the road will be borne by the Employer.

The Contractor shall allow all reasonable access to any authority or department for the purpose of maintaining, laying and/or altering any service cables or mains during the construction period.

- (a) Owing to the possible inaccuracy of records of existing services (watermains, electric cables, telephone cables, etc.) the Contractor shall locate services that may be affected by this Contract prior to the commencement of excavations.

Payment for the exposure of services by excavation will be on the basis of the tendered rates or, if no appropriate rate exists, on a Dayworks basis.

- (b) The Contractor shall not damage adjoining fences and buildings when depositing spoil and/or materials. All claims arising from such causes shall be settled by the Contractor.

The Contractor shall prevent damage to buildings, fences and other objects in the vicinity of the Works, as a result of the execution of this Contract. The Contractor shall supply and erect shoring, screens, barricades, temporary supports and other items necessary for preventing such damage."

**B1203 ROAD INTERSECTIONS AND JUNCTIONS**

*In the first sentence of the first paragraph of this Clause insert ", public transport embayments" after the words "farm accesses".*

*Add the following subclause:*

**"(a) Treatment at gravel road intersections and other accesses**

The base layer as well as the surfacing shall end at the specified limit of construction shown on the drawings for proclaimed roads and such other roads as directed by the Employer's Agent.

Each of the underlying layers of the new road shall project a distance at least 600 mm beyond the termination of the layer immediately above it.

The void shall be backfilled with approved wearing course gravel or shoulder material compacted in layers by hand operated vibrating compactors.

Prior to placing the surfacing, a thickened edge shall be constructed consisting of a trench 300 mm wide and 300 mm deep neatly excavated over the full width of the junction. This trench shall be filled with concrete, as specified in Section 2300 of the Specifications. The concrete shall be finished off level with the finished base and the surfacing for the new road shall be extended over this thickened edge."

## **B1204 PROGRAMME OF WORK**

### **(a) General requirements**

*Add the following as a continuation of the first paragraph:*

"In drawing up the programme the Contractor shall make allowance for the following:

- (i) Submission of documentation required from the Contractor before commencement of the Works in terms of Clause 5.3.1 in the Contract Data. Contractors shall provide sufficient time for the approval of the Health and Safety plan. Any claims regarding the rejection of a health and safety file shall not be entertained. It will be expected from the Contractor to pro-actively conclude this activity.
- (ii) Approval of the Construction Works Permit. A period of two (2) months has been estimated for the period from Contract Commencement Date to the commencement of the Works instruction date.
- (iii) Contractor survey of known survey control points as indicated by the Employer's Agent, setting out of new survey control points where required, survey of the existing ground levels at ten (10) m intervals and submission of the survey data to the Employer's Agent.
- (iv) Agreeing road prism cross sectional areas with the Employer's Agent for the purpose of determining mass earthwork quantities.
- (v) All special non-working days defined in the Contract Data (C1.2).
- (vi) The expected delays defined in clause B1215: Extension of time resulting from abnormal climatic conditions as a terminal float.
- (vii) Physical conditions and artificial obstructions and their effects.

(viii) Construction of new residential structures and relocation of graves for existing households and graves within the proposed road reserve.

(ix) Dealing with, altering and installing services including submission of notifications to the relevant service providers as required.

(x) The accommodation and safeguarding of public traffic. Repair and alterations of existing road used as temporary deviation and construction of new temporary deviation.

(xi) The time needed for preparation and approval of the various mix designs specified in the relevant construction sections of the Scope of Works.

(xii) Social facilitation and payment of affected individuals which are affected by the road re-alignment.

(xiii) Fulfilment of Employer's contract participation goals:

(1) Employment and development of Targeted subcontractors.

(2) Employment of Targeted labours.

(3) Engagement of Targeted suppliers

(xiv) All training requirements specified.

(xv) All other actions required in terms of this Contract.

(xvi) The following restricted working conditions:

(1) During the contractor's annual shutdown period between December and January (as determined

by SAFCEC), the contractor shall maintain two-way traffic within the contract limits.

(2) Limitations in terms of weather conditions especially the restriction on surfacing work.

(3) Traffic accommodation by means of half width construction.

(4) Maximum length of half width construction shall be 2 km;

(5) Minimum spacing between two consecutive sections of half width construction = 2 km (no construction activities will be allowed in this section and traffic will flow uninterrupted)

(6) Maximum number of half width construction closures on the contract shall be four (4) closures.

(7) The Contractor's construction procedure shall make allowance that once the first half width of a section is completed the opposite half width shall commence, to ensure full width completion of a section before moving to a new section.

This initial programme shall realistically account for the forecast cash flow within the defined contract period. If an alternative contract period is offered, the Contractor shall submit a separate programme with the alternative tender."

*Add the following paragraphs:*

**“(c) Additional programme requirements**

In addition to the requirements of clauses B1204(a), and of clause 5.6 of the General Conditions of Contract, the programme of work shall include the following details:

- (i) A work breakdown structure that identifies all major activities.
- (ii) Scheduled start and end dates for each activity.
- (iii) Linkages between activities that clearly identify sequence, floats and critical path.
- (iv) Intended working hours (per day and working days per week) and resource allocations (plant and labour).
- (v) Production rates.
- (vi) Monthly cashflow projections.
- (vii) Key dates in respect of information required or due delivery.
- (viii) The contractor’s payment weekends and special non-working days (end of year break as determined by SAFCEC).
- (ix) Detailed traffic accommodation proposal on which the programme is based.
- (x) A risk assessment schedule with mitigating plans of issues that could prevent the due completion date being met.

Should the Employer’s Agent require an electronic version of the programme for review purposes, the Contractor shall supply the programme in a format compatible with the Employer’s Agent’s software.

**(d) Programme revisions**

The programme will be reviewed at the monthly site meetings at which the contractor shall provide sufficient detail that will allow the comparison of completed work per activity against the current programme. The contractor shall indicate what resources and programme changes he intends to implement in order to remedy any activity that has fallen behind. The Employer’s Agent may demand from the contractor a major revision of the programme. Such a revision shall be submitted for comment within 14 days of the demand.”

**(e) Targeted subcontractor work packages**

In compiling the programme of work the Contractor shall make due allowance for targeted subcontractor work packages, the procurement of targeted subcontractors and indicate clearly commencements dates for each work package.”

**(f) Hard rock quarry of crushed stone material**

The hard-rock quarry shall be handed over to the Contractor on after receipt of the construction permit from the Department of Labour and instruction to commence the Works from the Employer’s Agent.”

**B1205 WORKMANSHIP AND QUALITY CONTROL**

*Insert the following heading after the title:*

**“(a) General:**

*Insert the following as subclauses after the first paragraph:*

**(b) Quality Systems**

The Contractor shall implement a quality assurance system that replicates an ISO 9002 and appoint a quality manager who shall ensure that members of the Contractor’s staff comply with the requirements of the quality system. The quality system and the methods used to implement it shall be described in a quality plan produced by the Contractor. The quality manager shall be resident on site full time.

**B1206 SETTING OUT OF THE WORKS AND PROTECTION OF BEACONS**

*Add the following after the first paragraph of Clause 1206 of the Specifications:*

*Add the following at the end of the fourth paragraph:*

Road markings, particularly painted islands and no overtaking lines are also elements of the road that require proper setting out. The Contractor shall prove to the Employer’s Agent that critical reference points have been satisfactorily recorded for later reinstallation before any work commences that will obliterate the existing markings.

*Delete “and of clause 14 of the general conditions of contract” in the sixth paragraph.*

*Add the following after the eighth paragraph of Clause 1206 of the Specifications:*

The Contractor shall indicate his own reference and control beacons to the Employer’s Agent at least one week before work is programmed to commence. The Employer’s Agent may take control measurements to determine the accuracy and adequacy of the reference/control beacons, and may instruct the Contractor to correct any faulty work and to take and provide such additional measurements and details as may be deemed necessary by him.

No payment will be made for any inconvenience or delay caused by compliance with these requirements.

*Add the following paragraphs:*

The Contractor shall take care that property beacons, trigonometrical survey beacons or setting-out beacons are not displaced or destroyed without the consent of the Employer’s Agent. Property beacons and trigonometrical survey beacons that have been displaced or destroyed shall be replaced by a registered land surveyor, who shall certify such replacement.

The cost of replacing all beacons displaced or destroyed during the course of the contract without the consent of the Employer’s Agent shall be the Contractor’s responsibility and included in the tender rates.

**B1207 NOTICES, SIGNS AND ADVERTISEMENTS**

*Replace the second paragraph with the following:*

Contract nameboards shall be erected and maintained for the duration of the works assignment at points to be indicated by the Employers Agent. Details of the contract nameboard are provided in the standard drawings, whilst a layout of the identity boards is included with the tender drawings.”

*Delete the final paragraph and replace with the following:*

“All signboards erected in accordance with the drawings or as approved by the Employers Agent, shall be removed at the same time as the Contractor’s de-establishment.

## **B1209 PAYMENT**

### **(b) Rates to be inclusive**

*Add the following to the first paragraph:*

No value added tax shall be included in the Contractor's tendered rates or amounts. Payment of value added tax (VAT) shall be made under a separate item in the Summary of Schedule(s) in C2.2 Bill of Quantities in C2 Pricing Data.

### **(c) The meanings of certain phrases in payment clauses**

#### **(i) Procuring and furnishing (material)**

*Add the following:*

Payment for procuring and furnishing material from commercial sources shall include all transport costs, irrespective of distance hauled.

*Add the following new sub-clauses:*

### **(g) Work in confined areas**

Except where provided for in the Specification **and** the Bill / Schedule of Quantities in the Pricing Data no extra payment shall be made nor shall any claim for additional payment be considered for construction in confined areas. The omission of standard pay items from the Bill / Schedule of Quantities shall be taken to be deliberate and any additional costs incurred shall be included in the bulk rate.

### **(h) Rates to remain unchanged when Scope of Work changes**

Dependent on the rates and prices offered in the Bill / Schedule of Quantities in the Pricing Data, the Employer intends to increase or reduce the scope of work to match the budget allowed for this project. To this end the Contractor has been provided the opportunity to price separately for unit rates of work and the establishment of major plant. The value of such increase or reduction in the scope of works shall not give cause for the Contractor to vary the offered rates and prices, which shall remain final and binding for the duration of the contract, provided that:

- (i) Notification of the change to the scope of work is given in writing within 28 days of the tender closing date.
- (ii) The value of the increase or reduction in the scope of work does not alter the tendered sum by more than 15%.

### **(i) Trade names**



Where materials are specified under trade names, tenders must be based on these materials. Equivalent materials may be submitted as alternative tender offers in the tender and the Employer's Agent may, after receipt of tenders, approve the use of equivalent materials.

**(j) Payment Certificates**

With reference to Clause 6.10.1 of the General Conditions of Contract, the Contractor shall, at his own expense, submit to the Employer's Agent three sets of A4-sized paper copies of the monthly statement for payment.

Additional payment items to cover the requirements of the project specifications are listed below.

**Add the following new payment items :**

<b>Item</b>	<b>Unit</b>
<b>B 12.04 Land acquisition and crop loss reimbursements</b>	
Item	Unit
(a) Direct payment to individuals or communities	Prov. Sum
(b) Handling costs and profit in respect of B12.04(a)	%

Expenditure under this item will be made in accordance with the general conditions of contract.

The submitted percentage is a percentage of the amount actually spent under Item B12.04(a), which shall include full compensation for the handling costs of the Contractor, plus the profit and all other incidentals, in connection with paying individual landowners, community co-operatives, communal land trusts etc, for the loss of land, crops, grazing or any other facility.

**B12.05 Provision of community liaison officer**

<b>Item</b>	<b>Unit</b>
(a) Wages, salary, allowances, etc.	Prov Sum
(b) Handling costs and profit in respect of B12.05(a)	%

Expenditure under this item will be made in accordance with the general conditions of contract.

Payment under Item B12.05 shall be made monthly. The amount due to the Contractor will be equal to the total of the actual amount paid to the Community Liaison Officer (CLO) plus the direct cost of medical and pension benefits, Workmen's Compensation, sick leave and holiday pay, accommodation and transport incurred by the Contractor in respect of the CLO.

The submitted percentage is a percentage of the amount actually spent under Item B12.05(a), and shall include full compensation for the handling costs and profit of the Contractor, plus all other incidentals, in connection with paying the CLO.

**B 12.07 Project Steering Committee and disbursements to members of the PSC**

<b>Item</b>	<b>Unit</b>
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(a)	Direct payments for expenses to members	Prov. Sum
(b)	Handling costs and profit in respect of B12.07(a)	%

Expenditure under this item will be made in accordance with the general conditions of contract.

The submitted percentage is a percentage of the amount actually spent under Item B12.07(a), which shall include full compensation for the handling costs of the Contractor, plus the profit and all other incidentals, in connection with paying the respective members for costs of travelling and subsistence for each meeting attended. Expenditure on this item will be closely monitored and must be approved in writing by the Engineer.

**B1210 CERTIFICATE OF PRACTICAL COMPLETION OF THE WORKS**

*Insert the following:*

In the fourth line of the first paragraph, delete "Clause 54" and replace with "Clause 5.14".

*Add the following paragraph:*

"Only a Certificate of Completion will be issued on successful completion of all works assignments at the completion of the 36-month appointment period."

**B1211 TRAFFIC OVER COMPLETED PAVEMENT LAYERS**

*Add the following:*

It is a specific requirement of this contract that traffic may have to be accommodated on completed pavement layers on certain road sections during peak hours and overnight. The final decision regarding the timing of opening of the completed pavement layers to traffic shall rest with the Employer's Agent. Repair work required to the completed pavement layers shall be included in the rates for accommodation of traffic and no additional payment will be made for work required to repair damage.

Completed final surfacing shall not be opened to traffic until the final surfacing has sufficiently cooled. The Contractor shall not allow construction equipment or public traffic, which is likely to cause damage, over the completed final surfacing.

**B1214 CONTRACTOR'S ACTIVITIES IN RESPECT OF PROPERTY OUTSIDE THE ROAD RESERVE AND OF SERVICES MOVED, DAMAGED OR ALTERED**

*Add the following to the first paragraph of subclause (d)(ii)*

"This is also required with respect to fences, gates, camp sites, bypasses and material spoiled on private property."

*Add the following after subclause (e)*

"These written statements, as required in Clause 1214(b)-(e) shall be handed to the Employers Agent before the final certificate will be issued."

**B1215 EXTENSION OF TIME RESULTING FROM ABNORMAL RAINFALL**

*Delete the entire clause and replace with the following:*

For the purposes of calculating an extension of time due to climatic conditions in terms of clause 5.12. as amended on the General Conditions of Contract, the number of days in excess of the number of working days anticipated to be lost due to climatic conditions shown in Table B1215/1 shall be taken into account:

**Table B1215/1 Anticipated days lost due to normal climatic conditions**

Month	"n" Working Days	Month	"n" Working Days
January	5	July	2
February	6	August	3
March	5	September	4
April	3	October	4
May	2	November	6
June	2	December	4

The Employer's Agent will certify a day lost due to climatic conditions only if:

- no work on the critical path according to the latest approved programme for completion of the works could be carried out during that specific working day or if
- only 30% or less of the work force and plant planned for that specific day, could work.

The extension of time as a result of climatic conditions will be calculated monthly as being equal to the absolute value of number of days certified by the Employer's Agent as lost due to climatic conditions, less the number of days in Table B1215/1.

The total extension for the contract will be the sum of the monthly extensions. Extension of time for six-day working weeks and parts of a month shall be calculated pro rata.

The Contractor shall submit to the Employer's Agent claims for all time lost due to inclement weather within 1 working day of the claim day. A record of inclement weather shall be kept by the Contractor and recorded at site meetings on a regular basis. The onus is on the Contractor to prove these claims.

**B1216 INFORMATION FURNISHED BY THE EMPLOYER**

*Add the following before the first paragraph*

The reduced drawings that form part of the tender document (Volume 4 : Book of Drawings Roadworks and Structures) shall be used for tender purposes only.

Any information in the possession of the Contractor, which the Employer's Agent's Representative requires for completing his as-built drawings, shall be supplied to the Employer's Agent's Representative before a certificate of completion will be issued.

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

**B1217 PROTECTION OF THE WORKS AND REQUIREMENTS TO BE MET BEFORE CONSTRUCTION OF NEW WORK ON TOP OF COMPLETED WORK IS COMMENCED**

*Add the following:*

- (h) The Contractor shall submit to the Employer's Agent for approval a method statement for the execution of that part which is subject to traffic accommodation on completed works. The Contractor is responsible for the protection of the underlying pavement layers and the drying out and/or keeping dry of such excavations. The Contractor's program shall make provision for the speedy backfilling of the excavations and the drainage thereof if inundation cannot be prevented.

The Contractor shall at his own cost be responsible for the repair of pavement layers, which have been damaged due to his own works or his neglect to submit his planning to the Employer’s Agent for approval or to adhere to approved precautionary measures.

- (i) Concrete elements adjoining the road, which is designated for resurfacing, shall be covered with protective material prior to any spraying operations to prevent the concrete from being stained with bituminous binder. The protection of concrete elements shall be to the Employer’s Agent satisfaction and no additional payment will be applicable for taking the specified protection measures.

**B1219 WATER**

*Add the following:*

The onus is on the Contractor to negotiate with the local landowners and authorities to obtain water. All water sources shall be tested for suitability for the use which it is intended.

The Contractor must identify suitable water sources. All water sources utilised shall be tested for suitability once the Contractor has established on site”. Water for use on site other than municipal, shall be subject to the required permit from DWA. This shall include such extraction points as rivers, dams, streams, and boreholes.

Table B1219: Water classification for Construction Testing

		Water Quality Classification Code						
		H0	H1	H2	H3	H4	H5	
Property	Unit	Pure water (AR)	Clean water (Rain)	Treated water (Municipal)	Silty (muddy) water with low salt content	Highly mineralised chloride sulphate water (brackish)	Waste brack, sewage, marsh, sea, etc water	Method
PH*	-	7.0	5.7 – 7.9	4.5 – 6.5	4.5 – 8.5	9.0	-	SABS M113 SM 11 - 1990
Dissolved solids*	ppm	0	1000	1500	3000	-	-	SABS 213 SM213 - 1990
Total hardness*	-	None	None	Temporary	Temporary	Permanent	-	SABS 215 SM 215 – 1971
Suspended matter	ppm	0	2000	2000	5000	-	-	SABS 1049 SM 1049 – 1990
Electrical conductivity	mS/m	0	200	200	500	-	-	SABS 1057 SM 1057 – 1982
Sulphates (SO <sub>4</sub> )	ppm	0	200	300	500	1000	-	SABS 212 SM 212 – 1971
Chlorides (Cl)	ppm	0	500	1000	3000	5000	-	SABS 202 SM 202 – 1983
Alkali Carbonates (CO <sub>3</sub> ) & Bicarbonates (HCO <sub>3</sub> )	ppm	0	500	1000	1000	2000	-	SABS 241 – 1999
Sugar	-	Negative	Negative	Negative	Negative	Negative	-	SABS 833
Quality of water required		Untreated layer works	✓	✓	✓	✓	Investigate the effect on the quality of the material	

	Chemically treated layer works	✓	✓	✓	Investigate the effect on the quality of the material
	Concrete mass	✓	✓	✓	Investigate the effect on the quality of the material
	Concrete prestressed	✓	✓		References: 1. Concrete Technology – Dr S Fulton (1989) 2. Materials Manual (PAWC)
	Slurry & emulsion	✓	✓		
	Soil/gravel tests	✓	✓		
	Chemical or control tests	✓	✓		

\* A primary property. The quality of the water is that quality where all three of the primary properties are within the limits.

! The tabulated single values are maximum value except in the case of the pH value for pure water, which must be 7.0

**B1229 SABS CEMENT SPECIFICATIONS**

*Add the following to this subclause:*

“Where reference is made in this specification or the Standard Specifications to the cement specifications, e.g., SABS 471: Portland cement and rapid hardening Portland cement, it shall be replaced with the new specification:

SANS 50197-1 "Cement composition, specifications and conformity criteria Part 1: Common cements.”

Furthermore, where reference is made in this specification or the standard specification to a different cement type, the following names will apply, and the Employers Agent will confirm the relevant new name from the table overleaf:

<b>AFRISAM</b>		Limpopo	Mpumalanga	Gauteng	Free State	KZN	Eastern Cape	NW Province	Northern Cape	Western Cape	Lesotho	Botswana	Namibia	Swaziland
CEM I	52,5R	RHC	RHC	RHC	RHC		RHC	RHC	RHC		RHC	RHC	RHC	RHC
CEM II A-M	42,5R	HSC	HSC	HSC	HSC	HSC	HSC	HSC	HSC		HSC	HSC	HSC	HSC
CEM II B-L	32,5R				APC		APC		APC		APC		APC	
CEM II B-L	32,5N					RS		RS			RS		RS	
CEM III A	42,5N			EBC										
CEM IV B-V	32,5R													APC
CEM V A	32,5R	APC	APC	APC	APC			APC				APC	APC	
CEM V A	32,5N	RS	RS	RS	RS			RS				RS	RS	

APC = All Purpose Cement    HSC = High Strength Cement    RHC = Rapid Hard Cement    EBC = Eco Building Cement    RS = Roadstab Cement

<b>LAFARGE</b>		Limpopo	Mpumalanga	Gauteng	Free State	KZN	Eastern Cape	NW Province	Northern Cape	Western Cape	Lesotho	Botswana	Namibia	Swaziland
CEM II A-V	52,5N	Rapidcem/ Fastcast	Rapidcem/ Fastcast	Rapidcem/ Fastcast	Rapidcem/ Fastcast	Rapidcem/ Fastcast		Rapidcem/ Fastcast	Rapidcem/ Fastcast					
CEM II A-V	42,5R					Powercrete Plus								
CEM II A-M (V-L)	42,5R	Powercrete Plus	Powercrete Plus	Powercrete Plus	Powercrete Plus	Powercrete Plus	Powercrete Plus	Powercrete Plus	Powercrete Plus		Powercrete Plus	Powercrete Plus	Powercrete Plus	Powercrete Plus
CEM II B-M (V-S)	32,5N	RoadCem	RoadCem	RoadCem	RoadCem	RoadCem		RoadCem	RoadCem					
CEM IV A-V	32,5R					Buildcrete/ Civilcrete								
CEM IV B-V	32,5R	Buildcrete/ Civilcrete/	Buildcrete/ Civilcrete/	Buildcrete/ Civilcrete//	Buildcrete/ Civilcrete//	Buildcrete/ Civilcrete/	Buildcrete/ Civilcrete/	Buildcrete/ Civilcrete/	Buildcrete/ Civilcrete/		Buildcrete/ Civilcrete/	Buildcrete/ Civilcrete/	Buildcrete/ Civilcrete/	Buildcrete/ Civilcrete/

<b>NPC-Cimpor</b>		Limpopo	Mpumalanga	Gauteng	Free State	KZN	Eastern Cape	NW Province	Northern Cape	Western Cape	Lesotho	Botswana	Namibia	Swaziland
CEM II B-S	42,5N					Plus	Plus							
CEM II B-M (S-V)	42,5N					Plus	Plus							
CEM II A-L	32,5R					Plus	Plus							
CEM II B-L	32,5N					Pro/Build	Pro/Build							
CEM II B-L	32,5R					Pro-R	Pro-R							
CEM III A	32,5N					Pro/Build	Pro/Build							
CEM V A (S-V)	32,5N					Pro/Build	Pro/Build							
MC	22,5X					Masonry	Masonry							

<b>PPC</b>		Limpopo	Mpumalanga	Gauteng	Free State	KZN	Eastern Cape	NW Province	Northern Cape	Western Cape	Lesotho	Botswana	Namibia	Swaziland
CEM I	52,5N	OPC	OPC	OPC	OPC	OPC	OPC	OPC	OPC	OPC	OPC	OPC		OPC
CEM II A-L	42,5N						Surebuild							
CEM II B-L	42,5N	Surebuild	Surebuild	Surebuild	Surebuild	Surebuild		Surebuild	Surebuild		Surebuild	Surebuild		
CEM II B-V	42,5N		Surebuild	Surebuild		Surebuild								Surebuild
CEM II B-M	42,5N	Surebuild	Surebuild	Surebuild	Surebuild	Surebuild	Surebuild		Surebuild	Surebuild				
CEM II B-V/M	32,5R											Botcem		

*Add the following new clauses:*

**B1230 SAFETY**

The Contractor must comply with the Occupational Health and Safety Act (Act No 85 of 1993) as amended as well as all the publications pertaining to the act or as specified in the Contract Document: A staff member will be appointed as the Health and Safety representative and will need to complete a site inspection register on a monthly basis. Payment for the Construction Safety officer will be made under Item C3-6/04(a). Payment for the Traffic Safety officer will be under Item B15.16. The two posts must be held by two separate people.

The Contractor shall nominate a Construction Safety Officer who will be responsible at all times, including after hours, nights, weekends and public holidays, for the safety of the work area. The accommodation of traffic will be supervised by the Traffic Safety Officer. All standard safety procedures and documentation must be adhered to.

The travelling public and emergency services shall have the right of way on public roads. The Contractor shall make use of approved methods to control the movement of his equipment and vehicles so as not to constitute a hazard on the road.

The Contractor may not commence construction activities before adequate provision has been made to accommodate traffic in accordance with the requirements of the specifications and drawings.

Failure to maintain road signs, warning signs and flicker lights in good working conditions shall constitute ample reason for the Employer's Agent to suspend work until such road signs and road safety ancillaries have been repaired or reinstated to the Employer's Agent's satisfaction.

The Contractor shall ensure that all plant left in the work area overnight is parked safely in accordance with the requirements of specifications.

All construction vehicles and equipment must be highly visible with flashing lights, reflective markings, stickers, etc. Operators must be aware of the public at all times.

In areas of steep embankments where public access cannot be limited, temporary guardrails will be erected where instructed by the Employer's Agent so that pedestrians can proceed safely. All open excavations to be clearly demarcated with danger tape, etc.

**B 1231 MATERIALS**

The Contractor, when using materials that are required to comply with any standard specification, shall, if so ordered, furnish the Employer's Agent with certificates showing that the materials do so comply. Where so specified, materials shall bear the official mark of the appropriate authority. Samples ordered or specified shall be delivered to the Employer's Agent's office on the Site free of charge.

Where proprietary products have been specified, similar products may be used subject to the prior written approval of the Employer's Agent.

Unless otherwise specified, all proprietary materials shall be used and placed strictly accordance with the relevant manufacturer's current published instructions.

Unless anything to the contrary is specified, all manufactured articles or materials supplied by the Contractor for the permanent works shall be unused.

Earth, stone, gravel, sand, and all other materials excavated or present on the Site or in borrow areas provided by the employer shall not become the property of the Contractor, but will be at his disposal only in so far as they are approved for use on the Contract.

Existing structures on the Site shall remain the property of the employer and except as and to the extent required elsewhere in the Contract, shall not be interfered with by the Contractor in any way.

No materials to be included in the works shall be damaged in any way and, should they be damaged on delivery or by the Contractor during handling, transportation, storage, installation or testing they shall be replaced by the Contractor at his own expense.

All places where materials are being manufactured or obtained for use in the Works, and all the processes in their entirety connected therewith shall be open to inspection by the Employer's Agent (or other persons authorized by the Employer's Agent) at all reasonable times, and the Employer's Agent shall be at liberty to suspend any portion of work which is not being executed in conformity with these specifications.

**(a) Ordering of Materials**

Immediately upon his Tender being accepted, the Contractor shall order materials which are in short supply or for which the delivery period may be long.

The quantities set out in the Bill of Quantities have been determined from calculations based on data available at the time and should therefore be considered to be only approximate quantities. The Contractor shall therefore, before ordering materials of any kind, check with the Employer's Agent the quantities required. No liability or responsibility whatsoever shall attach to the employer for materials ordered by the Contractor except if they have been ordered in accordance with written confirmation issued by the Employer's Agent.

**B1232 MIX DESIGNS**

Before commencing with certain construction activities, the Contractor shall, except where specified otherwise in the relevant construction sections in the Scope of Works, apply the following procedures with regards to mix designs:

- Taking and submitting samples of the relevant materials.
- Undertake the required mix design(s) or allow the Employer's Agent to undertake them.
- Produce, where required, laboratory, production/plant and/or trial mix(es).
- Undertake the required adjustments to the mix design(s) and reproduce required laboratory, production/plant and/or trial mix(es).
- Complete trial section(s) where required.
- Await the Employer's Agent's approval of the mix design(s) and trial section(s).

**B1233 COMMUNITY LIASON OFFICER (CLO)**

The Community Liaison Officer (CLO) is to be selected by the Project Steering Committee (PSC) / Local Council and the Employer (through his agent) and appointed by the Contractor. The Contractor shall, however, accept the appointment as part of his management personnel.

The duties of the CLO will be:

- To be available on site daily during normal working hours and at other times as the need arises. His normal working day and his period of employment will be mutually agreed upon by the Employer and the Employers Agent accordingly.



- To determine, in consultation with the Contractor, the needs of the local labour/SMMEs for relevant training if so required.
- To communicate daily with the Contractor and the Employers Agent to determine the labour/SMME requirements regarding numbers and skill, to identify possible labour disputes and to assist in their resolution.
  - To attend all meetings in which the community and/or labour is present or is required to be represented. In particular, he will attend the first part of the monthly/site meeting to report on the local community involvement.
  - To inform local labour of their conditions of temporary employment and to inform local labourers as early as possible when their period of employment will be terminated.
  - To attend disciplinary proceedings to ensure that hearings are fair and reasonable.
  - To keep a daily written record of his interviews and project liaison conducted.
  - All such other duties as agreed upon between all parties concerned.

A payment item has been allowed for in the Bill of Quantities for the payment of the CLO.

#### **B1234 COMMUNITY PARTICIPATION**

To give effect to the need for the participation and transparency in the process of delivering services, the community should participate in the decision-making process throughout the duration of the project. This shall be achieved through structured engagement between those responsible for the delivery of the project and the community.

A Project Steering Committee (PSC) which will be voluntary organizations shall be formed from representatives of the Roads Forum, the Employer, the Employers Agent, the Contractor and interested and affected parties. The PSC shall meet at least once every month.

The PSC shall make decisions and recommendations by consensus for the consideration and final approval of the Employer.

The tasks of the PSC will be to:

- Identify problems and opportunities that result from the location, construction, and operation of the roads.
- Participate in the prioritization process of the works in the development of the Maintenance Plan which will form the basis of the Construction Programme.
- Keep the community informed of all decisions taken and revisions relating to the Construction Programme.
- Keep the community informed with regards to progress being made monthly.
- To assist with community liaison and resolution of non-contractual disputes.
- To devise fair and transparent procedures that will assist the Contractor in the engagement of labour.

#### **B1235 UNSCHEDULED RELOCATION OF MAINTENANCE TEAMS DUE TO UNFORESEEN REASONS**

The Employers Agent may instruct the Contractor to transfer a specific maintenance team or a group of teams, to a new location within the project area which does not comply with the approved programme due to unforeseen reasons. Where the team or teams need to be re-established and moved to a site over a distance exceeding fifty (50) kilometres, the Contractor shall be compensated, at dayworks rates, for his plant and labour costs to relocate the specified teams accordingly.

These costs are to be agreed to by the Employers Agent and Employer prior to relocation commencing.

#### **B1236 PROVIDING CONTRACT MANAGEMENT TO THE HOUSEHOLD CONTRACTORS LOCATED WITHIN THE LMA**

The Eastern Cape Department of Roads and Transport is responsible for the Household Contractor Maintenance Programme.

The Household Contractor Maintenance Programme is aimed at poverty alleviation through community households located along certain roads as indicated in the Table below, who conduct basic road maintenance functions such as pothole repair and culvert cleaning.

It is the Employer’s intention that the provision of Contract Administration, Quality Control, Preparation of Reports and General Management of the programme be conducted by one full time foreman provided by the Main Contractor. The foreman is also required to provide the community contractors with basic training on how to conduct the said maintenance works to Departmental standards.

**B1239 MEASUREMENT AND PAYMENT FOR CERTAIN GENERAL ITEMS**

Payment will be made under this Section for certain temporary work items as follows:

<b>Item</b>	<b>Unit</b>
<b>B12.01 Community Liaison Officer</b>	
(a) Community Liaison Officer cost	provisional sum
(b) Monthly transport allowance for CLO	provisional sum
(c) Remuneration of PSC representatives from the community to attend official meetings	provisional sum
(d) Handling costs and charges for Contractor for items (a) (b) and (c)	percentage (%)

A provisional sum is provided for the cost of community liaison, which will include the salary of the Community Liaison Officer for the duration of the works assignment. The Community Liaison Officer may possibly not be required on a full-time basis.

Provisional sums are also allowed for the monthly transport allowance for the CLO, as well as for the payment of PSC members for attending official meetings as scheduled by the Employers Agent. All the above provisional sums will only be expended as instructed by the Employers Agent and approved by the Employer.

The percentage tendered for handling costs and charges shall cover all additional costs for the Contractor over and above the sums paid under sub items (a), (b) and (c).”

<b>Item</b>	<b>Unit</b>
<b>B12.11 Providing Contract Management to Household Contractors within the LMA</b> .....	<b>month</b>

The unit of measurement shall be per month or pro rata of 21 days for which the Foreman provides the function of Contract Administration, Quality Control, Preparation of Reports and General Management of the programme as well as training.

The tendered rate shall include for full compensation for all overheads, one full time foreman, one LDV and any other incidentals that may be required to provide the above service complete.

<b>Item</b>	<b>Unit</b>
<b>B12.12 Supply and installation of Contract Name Boards</b> .....	<b>No.</b>

The unit of measurement shall be per number of contract name boards erected.

The tendered rate shall include for full compensation for all overheads including the supply, handling and erection of the contract name boards complete with poles as per the detail attached in Annexure A.

<b>SECTION 1300: CONTRACTOR'S ESTABLISHMENT ON SITE AND GENERAL OBLIGATIONS</b>
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**B1302 GENERAL REQUIREMENTS**

*Add the following new sub-clause:*

**(d) Contractor's ablution facilities**

The Contractor shall, at each construction section, provide sufficient portable chemical latrine units. Furthermore the Contractor shall also provide a portable chemical latrine unit at each temporary traffic control facility. The latrine units shall be serviced daily and kept in a hygienic and orderly state to the approval of the Employer's Agent. No separate payment shall be made for this requirement and the costs thereof shall be deemed to be included in the rates tendered for the Contractor's time-related obligations.

**B1303 PAYMENT**

**B13.01 The contractor's general obligations**

*Insert the following paragraph after the fourth paragraph:*

Should the combined total tendered for sub-items (a), (b), and (c) exceed 20% of the tender sum (excluding VAT), the tenderer shall state his reasons in writing for tendering in this manner. The tenderer's attention is drawn to Form H, (bound in this Volume), to be completed by the tenderer.

*Delete the 17<sup>th</sup> paragraph commencing "The tendered rate per month for sub-item 13.01(c) ..... " and replace with:*

The tendered rate per month for sub-item 13.01 (c) represents full compensation for that part of the Contractor's general obligations, which are mainly a function of construction time. The tendered sum will be paid monthly, pro rata for parts of a month, from the Commencement Date (as defined in the general conditions of contract under sub-clause 1.1.1.5) until the end of the period for completion of the works, plus any extension thereof as provided in clause 5.12 of the general conditions of contract, provided that the total of the monthly amounts so paid for each item is not more than in proportion to the progress of the works as a whole."

e.g. 

$\frac{\text{Net Value of Work Completed} \times \text{Time Related Tendered Costs}}{\text{Net Value of the Contract}}$
---

*Add the following after the 19<sup>th</sup> paragraph:*

The amount payable to the Contractor for time related costs arising from extensions of time granted by the employer, where the Contractor is fairly entitled to such compensation in terms of clause 5.12 of the general conditions of contract, shall be calculated as follows:

Account shall be taken of all time related items scheduled in Sections 1300, 1400 and 1500.

All pay items for which the unit of measurement is "month" shall be deemed to be based upon an average of 23 working days per month.

Amend item 13.01 to read as follows:

**B13.01 Contractor's general obligations**

<b>Item</b>		<b>Unit</b>
(a)	Fixed obligations	Lump Sum
(b)	Value-related obligations	Lump Sum
(c)	Time-related obligations	Month
(e)	Provision of a 10 seater mini bus	Day
(f)	Environmental obligation	Month
(g)	Monthly reporting cost	Month
(h)	Security on site	Month

**SECTION 1400: HOUSING, OFFICES AND LABORATORIES FOR THE ENGINEER'S SITE PERSONNEL**

**B1401 SCOPE**

Replace the first sentence with the following:

This section covers the provision of accommodation, vehicles and travel, and salaries and subsistence allowances for the Employer's Agent's supervisory staff.

Add the following after the first paragraph:

This vehicle shall include the necessary licensing and equipment such as a jack, a spare wheels and wheel spanners.

**B1406 PROVISION OF VEHICLES**

**Replace the Clause 1406 with new Clause B1406 hereafter and add new Clauses B1407 and B1408:**

**B1406 PROVISION OF VEHICLES AND TRAVEL COSTS**

**(a) Engineer's Staff Travel**

The Contractor shall pay the Engineer for his site staff's travel costs on site and for authorised trips elsewhere. Such costs may arise via vehicle kilometres, public road or rail transport, or from flights. For vehicle kilometres, the applicable rates shall be approved by the Engineer.

Payment will only be made on submission to the Contractor of a proper invoice, with supporting documentation, from the Engineer. All claims must be signed by the Resident Engineer and by the Engineer to the Contract. No unauthorised payments will be allowed in respect of travel.

The Contractor shall be reimbursed via the relevant item in the Schedule of Quantities. No reimbursement will be made without the proper attachments signed by the Engineer.

A provisional sum has been allowed in the Schedule of Quantities to cover the above costs, together with a tendered percentage to cover the Contractor's handling costs and profit.

**B1407 SALARIES AND SUBSISTENCE ALLOWANCES FOR THE ENGINEER'S STAFF**

The Contractor is required to make payment to the Engineer for the salaries, subsistence and site allowances to the Engineer's site staff on a monthly basis. The amount of the salaries and allowances will be advised in writing by the Engineer following confirmation with the Employer of the site staff compliment.

The Engineer will submit a monthly tax invoice to the Contractor with a breakdown of the personnel, salary, allowances and the standard mark-up allowed. The same invoice will include details of the travel costs and any other recoverable disbursement. Payment of the invoices shall be within 30 days or receipt by the contractor. Payment will not be withheld for any reason, including any delay in the Employers payment of the Contractor's payment certificate.

Authorisation for each monthly payment shall be signed by the Resident Engineer and by the Engineer to the Contract. No unauthorised payments will be allowed and no reimbursements shall be made without the Engineer's signature.

A provisional sum has been allowed in the Schedule of Quantities to cover the above costs, together with a tendered percentage to cover the Contractor's handling costs and profit.

**B1408 : MEASUREMENT AND PAYMENT**

*Amend item 14.01 to read as follows:*

**Item**

**Unit**

**B14.01 Office and laboratory accommodation**

Add the following new sub-item:

(g)	Kitchen units	m <sup>2</sup>
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The unit of measurement and payment shall be the square metre of each item provided, measured in accordance with the authorised inner dimensions.

**B14.03 Office and laboratory fittings, installations and equipment****(a) Items measured by number**

Add the following new sub-sub-items:

Item	Unit
(xix) Plan holder	No
(xx) Floodlights complete with poles and 500 Watt minimum globes	No
(xxi) Single light fitting complete with CFC type 75 Watt globes	No
(xxii) Uninterruptable power supply unit	No
(xxiii) Steel plan cabinets	
(1) 50 A0 capacity	No
(2) 30 A0 capacity	No
(xxiv) Floodlights complete with poles, 500 Watt minimum globes and photocell for security	No
(xxv) Plan racks	No
(xxvi) Microwave (30ℓ)	No
(xxvii) Photocopier, printer, fax, scanner	No

The unit of measurement shall be the authorised number of units supplied and installed, complete and in accordance with the specifications and drawings, together with all minor fittings, brackets, connections, leads, mountings etc.

**(b) Prime cost items and items paid for in a lump sum**

Amend the following new sub-sub-items :

Item	Unit
(i) The provision of cellular telephones, including the cost of calls and data in connection with contract administration	Prov Sum
(ii) Handling costs and profit in respect of sub-sub-item B14.03(b)(i)	%

Expenditure under these items will be made in accordance with the conditions of contract.

The tendered percentages are percentages of the amount actually spent under Item B 14.03(b)(i), shall include full compensation for the handling costs of the Contractor, plus the profit and all other incidentals, in connection with paying for the cell phones, all risks insurance as appropriate.

**(c) Items measured by area**

Add the following new sub-items:

Item	Unit
(vix) White boards (0.9m x 1.2m)	m <sup>2</sup>

The unit of measurement and payment shall be the square metre of each item provided.

**Add the following new payment items :**

<b>Item</b>	<b>Unit</b>
<b>B14.11 Provision of mobile outdoor weather station</b>	<b>No</b>

The unit of measurement shall be the authorised number of units supplied and installed, complete and in accordance with the specifications together with all minor fittings, brackets, connections, leads, mountings etc.

**B14.12 Provision of semi-skilled labour for use by the Engineer**

<b>Item</b>	<b>Unit</b>
(a) Wages, salaries and allowances	Man-Month

Expenditure under this item will be in accordance with the conditions of contract. Payment under Item B14.12 shall be made monthly. The amount due to the Contractor will be equal to the total of the actual amount paid to the Engineer's semi-skilled labourers plus the direct cost of medical and pension benefits, Workmen's Compensation, sick leave and holiday pay, incurred by the Contractor in respect of the Engineer's semi-skilled labourers. The Contractor shall advise the Engineer of the full monthly cost for each semi-skilled labourer engaged. No payment other than that provided above will be made in respect of the employment of semi-skilled labourers for the Engineer. Contract price adjustment will not apply to this item.

The tendered percentage is a percentage of the amount actually spent under Item B14.12(a), which shall include full compensation for the handling costs of the Contractor, plus the profit and all other incidentals, in connection with paying the Engineer's assistants.

**B14.13 Provision of Vehicles and Travel Costs**

<b>Item</b>	<b>Unit</b>
(a) Engineer's site staff's vehicle kilometres and public transport costs	km
(b) Handling costs and profit in respect of Sub-item B14.13(a)	%

Expenditure under this item will be made in accordance with the conditions of contract.

Payment under Item B14.13(a) shall be made once the Engineer's monthly tax invoice has been paid by the Contractor. Payment for the vehicle kilometres and public transport costs will be included in the next monthly certificate.

The tendered percentage is a percentage of the amount actually spent under Item B 14.13(a), which shall include full compensation for the handling costs of the Contractor, plus the profit and all other incidentals, in connection with paying for the Engineer's travel costs.

**B14.14 Provision for Subsistence and Site Allowances**

<b>Item</b>	<b>Unit</b>
(a) Subsistence and site allowances for the Engineer's Staff	Prov Sum
(b) Handling costs and profit in respect of Sub-item B14.14 (a)	%

Expenditure under this item will be made in accordance with the conditions of contract.

Payment under Item B14.14 shall be made once the Engineer's monthly tax invoice has been paid by the Contractor. Payment for the Engineer's salaries and allowances will be included in the next monthly certificate.

The tendered percentage is a percentage of the amount actually spent under Item B14.14(a), which shall include full compensation for the handling costs of the Contractor, plus the profit and all other incidentals,

in connection with paying for the Engineer's subsistence allowances.

#### **B14.16 Provision of Computers**

<b>Item</b>	<b>Unit</b>
(a) Computers, printers, related hardware, software, consumables and internet connection	Prime Cost
(b) Handling costs and profit in respect of Sub-item B14.16(a)	%

Expenditure under this item will be made in accordance with the conditions of contract.

Payment under Item B14.16 shall be made once the computers and other equipment has been installed to the satisfaction of the Engineer, but only on submission of a receipt by the Contractor. Payment for the computers will be included in the next monthly certificate.

The tendered percentage is a percentage of the amount actually spent under Item B14.16(a), which shall include full compensation for the handling costs of the Contractor, plus the profit and all other incidentals, in connection with paying for the computers.

#### **B14.17 Client's Occupations Health and Safety Agent**

<b>Item</b>	<b>Unit</b>
(a) Direct payment to client's Occupational Health and Safety Agent	Prov Sum
(b) Handling costs and profit in respect of sub-item B14.17(a)	%

Expenditure under this item will be made in accordance with the conditions of contract.

Payment under Item B14.17 shall be made once the Engineer's monthly tax invoice has been paid by the Contractor. Payment for client's Occupations Health and Safety Agent will be included in the next monthly certificate.

The tendered percentage is a percentage of the amount actually spent under Items B14.17(a) which shall include full compensation for the handling costs of the Contractor, plus the profit and all other incidentals, in connection with paying for the client's Occupations Health and Safety Agent.

#### **B14.18 Client's Environmental Agent**

<b>Item</b>	<b>Unit</b>
(a) Direct payment to client's Environmental Agent	Prov Sum
(b) Handling costs and profit in respect of subitem B14.18 (a)	%

Expenditure under this item will be made in accordance with the conditions of contract.

Payment under Item B14.18 shall be made once the Engineer's monthly tax invoice has been paid by the Contractor. Payment for client's Environmental Agent will be included in the next monthly certificate.

The tendered percentage is a percentage of the amount actually spent under Items B14.18(a) which shall include full compensation for the handling costs of the Contractor, plus the profit and all other incidentals, in connection with paying for the client's Environmental Agent.

<b>Item</b>	<b>Unit</b>
<b>B14.19 Training</b>	
(a) Provision for training of Technikon Student	Prov Sum
(b) Provision for training of local communities and students on road safety	Prov Sum



(c) Handling costs and profit in respect of subitem B14.19 (a) & (b) %

Payment under the provisional sums for training shall be made in accordance with the general conditions of contract.

The submitted percentage for Sub-item B14.19(c) is a percentage of the amounts actually spent under Sub-items B14.19(a) and B14.19(b). The percentage submitted shall include full compensation for the handling costs of the Contractor, plus the profit and all other charges and incidentals, in connection with the provision of training courses and ancillary requirements.

Payment will be made on successful completion of each course, or on a monthly basis for students actually employed under B14.19(a). A tax invoice from the course provider and proof of payment by the Contractor must be provided.

<b>SECTION 1500:</b>	<b>ACCOMMODATION OF TRAFFIC</b>
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**B1501 SCOPE**

*Add the following:*

Certain parts of the work to be carried out under this section may be reserved for selected sub-contractors.

"This section also covers the provision of additional information signs for motorists and releasing any notices to the media and public.

It is a condition of this contract that traffic is accommodated taking into account the provisions of the latest edition of the South African Road Traffic Signs Manual (SARTSM). The latest version for use in the accommodation of traffic is Volume 2, Chapter 13 of the June 1999 edition.

Copies of this publication are available from Government Printers attention Anna Steyn Tel. (012) 334-4500, e-mail: asteyn@print.pwv.gov.za"

**B1502 GENERAL REQUIREMENTS****(a) Safety**

*Add the following at the end of the second paragraph of this subclause:*

"The entire site will be handed over to the Contractor and he is responsible for the accommodation of traffic thereon. The Contractor may only occupy such areas on the site in accordance with the approved construction programme or as approved by the Employers Agent.

The Contractor shall submit a programme for the accommodation of traffic to the Employers Agent for approval."

**f) Approval of temporary deviations**

*Add the following:*

"If, after any temporary deviation has been constructed, any changes which are considered necessary or desirable, the proposal shall be submitted to the Employers Agent for his approval."

**(i) Traffic Safety Officer**

*Add the following after the second paragraph:*

"The Contractor shall submit a CV of the candidate to the Employers Agent for approval before the Traffic Safety Officer is appointed. The Traffic Safety Officer shall be made available to discuss road safety and traffic accommodation matters whenever required by the Employers Agent. This Traffic Safety Officer shall not be the same person as the Construction Health and Safety Officer contemplated in Part C of this specification. If a Traffic Safety Officer is found to be incompetent by the Employers Agent, the Employers Agent will instruct the Contractor to remove and replace him with a competent person. The Traffic Safety Officer will report to the Construction Health and Safety Officer"

*At the end of the subclause add the following:*

"The duties of the responsible persons shall include liaison with the relevant traffic authorities and in the event of an accident on the section of road under construction, the Traffic Safety Officer or his assistants shall be responsible for contacting the traffic authority and South African Police Service."

Replace sub-sub-clauses (ii) and (iii) with the following:

"(ii) Record on neat and dimensioned sketches and submit to the Employers Agent the position and sign reference number where applicable of each sign, barricade, delineator, cone, amber flicker light, guardrail and permanent or temporary painted road marking feature. The position of each of the above-mentioned signs and road marking features shall be adequately referenced to identifiable permanent features located along the site of the works.

These records shall also show the date and time at which the recorded traffic accommodation features are certified correct by the traffic safety officer, and shall be signed by the traffic safety officer before being submitted to the Employers Agent.

The records shall be amended whenever changes are made in the field and the amended detailed sketches shall be submitted to the Employers Agent. Such amendments shall record the position(s) of flagmen and stop/go control men and their associated traffic accommodation equipment wherever they are used.

- (iii) Personally inspect the position and condition of each traffic accommodation feature on the whole site of works at least twice each day at 9h30 and at 16h30, to record all irregularities discovered and the remedial action taken, and to sign off as correct and submit to the Employers Agent such record sheets by the middle of the next working day at the latest. The traffic safety officer shall keep a duplicate book for this specific purpose. The provision of daily photographs is advisable.

The traffic safety officer shall also submit the daily labour returns of flagmen, stop/go and traffic signal control men employed, with this report.

*Add the following sub-clauses:*

- “(i) The traffic safety officer shall be equipped with a cellular telephone and shall have a vehicle and sufficient labourers at his disposal 24 hours a day, including special non-working days and shall not be available for other duties. He shall be directly answerable to the Contractor’s site agent.

The traffic safety officer shall have a direct line of communication with the police and traffic officers responsible for the area within the limits of the contract at all times. The provision of the road safety vehicle, driver, sufficient labourers and the cost of the cellular telephone shall be deemed to be included in the tendered rates.”

- “(x) Ensure that all obstructions related to the Contractor’s activities be removed before nightfall, where applicable or as instructed by the Employers Agent and that the roads are safe for night traffic.
- (xi) Be responsible for implementing actions requested in writing by the traffic authorities with regard to the work to be carried out and be responsible for the erection and maintenance of all traffic signs necessary for the accommodation of traffic.
- (xii) In the event of an accident, the traffic safety officer shall record details of the accident in a written report accompanied by photographs and a neat sketch plan which show identifiable permanent features, relevant dimensions and the position of all temporary road signs, barricades, delineators and other devices used for traffic accommodation. The traffic safety officer is also to record the GPS coordinates of the accident scene. ”
- (xiii) Also ensure full compliance with all the requirements of the Occupational Health and Safety Act and Construction Regulations (2014) which may pertain to the accommodation of traffic.
- (xiv) Keep the responsible Traffic Police fully informed with regard to any changes in the accommodation of traffic planned by the Contractor due to construction activities.”

*Add the following sub-clauses:*

- (j) Failure to comply with provisions for the accommodation of traffic.**

Failure or refusal on the part of the Contractor to take the necessary steps to ensure the safety and convenience of the travelling public, accommodation of traffic, and the provision of plant and personnel in accordance with these specifications or as required by statutory authorities or ordered by the Employers Agent, shall be sufficient cause for the Employers Agent to apply penalties as follows:

Work related Penalties.

A fixed penalty of **R500** per occurrence shall be deducted for each and every occurrence of non-compliance with any of the requirements of Section 1500 of the Standard Specifications and Section B1500 of the Scope of Works.

In addition, a time-related penalty of **R300** per hour over and above the fixed penalty shall be deducted for non-compliance to rectify any defects in the accommodation of

traffic within the allowable time after an instruction to this effect has been given by the Employers Agent. The Employers Agent's instruction shall state the allowable time, which shall be the time in hours for reinstatement of the defects. Should the Contractor fail to adhere to this instruction, the time-related penalty shall be applied from the time the instruction was given.

#### Health and Safety related Penalties

Penalties in respect of Occupational Health and Safety related issues are as per the table in Section 13000 of this document.

#### **(k) Site personnel**

The Contractor shall ensure that all his personnel, excluding those who are permanently office bound, are equipped with reflective safety jackets and that these are worn at all times when working on or near to the travelled way.

Any person found not wearing a reflective jacket under these circumstances shall be removed from the site until such time as he is in possession of and wearing a reflective jacket. Furthermore, the above penalties will also be applied. Reflective safety jackets shall be kept in good condition and any jackets that are, in the opinion of the Employers Agent, ineffective shall be immediately replaced by the Contractor.

#### **(l) Use of the road by the public**

The Contractor shall plan and conduct his activities so as to bring about the least possible disruption to the traffic on the roads on which he works. The Contractor shall deal with deliberate courtesy and understanding in any discussions or disputes at all points of contact with the travelling public.

#### **(m) Extension of time for completion**

No delays caused by the requirement that public traffic be accommodated during the construction of the works and that traffic flows be maintained as specified will be regarded a reason for an extension of time in terms of the general conditions of contract.

#### **(n) Provision of safety equipment for the Employers Agent**

The Employers Agent shall be provided with the following traffic safety equipment:

- (i) Amber rotating flashing lights for mobile use which shall be approved by the Employers Agent.

The Contractor shall provide the Employers Agent and the Representative with amber rotating warning lights. All lights shall be operational whenever the vehicles operate within the road reserve. All lights shall have a minimum height of 200 mm and 50-watt output, be of the revolving reflector type and shall have a magnetic base, flexible cable and a connection suitable for insertion into a 12V automobile cigarette lighter socket.

- (ii) Maintenance sticker

The Contractor shall supply the Employers Agent and the Representative with magnetic "maintenance" stickers. The stickers must read "CONSTRUCTION VEHICLE" in 170 mm letters on a yellow retro-reflective background.

- (iii) Safety jackets

The Contractor shall provide the Employers Agent, the Representative and visitors with safety jackets for moving around on site. The jackets shall be of an approved type, orange in colour and shall be to the approval of the Employers Agent. The Contractor is to allow for fifteen jackets.

- (iv) Hard hats

The Contractor shall provide the Employers Agent and visitors with hard hats for moving around on site where they may be required. The Contractor is to allow for fifteen hard hats.

No additional payment will be made for the above items and the costs will be deemed to be inclusive in the establishment costs."

**(o) Flagmen**

Where required by the Employers Agent, flagmen shall be provided for the control of traffic at lane closures and road accidents if and when they occur.

Flagmen shall be adequately trained in the standard flagging techniques as described in the South African Road Signs Manual (Volume 2, Chapter 13) on Figure 13.23 (Detail 13.23.1) and be provided with conspicuous clothing such as safety jackets utilising retro-reflective and/or fluorescent panels in red, yellow and / or white.

Flagmen shall have in their possession, at all times, certification that they have attended and passed an accredited course in flagging techniques before being allowed onto the construction site.

Flags shall be made from bright red or red-orange material and shall be square with a minimum side length of 600 mm. The flag shall be attached to a staff at least 1,0 m in length.

Flagmen shall be placed at positions as shown on the drawings or as directed by the Employers Agent. Such positions shall be a sufficient distance from the work areas to allow vehicles to slow down before entering the work area but not so far away that the drivers tend to increase speed before entering the work areas. The minimum requirement shall be one flagman at the start of each closure.

During the daytime, at least two flagmen shall be provided at each traffic control point in addition to the STOP/GO sign operator, one flagman at the 80 km/h sign and a second roving flagman to indicate to the traffic at the end of the queue to stop.

At nighttime at least one roving flagman equipped with a Stromberg Lightman xenon strobe, or similar approved, and a torch is required at each traffic control point as well as the traffic light operator. Where the shoulder of the road is closed to traffic, a flagman shall be provided at the leading end of the closure during daytime. This flagman shall be provided at the 80-km/h sign to warn the traffic about the closure. No flagman shall be on duty for a period of more than 10 hours per day. The traffic control site shall be well lighted at night with at least one floodlight positioned so as to illuminate the area and not shine into the oncoming traffic.

In terms of lateral clearance and safety, flagmen shall stand on the shoulder of the lane of traffic that is being controlled and under no circumstances shall flagmen be permitted to stand within the traffic lane. In order to obtain maximum visual impact for the travelling public, flagmen shall stand-alone.

**(p) Access to the works**

The Contractor's plant and equipment shall not stop on the trafficked carriageway except to unload or load traffic control facilities."

**B1503 TEMPORARY TRAFFIC-CONTROL FACILITIES**

*Replace the first sentence of the first paragraph with the following:*

“The Contractor shall provide, erect and maintain the necessary traffic-control devices, road signs, channelisation devices, barricades, warning devices and road markings (hereinafter referred to as traffic-control devices) in accordance with these special provisions and as shown on the drawings and in the SARTSM and remove them when no longer required. It shall be incumbent upon the Contractor to see to it that the abovementioned traffic-control devices are present where required at all times and are functioning properly, and he shall replace any that have been damaged, lost, stolen or obliterated at his own cost.”

*Delete the last sentence of the second paragraph and substitute the following:*

“Traffic-control devices no longer required at the site of a deviation or a lane closure shall be moved for re-use. Traffic-control devices lost or damaged by the Contractor shall be replaced at his own cost.”

*Replace the third paragraph with the following:*

“The type of construction, spacing and placement of traffic-control devices shall be in accordance with the latest edition of the South African Roads Traffic Signs Manual (SARTSM). The recommended arrangements of the traffic control devices illustrated and/or drawings shall not be departed from without prior approval of the Employers Agent. The arrangements expected to be most commonly used on this contract are shown in the Routine Road Maintenance Procedures Manual of the Department of Roads and Public Works of the Eastern Province.

The details shown for spacing and placement of traffic-control facilities may, however, be revised at the discretion of the Employers Agent where deemed necessary to accommodate local site geometry and traffic conditions.”

**(a) Traffic-control devices**

*Add the following to this Subclause:*

“Flagmen shall be provided at all access exit points to the working areas.”

*Add the following new paragraph:*

“The Contractor shall be responsible for the removal of all litter at the traffic control points on a daily basis to an approved dumping site.”

**(b) Road signs and barricades**

*Add the following after the second paragraph of this Subclause:*

“The Contractor shall be responsible for the protection and maintenance of all signs and shall at his own cost replace any that have been damaged, or lost, or stolen.

All temporary road signs required to remain in position for some time shall be pole mounted as shown on the drawings. All temporary road signs required to be moved more often shall be mounted on portable supports for the easy moving of signs to temporary positions. The only permitted method of ballasting the sign supports shall consist of durable sandbags filled with sand of adequate mass to prevent signs from being blown over by wind. The cost of the sandbags shall be included in the monthly rate for accommodation of traffic.

Temporary road signs and channelization devices shall be manufactured in accordance with the South African Road Traffic Signs Manual (Volume 2, Chapter 13) of June 1999 and arranged along the road as shown on the drawings and in the Manual.

*Add the following paragraphs:*

“All road signs shall be new or approved by the Employers Agent as new in accordance with the specifications. The Contractor shall have available on site sufficient extra road signs, barricades and delineators to replace items that have become defective or missing.

The Contractor shall be responsible for the protection and maintenance of all signs and shall take all reasonable measures to ensure minimum damages to signs and other traffic control devices.

The covering of permanent road signs, if applicable, shall be by first utilising a hessian bag, which shall be pulled over the sign in the form of a hood and fastened to the signposts. Plastic bags or other materials fastened by means of adhesive tape shall not be permitted. The cost of covering of permanent road signs shall be included the monthly rate for accommodation of traffic.

All temporary road signs required to remain in position for some time shall be pole mounted as indicated on the drawings. All temporary road signs required to be moved more often shall be mounted on portable supports for the easy moving of signs to temporary positions. The only permitted method of ballasting the portable sign supports shall consist of durable sandbags filled with sand of adequate mass to prevent signs from being blown over by wind.

No work may proceed on any section where accommodation of traffic is required until such time as the relevant requirements with regard to sign posting and other detail shown on the Contractor's drawings are met and approved by the Traffic Safety Officer in writing."

**(c) Channelisation devices and barricades**

*Add the following:*

"The start of barricades shall be positioned such that a minimum sight distance of 150m, measured at a height of 1,05m from the road surface, is obtained.

Drums shall not be used as channelization devices.

Delineators shall:

- (i) comply with the manufacturing and reflective requirements of the SARTSM and the blades shall be reversible.
- (ii) have smooth and round edges, be mounted on a post and base and all components shall be of durable plastic material.
- (iii) have the lower edge of the reflective part mounted not lower than 250 mm above the road surface.
- (iv) be capable of withstanding the movement of passing vehicles and gusting winds up to 80 km/h in typical working conditions without falling over. To achieve this, the base shall be at least 0,18 m<sup>2</sup> and ballasted by sandbags filled with sand.
- (v) together with its mounting be designed such that it will collapse in a safe manner under traffic impact and
- (vi) where work is not taking place in a section closed half width to traffic, the delineators shall be moved laterally back to the edge of the work area to provide a wider space for traffic."

No traffic cones are to be utilised."

**(e) Warning devices**

*Add the following:*

"All construction vehicles and plant used on the works shall be equipped with rotating amber flashing lights and warning boards as specified. All vehicles and plant, before being allowed onto the site, shall obtain a clearance permit from the Employers Agent.

Rotating lights shall have an amber lens of minimum height of 200 mm and shall be mounted in such a way as to be highly visible from all directions. The lights on construction vehicles shall not be switched on while vehicles are being operated on unrestricted sections of a public road but shall be switched on while construction vehicles are operating within the accommodation of traffic area, as the vehicles decelerate to enter a construction area, or as the vehicles accelerate to the general speed when entering the road from a construction area. Lights on plant shall operate continuously while the plant is working alongside sections of road open to public traffic.

All LDV's and cars operating on site shall also be equipped with rotating amber flashing lights which shall be placed so as to be highly visible and operated continuously while the vehicles are manoeuvring in or out of traffic or is travelling or parked alongside roads open to public traffic.

Rotating lights and the "Maintenance Vehicle" signs on the Contractor's and Employers Agent's vehicles and plant shall not be paid for separately.

The Contractor shall apply and maintain lights together with temporary mounting brackets, to the approval of the Employers Agent. Vehicles and plant that do not comply with these requirements shall not enter the site.

*Add the following sub-clauses:*

**(g) Other traffic control measures ordered by the Employers Agent**

The Employers Agent may instruct the Contractor to provide any other road sign, reflective tape, etc. Such road signs shall conform to the requirements of the South African Road Traffic Signs Manual, or specification provided by the Employers Agent.

Similarly, in order to ensure that the travelling public is kept fully informed and warned on matters relating to the accommodation of traffic, construction sign posting and the effect of the construction on the flow of traffic through the site, the Employers Agent may arrange for advertising in the press and/or for other forms of publicity.

**B1504 WIDTH AND LENGTH OF TEMPORARY DEVIATIONS**

*Replace "10m" and "5m" in the first paragraph with "3m" and "2m" respectively.*

*Replace the second paragraph with the following:*

"Where the existing road is constructed in half widths or in full width with single direction traffic, the roadway width for accommodating one-way traffic shall be at least 3,2 m wide. The length of the half-width construction or full width construction with single direction traffic controlled by STOP and GO/RV signs shall not exceed 2,0 km.

The traffic shall be single direction controlled by STOP and GO/RV signs during daytime and temporary traffic signals at night as agreed by the Employers Agent."

**B1506 EARTHWORKS FOR TEMPORARY DEVIATIONS**

*Add the following to this Clause:*

"Wherever possible and as agreed by the Employers Agent topsoil shall be stripped off the area required for deviations. The topsoil shall be stockpiled in accordance with the specifications for later re-use to re-instate the deviations."

**B1517 MEASUREMENT AND PAYMENT**

*Delete the contents of this clause and replace with the following:*

<p>"Accommodation of traffic will not be paid for separately and any costs associated with it, unless expressly stated and allowed for, must be included in the rates of the various items where accommodation of traffic is required."</p>
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**SECTION 1600: OVERHAUL**

**B1602 DEFINITIONS**

**(a) Overhaul Material**

*Add the following:*

Overhaul shall not apply in the case of:

- (i) Material to be obtained from commercial sources or sources to be supplied by the Contractor.
- (ii) Material to be disposed of to commercial spoil dump sites or suitable approved spoil dump sites to be provided by the Contractor off the site of the Works.
- (iii) Items salvaged on the site of the works such as vegetation removed from concrete-lined v-drains, and pipe culvert inlets/outlets existing pipes, culverts, manhole covers, grates, guardrails and signs.

The Contractor's tendered rates for all materials from commercial sources or other Contractor sources of supply shall be deemed to include full compensation for hauling the materials to its point of use on the site of Works. The Contractor shall make his own arrangements for the procurement of materials and shall pay all royalties and other costs in this connection.

Where material is required to be spoiled, the Contractor shall pay any dumping charges which may become payable.

**(b) Overhaul**

*Delete the sub clause and replace with:*

Payment shall only be made for material hauled in excess of 1 kilometre. Overhaul shall be measured as the product of the volume of material hauled and the overhauled distance.

**(c) Haul distance**

*Add the following:*

The haul distance of any material which is removed from existing pavements shall be measured along the shortest route from the place of excavation to the point of use (should the material be re-used directly) or to the approved stockpile, and the shortest distance from the approved stockpile to the point of use.

**(d) Free-haul distance**

*Replace the last sentence with:*

This distance shall be 1 kilometre in the case of all overhaul materials.

Add the following:

The free-haul distance in regard to any material which is removed from existing pavements shall be 1,0 km. In the case of material hauled to a stockpile and then hauled again for re-use, the free-haul distance shall apply only once.

**B1603 MEASUREMENT AND PAYMENT**

Amend item 16.02 as follows:

**B16.02 Overhaul on material hauled in excess of 1,0 km (ordinary overhaul) - (Haulage included in rates from commercial sources).....**

<b>Item</b>	<b>Unit</b>
(i) Subbase, selected and fill material	m <sup>3</sup> -km

Delete the first paragraph of the paragraph entitled "Note".

<b>SECTION 1700: CLEARING AND GRUBBING</b>
--

**B1701 SCOPE**

*Add the following:*

This section also covers the demolition of ancillary concrete structures, including the subsequent removal of all rubble and debris from the demolition, to the Contractor's off-site spoil dump.

**B1703 EXECUTION OF WORK****(a) Areas to be cleared and grubbed**

*Delete "normally" in the second line of the second paragraph.*

**(c) Disposal of Material**

*Add the following to the first paragraph:*

The Contractor shall remove all debris, rubble and rubbish to a suitable off-site spoil area supplied by the Contractor. No haul or overhaul will be measured under this section.

**B1704 MEASUREMENTS AND PAYMENT****Item****Unit****B17.01 Clearing and grubbing**

*Add to Payment Item 17.01 the following :*

Clearing and grubbing for the construction of camp sites shall not be measured separately. Payment shall be regarded as included in the rates tendered for the applicable items for the contractor's general obligations and site establishment.

Within the road reserves, clearing and grubbing will only be measured and paid for where required for road works. All topsoil removed in this process must be stockpiled in heaps not exceeding 2.0 m in height for later use during rehabilitation and landscaping.

No clearing and grubbing will be paid where the Engineer instructs the direct removal and conservation of topsoil. Grasses and other minor plants will be removed with the topsoil and their removal is deemed to be included in the topsoil rate.

Add the following new sub-items:

<b>Item</b>	<b>Unit</b>
(a) to improve sight distance at intersections and accesses, and on cut batters	ha
(b) in the road reserve for roadworks	ha
(c) Remove grass and build-up of soil along road edge to 2 000 mm outside the edge of seal.	m <sup>2</sup>
(d) Clearing and grubbing in borrow pits	ha

*Add the following to the measurement and payment paragraphs:*

**SCMU10-24/25-0021**

The unit rate for Item B17.01(c) shall include full compensation for removing grass, roots, soil and other detritus from the road surface and from a 2,000 mm wide strip parallel to the edge of seal, and for disposing of the material within a freehaul distance of 1 km. The work shall be effected prior to the shoulder reconstruction and in-situ recycling operation for a particular section of road.

<b>SECTION 1800: DAYWORKS</b>
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**CONTENTS**

- B1801 SCOPE  
 B1802 ORDERING OF DAYWORK  
 B1803 MEASUREMENT AND PAYMENT

**B1801 SCOPE**

This Section covers the listing of day work items in accordance with the General Conditions of Contract (Clause 6.5) for determining payment for work which cannot be quantified in specific units in the Bill of Quantities, or work ordered by the Employers Agent during the construction period which was not foreseen at tender stage and for which no applicable rate exists in the Bill of Quantities as well as for the establishment and de-establishment of site.

**B1802 ORDERING OF DAYWORK**

No dayworks shall be undertaken unless written authorisation has been obtained from the Employers Agent.

**B1803 MEASUREMENT AND PAYMENT**

<b>Item</b>	<b>Unit</b>
<b>B18.01 Personnel</b>	
(a) Unskilled labour	hour (hr)
(b) Semi-skilled labour	hour (hr)
(c) Skilled labour	hour (hr)
(d) Ganger	hour (hr)
(e) Flagmen	hour (hr)
<b>B18.02 Plant</b>	
(a) Flat bed truck	hour (h)
(b) Tipper Trucks - 3 to 5 ton capacity	hour (h)
(c) Tipper Trucks - More than 5 ton	hour (h)
(d) TLB ( digger loader )	hour (h)
(e) Excavator. (20-30 ton)	hour (h)
(f) Grader (AT 140 G or similar)	hour (h)
(g) Compactor (Bomag 90)	hour (h)
(h) Water truck (5000 litre)	hour (h)
(i) Dozer (D7 or similar)	hour (h)
(j) Tractor-trailer combination (43 kW, 3 ton min)	hour (h)
(k) Compressor (air) including hoses and tools (specify)	hour (h)
(l) Dewatering pump including generators and accessories (specify size)	hour (h)
(m) Mobile electric welding sets and accessories (specify size)	hour (h)
(n) Cutting torch with mobile electric & oxy acetylene installation	hour (h)
(o) Mobile concrete mixers (specify size)	hour (h)
(p) Light delivery vehicle (LDV)	hour (h)
(q) Centre-mount crane (specify size)	hour (h)
(r) Low bed truck (specify size)	kilometre (km)
(s) Other (specify)	hour (h)

<b>Item</b>	<b>Unit</b>
<b>B18.03      Materials</b>	
(a) Procurement of materials.....	provisional sum
(b) Contractor's handling costs, profit and all other charges in respect of	
Item B18.03 (a) .....	percentage (%)

The unit of measurement for items B18.01 and B18.02 shall be the hour for the item of plant or personnel. Non-working hours for transport breakdown, lack of operator or any other reason shall not be measured. The time shall be taken from the time that the personnel and/or plant depart until return.

Measurement shall only be for work instructed and directed by the Employers Agent, where the Employers Agent considers no other appropriate rate is available in the Bill of Quantities. Prior to the commencement of any work by the labourers described under item B18.01, the Contractor must obtain written consent from the Employers Agent regarding the classification of all labourers in terms of "unskilled", "semi-skilled" and "skilled" labourers.

The tendered rates for labour for item B18.01 shall include full compensation to cover overhead charges and profit, leave pay, bonuses, subsistence, allowances, employer's contributions, additional payment for overtime, where applicable, insurances, housing, site supervision, use of small hand tools and appliances, non-mechanical plant and equipment and consumable stores, for all administrative, supervisory, operative and contingent costs, relating to the supply of personnel.

The tendered rates for plant for item B18.02 shall be an all-inclusive hire charge for the use of the vehicle and driver or plant/equipment and operator and shall apply only to vehicles plant and equipment nominated in writing by the Employers Agent, for all administrative, supervisory operative and contingent cost, and profit, relating to the running of the plant.

The unit of measurement for item B18.03 (a) shall be the amount actually paid for the procurement of materials to be purchased and shall be made in accordance with the provision of the general conditions of Contract. Only the actual quantities of materials used, as verified by the Employers Agent, shall be paid for.

The percentage tendered for item B18.03 (b) shall be percentage of the amounts actually paid for the procurement of materials as ordered under item B18.03 (a) and shall be in full and final compensation in respect of the Contractor's handling costs, profit and all other charges in connection with the procurement and supply of the materials to the point of usage.

The abovementioned tendered rates shall be full compensation for the various items as specified and no further profit shall be paid."

## **SECTION 3300: MASS EARTHWORKS**

### **B3301 SCOPE**

*Add the following paragraph:*

“This section also covers the use of geotextiles for the purpose of stabilisation, reinforcement, separation and filtration of roadbed or fill.”

### **B3302 MATERIALS**

#### **(a) Roadbed and cut**

*Add the following paragraph:*

“These materials shall not contain any visible materials of the following:

- Organic materials, grass and shrubs,
- Wood chippings, tree bark, and roots,
- Plastic (bags, polystyrene and so forth),
- Refuse or other non-compliant material,
- Asbestos or any hazardous materials.”

#### **(b) Fill**

*Delete the contents of subclause (b) and replace with the following:*

“(i) Composition of materials in fill layers

(1) Sand fill material comprises of non-plastic sand with not less than 95% passing through the 5 mm sieve, and which can be compacted to a measurable density.

(2) Normal fill material consists of sand, gravel or gravel with cobbles with a maximum particle size up to 200 mm in the compacted fill layer and which can be compacted to a measurable density.

(3) Coarse fill material comprises gravel with cobbles, boulders or lumps of hard material with a maximum particle size up to 500 mm, or hard material crushed by means of single stage crushing to a specified maximum particle size, or a maximum particle size so that the material in the fill layer can be compacted to the specified density by the construction equipment, whichever is the lesser. The strength of coarse fill material does not rely on mechanical interlock of the coarse particles. Coarse fill is constructed by compaction to a measurable density or, if specified by the Employer’s Agent, eight roller passes compaction.

(4) Rock fill material consists predominantly of blasted or crushed angular rock with fine material filling the voids between the rock particles to form a dense layer with minimum voids between the rocks. Rock fill may be constructed with a geotextile separation layer between the rock fill and subsequent layers to prevent loss of material into the rock fill. The stability of rock fill results from the mechanical interlock of the rock particles and not from the compaction of the finer material. The compacted density of a rock fill cannot be measured.

Rock fill material shall have a maximum dimension not exceeding 500 mm.

The following rock types that decompose or deteriorate rapidly on exposure to air and moisture shall not be used unless permitted by the Employer’s Agent:

- Mudrocks and soft or weathered shales.
- Highly weathered, very soft basic crystalline rocks in the wet eastern part of Southern Africa where Weinert  $N \leq 5$ .
- Highly weathered (brown coloured) tillite.

For this Contract the use of blasted sandstone does not qualify as rock fill material.

If the rock fill material is deficient in fine materials, approved fine material may be added to the rock fill and placed as specified in the specifications.

(5) Pioneer layer material consists predominantly blasted rock and boulders (shape not completely rounded or polished), generally in the size range 100 mm to 500 mm, and a lack of material finer than 50 mm.

(6) Sand filter material consists of clean, durable sand and shall comply with the grading requirements of table B3300/1.

(7) Crushed stone drainage blanket material consists of clean, durable crushed stone and shall comply with the grading requirements of table B3300/2.

(8) Selected rock bench drain material consists of rock fill material as specified in subclause B3302(b)(i)(4), deficient of fine material

(9) The materials above shall not contain any visible materials of the following:

- Organic materials, grass and shrubs,
- Wood chippings, tree bark, and roots,
- Plastic (bags, polystyrene and so forth),
- Refuse or other non-compliant material,
- Asbestos or any hazardous materials.

**TABLE B3300/1: GRADING LIMITS OF SAND FILTER MATERIAL**

Sieve size (mm)	Percentage passing sieve, by mass	
	Natural sand	Crusher sand
5	90 - 100	
0.15	5 - 25	
0.075	0 - 5	0 - 10

**TABLE B3300/2: GRADING LIMITS OF CRUSHED STONE DRAINAGE BLANKET MATERIAL**

Sieve Size (mm)	Percentage passing sieve, by mass
50	100
37.5	74 – 100
28	56 – 98
14	42 – 69
5	25 – 37
2	15 – 20
0.425	4 - 9
0.075	0 - 4

(ii) Quality of fill materials by virtue of minimum CBR and maximum swell at specified compaction

(1) Sand fill shall have a CBR  $\geq$  7% and a swell  $\leq$  1% at 100% of MDD.

(2) The CBR of compliant normal and coarse fill shall comply with the requirements of its depth below the final road surface, as indicated below:

Within the material depth of 800 mm	CBR $\geq$ 7 % at 93 % of MDD Swell $\leq$ 2 % at 100 % of MDD
Below the applicable material depth up to 10 m	CBR $\geq$ 3 % at 93 % of MDD Swell $\leq$ 2 % at 100 % of MDD
More than 10 m	As specified by the Employer's Agent

Normal and coarse fill materials may contain inactive clay and silt, provided that the CBR strength requirements are complied with.

(iii) Compaction requirements, minimum MDD

(1) Sand fill



Sand fill material with properties as specified in these specifications shall be subject to a minimum percentage compaction of MDD. This sand shall be compacted to 100% of MDD, unless specified otherwise by the Employer's Agent.

Notwithstanding this sand fill compaction criteria, the compatibility of the sand fill material shall be assessed and confirmed by means of the construction of an appropriate trial section or trial sections.

(2) Normal fill and coarse fill

Normal fill and coarse fill material shall both be subject to a minimum percentage compaction of MDD. The compaction density of normal fill and coarse fill shall normally be either 90 % of MDD or 93 % of MDD as specified.

(3) Fill widening

Unless specified otherwise by the Employer's Agent the fill material placed in a fill widening shall be benched as specified and compacted as follows in order to minimise differential settlement.

□ Where the embankment fill thickness is less than 1,5 m the underlying in place roadbed and the fill material shall all be compacted to at least 93 % of MDD. Where it is not possible to achieve the compaction of the roadbed, the Employer's Agent shall instruct alternative roadbed compaction or treatment.

□ Where the embankment fill thickness exceeds 1,5 m, the upper 1,5 m of the fill shall be compacted to at least 93 % of MDD. The fill material more than 1,5 m below the top of the fill and the underlying in place roadbed shall be compacted to at least 90 % of MDD. Where it is not possible to achieve the compaction of the roadbed, the Employer's Agent shall instruct alternative roadbed compaction or treatment."

**B3303 CLASSIFICATION OF CUT AND BORROW EXCAVATION**

Classification of cut and borrow excavation shall be revised as follows:

- "(a) Classes of excavation
- (ii) Intermediate excavation

No distinction shall be made between soft and intermediate excavation, and all intermediate excavation shall be classified and measured as soft excavation."

**B3304 CLASSIFICATION OF COMPACTION**

*Replace subclause (a) with the following:*

**"(a) MDD compaction**

Wherever a density requirement in respect of a fill layer is specified in these specifications in terms of a percentage of MDD, the Contractor may employ any type of compaction equipment to achieve such density over the full, as-specified, depth of the layer. The compaction equipment employed shall be adequate and suitable for the purpose and shall not create lamination layers or shear cracks.

The Contractor shall restrict the size of the compaction equipment being used, if necessary, in order to ensure that no part of the already completed works, any underlying structures, adjacent buildings or underground services are damaged during the compaction process."

**B3305 TREATING THE ROADBED**

**(a) Removing unsuitable material**

*Replace "or" in the eight line of the third paragraph with "and"*

**(d) In situ treatment of roadbed**

*Add the following after the second paragraph:*

"Shales and mudstone shall be treated as directed by the Employer's Agent."

*Add the following subclauses:*

**“(g) Drainage blanket layer in cuttings**

Once the roadbed preparation through a cutting with a hard formation has been constructed in accordance with the specifications, the initial layer on top of the completed roadbed shall be a crushed stone drainage blanket layer where instructed by the Employer’s Agent.

The crushed stone drainage blanket layer shall be constructed on top of the roadbed with material in accordance with subclause B3302(b)(i)(7) and shall be compacted with at least three (3) number of roller-passes to smooth and level it.

The crushed stone drainage blanket layer shall have a nominal placement thickness of 150 mm with a minimum compacted thickness of not less than 100 mm in any one place, and shall comply with the level tolerances for the equivalent fill or pavement layer. The average drainage layer thickness based on levels before and after placement of the drainage layer shall not exceed 200 mm.

The crushed stone drainage blanket layer shall be protected from contamination by installing suitable geotextile layers below the blanket layer and then on top of the blanket layer ahead of the next layer of fill or of the pavement.

**(h) Use of geotextiles in roadbed**

As an alternative to removing unsuitable roadbed material, the Employer’s Agent may instruct the Contractor to install selected geotextiles to improve roadbed soil stabilisation. The properties of geotextiles and requirements are specified in clause B3313 of this specification.

Installation and care of geotextiles shall be in accordance with the Employer’s Agent’s instruction and as per the manufacture’s installation requirements.

**B3306 CUT AND BORROW**

**(a) Dimensions of cuts**

*Delete paragraph three and replace with the following:*

“For this Contract the Employer’s Agent may, when he considers the cut material unsuitable for the designated cut slope as per the cross-sections or if additional suitable cut material is required, instruct the Contractor to alter (flatten) the cut slope or widen the completed or partly completed cutting. Those parts of the cut where the cut slope has been altered (flattened) or widen on the instruction of the Employer’s Agent shall be measured and paid for as specified in clause B3312, item B33.08 (cut widening) and item B33.23 (flattening of cut slopes). Clause B3312, item B33.08 and item B33.23 are not applicable to existing cut slopes being altered or widened to provide the cut dimensions as per the cross-sections.”

**(c) Use of cut material**

*Add the following paragraphs:*

“Prior to the commencement of earthworks operations, the Employer may instruct the Contractor to excavate large trial holes in certain cuttings to provide additional cut materials information. Such trial holes (maximum depth of 8 m) shall have sloping sides so that the excavation can safely entered for inspection and material sampling.

The Contractor shall submit his detailed earthworks utilization plan to the Employer’s Agent for approval before commencing earthworks operations.

**(d) The temporary stockpiling of materials**

*Replace the contents of this subclause with the following:*

"The Contractor shall plan his activities in such a manner so that materials excavated from borrow areas and cuttings can be directly transported to and placed at the designated points.

The temporary stockpiling of material will not be paid for separately unless instructed by the Employer’s

Agent, and full compensation will be deemed to have been included in the rates tendered for the various payment items for work for which the stockpiled material is to be used."

**(g) General**

*Add the following after the first sentence of the second paragraph:*

"The final cut surface in hard excavation shall not be more than 0,5 m below the specified slope face, measured at right angles to the strike and dip directions of the slope face."

*Add the following subclause:*

**“(h) Controlled blasting**

Controlled blasting techniques as specified in clause B1222 shall be employed by the Contractor to provide the specified finished cut slope in excavated hard material.”

**B3307 FILLS**

**(a) General**

*Add the following at the end of the first paragraph:*

“Special attention shall be given to ensuring that compaction standards are maintained right up to the edges of the fills since no un-compacted material will be allowed to remain on the fill batters. Material spilled onto the fill batters as a result of construction at higher levels shall be trimmed off the fill batters to the satisfaction of the Employer’s Agent.”

*Replace the fifth paragraph starting with “The layer thickness used for the construction of the fills” with the following:*

“The layer thickness used for the construction of the fills is dictated by the type and grading of the fill material and the compaction equipment being used. Fill layer thicknesses specified in the specifications are based on the expected material type and on the use of typical compaction equipment. The compacted fill thickness shall be as follows for the different types of compliant fill material used unless otherwise specified by the Employer’s Agent:

(i) Normal fill material that readily breaks down to a maximum size of 200 mm shall be compacted in layers not exceeding 200 mm after compaction.

(ii) Sand fill material may be compacted in layer thicknesses not exceeding 400 mm subject to the construction of a compliant trial section. The trial section shall be constructed at no additional cost to the Employer.

(iii) Coarse fill that readily breaks down to a maximum size of 500 mm shall be compacted in layers not exceeding 500 mm after compaction.

(iv) The maximum compacted thickness of each rock fill layer shall not exceed 750 mm.”

*Add the following:*

"Where existing embankments are to be widened, or where new embankments are to be constructed adjacent to existing embankments, the existing side slopes shall be benched as specified in subclause 3307(d) and in accordance with the details on the drawings."

*Amend subclause (b) to read as follows and replace contents of subclause with the following:*

**“(b) Use of fill material**

Only normal fill material shall be used at a depth less than 150 mm below the top of the fill, unless instructed otherwise by the Employer’s Agent.

Only normal fill or coarse fill shall be used to construct a fill widening unless instructed otherwise by the Employer’s Agent.

Coarse fill material may only be used up to a depth of 150 mm below the top of fill, unless instructed otherwise by the Employer's Agent.

Rock fill material may only be used up to a depth of 300 mm below the top of fill, unless instructed otherwise by the Employer's Agent."

**(e) Benching**

*Replace the first sentence of the second paragraph with the following:*

"The dimensions of benches as well as the extent to which existing fills have to be cut back to form benches shall be as indicated on the drawings or indicated by the Employer's Agent."

*Add the following after the second paragraph:*

"In order to obtain sufficient working width for road-building equipment when the existing road fill is widened, it may be necessary to form benches that extend beyond the normal road prism or to cut back into the existing road fill or both. The Contractor shall submit his proposals in this regard to the Employer's Agent for approval before proceeding with such work. The Contractor will be paid in accordance with the relevant payment items for work required to obtain a working width of up to 4 m. Additional work required to provide a working width in excess of 4 m shall be at the Contractor's expense."

*Amend subclause (e) to read as follows and replace contents of subclause with the following:*

**“(e) Construction of fills**

**(i) Fills up to 10 m high**

Before the normal or coarse fill material is compacted, it shall first be thoroughly mixed by grader or other suitable equipment so as to obtain an even mix of the material and to spread the fine and coarse material evenly throughout the mixture. If necessary during the mixing process, water shall also be sprayed evenly over and mixed into the material to bring it to the correct uniform moisture content.

The moisture content to which the material shall be brought by adding water shall be sufficient to bring the material to the most favourable moisture content for the specific compaction equipment to be used and the percentage compaction required. If the moisture content of the material is in excess of 2% above the optimum moisture content for the MDD, the Contractor shall still ensure the required compaction is obtained by carefully monitoring and adjusting the compaction technique or the material shall first be dried out to the required moisture content before compaction commences.

**(ii) Fills higher than 10 m**

The construction of high fills shall require special techniques to prevent the development of excessive pore pressure and ensure the stability of such fills during and after construction.

These techniques may include, inter alia, the selection of better class material for use in the bottom layers of the fill, the construction of drainage blanket layer/s, the construction of rock fill embankment toe/s and the strict control of moisture content during compaction.

The material requirements for the construction of fills higher than 10 m are set out in the drawings or as instructed by the Employer's Agent."

*Amend subclause (f) to read as follows and replace contents of subclause with the following:*

**“(f) Drainage blankets in fills**

At the bottom of fills, and sometimes at intermediate levels, the construction of a sand filter blanket layer or crushed stone drainage blanket layer may be required to facilitate the drainage of fills. The requirement for the installation of sand filter blanket layers or crushed stone drainage blanket layers shall be as indicated on the drawings or as instructed by the Employer's Agent.

**(i) Sand filter blanket**

Sand filter blanket layers shall be constructed with materials in accordance with subclause

B3302(b)(i)(6).

The surface on which the sand filter blanket layer is to be constructed, shall be smooth and even and the sand shall be spread evenly to the required thickness and be given a one roller-pass compaction with a suitable roller. The final surface of the sand filter blanket layer shall be finished off true to line and level. The sand filter blanket layer shall be protected from contamination by installing suitable geotextile layers below the blanket layer and then on top of the blanket layer ahead of the next layer of fill or of the pavement.

**(ii) Crushed stone drainage blanket**

Crushed stone drainage blanket layers shall be constructed with materials in accordance with subclause B3302(b)(i)(7).

The surface on which the crushed stone drainage blanket layer is to be constructed, shall be smooth and even and the crushed stone shall be spread evenly to the required thickness and be given at least three (3) roller-passes compaction with a suitable roller. The final surface of the crushed stone drainage blanket layer shall be finished off true to line and level.

The crushed stone drainage blanket layer shall be protected from contamination by installing suitable geotextile layers below the blanket layer and then on top of the blanket layer ahead of the next layer of fill or of the pavement.”

**(h) Constructing toes for rock fill embankments**

*Delete the last paragraph and replace with the following:*

“Payment will be made for the supply and installation of geotextile and shall distinguish between the different grades of geotextiles.

**(i) Widening of fills**

*Replace the first sentence of the eight paragraph with the following:*

No extra over payment shall be made for the widening of existing fills, the additional cost associated with the widening of existing fills shall be included in the bulk rates.

*Add the following subclause:*

**(k) Selected rock bench drains in fills**

Selected rock bench drains shall be constructed with materials in accordance with subclause B3302(b)(i)(8).

The requirement of the installation of selected rock bench drains shall be as indicated on the drawings or as instructed by the Employer’s Agent.

Selected rock bench drains comprises of free draining rockfill material wrapped in a geotextile constructed on benches cut at the roadbed and fill interface. Particular attention must be paid to the provision of the required grade over the full area of the drain and discharge points.

Selected rock bench drains have a compacted layer thickness of 600 mm and are generally 2 m wide.

**B3312 MEASUREMENT AND PAYMENT**

**General directions**

*Delete and replace the paragraph under number (3) Work in restricted areas with the following:*

“For this Contract measurement and payment under items 33.15 and 33.18 are not applicable. The cost of additional work in restricted areas shall be included in the bulk rates.”

*Add the following point number:*

“(4) Free-haul distance

“The free-haul distance for all items, which are less than 1,0 km, in this section shall be 1,0 km.”

<b>Item</b>	<b>Unit</b>
<b>B33.01 Cut and borrow to fill, including free-haul up to 1,0 km:</b>	

*Amend subitem (a) to read as follows:*

“(a) Normal fill material (as described in clause B3302) compacted layer thickness of 200 mm and less.”

*Amend subitem (b) to read as follows:*

“(b) Course fill material (as described in clause B3302) compacted layer thickness exceeding 200 mm and up to 500 mm.”

*Amend subitem (f) to read as follows:*

“(f) Crushed stone drainage blanket in cuttings

(as specified in subclause B3305(g)) ..... cubic metre (m3)

*Add the following subitems:*

“(g) Drainage blanket in fills (as specified in subclause B3307(f)) constructed of:

(i) Sand filter blanket material (as specified in sub-subclause B3307(f)(i))

(1) Natural sand ..... cubic metre (m3)

(2) Crushed sand ..... cubic metre (m3)

(ii) Crushed stone drainage blanket material

(as specified in sub-subclause B3307(f)(ii)) ..... cubic metre (m3)

(h) Selected rock bench drains (as specified in subclause B3307(k)) ..... cubic metre (m3)

(i) Sand fill material (as described in clause B3302) compacted layer thickness of 400 mm and less, compacted to 100 % of MDD ..... cubic metre (m3)”

*In the second sentence of the first paragraph of the item description amend “For subitems (a), (b) and (c)” to read “For subitems (a), (b), (c) and (i)”.*

*Delete and replace the second paragraph of the item description with the following:*

“The quantities for subitems (d), (f), (g) and (h) shall be calculated from the authorized dimensions.”

*Delete and replace the sixth paragraph of the item description with the following:*

“Full compensation for the supply and installation of geotextiles where specified or indicated on the drawings shall be measured and paid for under item B33.20.”

*Add the following paragraphs:*

“For subitem (f), subsubsubitem (g)(i)(2) and subsubitem (g)(ii) the tendered rates shall also include the crushing and screening, in terms of item B32.03, of crushed sand and crushed stone drainage material. The tendered rates shall also include full compensation for all additional transport, equipment, labour, supervision as well as any additional costs for the widening of fills as specified in subclause B3307(i), including the cutting of benches.”

<b>Item</b>	<b>Unit</b>
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**B33.03 Extra over item B33.01 for excavating and breaking down material in:**

*Delete subitem (a) Intermediate excavation*

“Refer to sub-subclause B3303(a)(ii).”

<b>Item</b>	<b>Unit</b>
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**B33.04 Cut to spoil, including free-haul up to 1,0 km. Material obtained from:**

*Delete subitem (b) Intermediate excavation*

“Refer to sub-subclause B3303(a)(ii).”

<b>Item</b>	<b>Unit</b>
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**B33.08 Widening of cuts (extra over items B33.01, 33.02 and B33.04):**

*Delete and replace the first paragraph of the item description with the following:*

“The unit of measurement shall be the cubic metre of material excavated during the widening of cuts as specified in subclause B3306(a).”

*Delete and replace in the sixth line of the third paragraph of the item description after the word “cut” with the following:*

“.as specified in subclause B3306(a).”

<b>Item</b>	<b>Unit</b>
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*Amend item 33.17 to read as follows:*

**“B33.17 Extra over item B33.04 for spoiling material excavated from selected rock bench drains constructed ..... cubic metre (m<sup>3</sup>)**

The unit of measurement shall be a cubic metre of material excavated from selected rock bench drains which is spoiled on the instruction of the Employer’s Agent.

The quantity shall be calculated in accordance with the authorized dimensions of the benched. The tendered rate shall be paid extra over the rates applicable to item B33.04, and shall include full compensation for all additional costs for spoiling the material, including amongst others all additional work, construction equipment, labour and supervision, irrespective of the size and depth of the benches and class of material.

No extra-over payment will be made for work in restricted areas.”

*Add the following items:*

<b>“Item</b>	<b>Unit</b>
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**B33.20 Geotextiles :**

(a) Filtration or filter separation system:

(i) Type and grade ..... square metre (m<sup>2</sup>)

(b) Protection system:

(i) Type and grade ..... square metre (m<sup>2</sup>)

(c) Reinforcement system:

(i) Type and grade ..... square metre (m<sup>2</sup>)

(d) Separation system:

(i) Type and grade ..... square metre (m<sup>2</sup>)

The unit of measurement shall be the square metre of geotextiles supplied and installed as specified. The tendered rate shall include full compensation for furnishing, procuring, cutting, overlapping, jointing, placing and protecting the filter fabric as specified, as well as for wastage.

The specified grade and type of geotextile shall comply with requirements of clause B3313.

<b>Item</b>	<b>Unit</b>
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**B33.21 Geocomposite reinforced-geotextiles or geotextile-geogrids for ground stabilisation or**

**reinforcement of soil:**

(a) Design, supply and installation of ground stabilisation or reinforcement of soil systems .....provisional sum

(b) Handling cost and profit in respect of subitem B33.21(a) ..... percentage (%)

The provisional sum provided to cover the cost for the design, supply and installation of ground stabilisation or reinforcement of soil systems using geocomposite reinforced-geotextiles or geotextile-geogrids materials by the Contractor as requested by the Employer’s Agent shall be in accordance with the provisions of the General Conditions of Contract.

The percentage for subitem B33.21(b) is a percentage of the actual amount spent under subitem B33.21(a), which shall include full compensation for the handling cost of the Contractor, and the profit in connection with the design, supply and installation of ground stabilisation or reinforcement of soil systems using geocomposite reinforced-geotextiles or geotextile-geogrids materials.

**Item** **Unit**

**B33.22 Flattening of cut slopes (extra over items B33.01, 33.02 and B33.04) within the following slope distance ranges:**

(a) Specify slope distance range ..... cubic metre (m<sup>3</sup>)

The unit of measurement shall be the cubic metre of material excavated during the flattening of the cut slopes as specified in subclause B3306(a).

Measurement of the material shall be the original position in the cut and the quantity shall be computed by the method of average end areas from levelled cross-sections at intervals not exceeding 20 m measured along the centre line of the road before and after removal of the material.

The slope distance range shall be a function of the flattened slope length measured from the toe of the cut slope forwards the top of the cut slope.

The tendered rates for flattening of the cut slopes shall be paid extra over the rates tendered for items B33.01, 33.02 and B33.04 and shall include full compensation for the additional costs involved (over and above those for excavating new cuttings) for excavating material during the flattening of the cut slopes as specified in subclause B3306(a).

**Item** **Unit**

**B33.23 Controlled blasting (as specified in subclause B1222(n)) for rock cut faces:**

(a) Specify type ..... square metre (m<sup>2</sup>)

The unit of measurement shall be the square metre of rock cut faces formed by using controlled blasting methods as specified in subclause B1222(n).

Measurement of the rock cut face shall be the slope area of the cut face formed by using controlled blasting methods.

The tendered rate shall include full compensation for all cost associated with the specified controlled blasting method.

*Add the following clause:*

**“B3313 GEOTEXTILES**

**(a) Scope**

This clause details the material specifications and uses of geotextiles in mass earthworks and their application as filtration, protection, reinforcement and separation systems.

**(b) Definitions**



(i) Geotextiles

Are continuous sheets of woven, nonwoven, knitted or stitch-bonded fibres or yarns. The sheets are flexible and permeable and generally have the appearance of a fabric. Geotextiles are used for separation, filtration, drainage, reinforcement and erosion control applications.

**(c) General**

All materials used in the works shall meet the appropriate standards given in this specified and shall be subject to the approval of the Employer's Agent. The Contractor shall submit product certificates, conformance documentation related to the specifications, test results as required together with samples of materials and, where applicable, designs that he proposes to use in the construction of the works to the Employer's Agent for his acceptance/approval as provided for in the contract documentation.

(i) Uses of geotextiles

(1) Filtration

To allow passage of fluids from a soil while preventing the uncontrolled passage of soil particles.

(2) Protection

As a localised stress reduction layer, to prevent or reduce damage to a given surface or layer.

(3) Reinforcement

To resist stresses or contain deformations in roadbed or fill layers

(4) Separation

To provide separation between two dissimilar materials, to prevent intermixing.

**(d) Materials**

(i) Geotextiles for filtration or filter separation systems

Geotextiles specified in subsoil drainage systems or as filter separation blankets shall be in accordance with subsubclause B2104(a)(iii).

(ii) Geotextiles for protection, separation or reinforcement systems

Geotextiles specified in protection, separation or reinforcement systems shall be in accordance with the following:

(1) Composition and manufacturing

The geotextile shall be manufactured from a synthetic polymer, processed into a permeable, homogeneous sheet. The sheet shall be of non-woven needle punched and mechanically bonded construction.

On account of the temperature and moisture susceptibility of polyamide, this synthetic product is not considered acceptable.

(2) Classification

The geotextile shall be classified according to the mechanical properties thereof, in terms of its strength, penetration load, puncture resistance and the minimum water-percolation rate or through flow as measured in the permeability test. Table B3313/1 shall be used for determining the grade of a geotextile.

**TABLE B3313/1: GRADE CLASSIFICATION OF GEOTEXTILES FOR MASS EARTHWORKS**

Properties	Test method	Grade (Material placed on geotextile)			
		ME 4 (Soil)	ME 3 (Gravel)	ME 2 (Coarse gravel)	ME 1 (Rockfill)
Thickness (mm)	SANS 9863-1:2013	≥1.8	≥3.0	≥4.0	≥6.0
Tensile strength longitudinal (kN/m)	SANS 1525:2013	≥14	≥20	≥40	≥50
Elongation (%)	SANS 1525:2013	≥50			
Static puncture strength (CBR)	SANS 12236:2013	≥2.5	≥4.5	≥7.0	≥9.5
Puncture resistance (maximum hole diameter mm)	SANS 13433:2013	<20	<15	<10	<6
Permeability @ 50 mm head (m/s x 10 <sup>-3</sup> )	SANS 11058:2013	≥3.5	≥3.5	≥3.5	≥2.5

**Notes:**

- The standard equivalent atmosphere for testing and the preconditioning atmosphere for all geotextile tests (SANS tests and other) shall have a relative humidity falling within the range of 0 to 80 per cent and a temperature within the range of 15°C to 35°C.

- The resistance of a geotextile to puncture is the average diameter of the hole formed when a 45 degree pointed cone with a mass of 1kg is dropped through 500mm height onto the geotextile fixed in the holding device.

**(3) Durability**

A geotextile is required to comply with the following durability specifications:

- Resistance to chemical attack

The geotextile shall withstand the level of aggressiveness of the soil and ground water given below without significant loss of its strength and hydraulic properties during its design life of 25 years:

The geotextile shall withstand soil and ground water with a pH in the range of 4 to 9 (pH to be determined by SANS 10224, SANS 3001).

The geotextile shall withstand soil (as paste) and ground water containing salts with a conductance of up to 1,0S/m (conductivity to be determined by SANS 10224, SANS 3001).

- Resistance to ultra-violet light

The geotextile shall maintain at least 80% of its original strength after direct exposure to sunlight of 1500 hours as determined under ASTM D5355 or ASTM D7238 and EN ISO 12224

- Resistance to rot

The geotextile shall be manufactured of an entirely rot-proof polymer.

**(4) Selection**

The geotextile required shall satisfy the criteria for a grade ME1, ME2, ME3 or ME4 geotextile (based on material placed on the geotextile) for the selected application as specified in the schedule of quantities, drawings, Contract Documentation or as instructed by the Employer's Agent and shall satisfy the criteria for this grade of geotextile as given in Table B3313/1.

The Contractor shall, at least 45 days before the installation of the geotextile(s), submit to the Employer's Agent samples and the specifications of the geotextile he proposes to use, to enable the Employer's Agent to verify the suitability and confirm the use thereof and ensure that the geotextile meets the design requirements as well as is suited to the insitu conditions and materials to be drained. No extra payment shall be made for providing the samples required by the Employer's Agent.

(5) Testing

The Contractor shall, at his own cost, submit a certificate by an approved laboratory to prove compliance with specified tests as stated in section 8100. Alternatively, verifiable testing by the supplier may be submitted for approval to the Employer's Agent.

The tests to be carried out on geotextiles relate to the material and the method of manufacture and are mainly to ascertain that the correct grade and type of geo-textile is supplied, and that the material is equivalent in quality to that specified for use in the works. This includes geotextile qualities regarding soil retention; permeability; clogging; durability and strength. Compatibility testing can be done for filtration using the ASTM D5101 - Measuring the Soil-Geotextile System Clogging Potential by the Gradient Ratio.

**SECTION 3400: PAVEMENT LAYERS OF GRAVEL MATERIAL****B3401 SCOPE**

Add the following:

"This section also covers activities that are required to conduct routine and preventative maintenance to existing gravel roads, including the use of self-propelled road graders to improve the overall ride-ability, safety aspects and correcting any drainage faults that may be present."

**B3402 MATERIALS****(a) General**

Add the following at the end of the second paragraph:

"For chemically stabilised layers the material shall conform to the requirements in table B3402/5. For bitumen stabilised layers the material shall conform to the requirements in table B3402/6. For cold in situ recycled layers the target grading shall be as indicated in table B3402/7"

Add the following after the second paragraph:

"Distinction shall be made between crushed and natural G4, G5 and G6 materials. Where the crushing and/or screening of these materials has been specified, the combined grading shall conform to the grading limits specified for G4 class material in Table B3402/1.

The same shall apply for all materials obtained from commercial sources.

For this Contract all G4, G5 and G6 materials specified shall be crushed material produced by multi-stage crushing and screening."

Replace the grading section in Table 3402/1 with:

PROPERTY		TYPE OF MATERIAL					
		G4		G5		G6	
		Crushed material produced by multi-stage crushing and screening	Uncrushed material or material produced by single or two stage crushing	Crushed material produced by multi-stage crushing and screening	Uncrushed material or material produced by single or two stage crushing	Crushed material produced by multi-stage crushing and screening	Uncrushed material or material produced by single or two stage crushing
GRADING ENVELOPE	Sieve size (mm)	Percentage passing through sieve by mass	None specified	Percentage passing through sieve by mass	None specified	Percentage passing through sieve by mass	None specified
	50	100		100		100	
	37,5	85 – 100		85 – 100		85 – 100	
	20	61 – 91		61 – 91		61 – 91	
	14	48 – 82		48 – 82		48 – 82	
	5	31 – 66		31 – 66		31 – 66	
	2	20 – 50		20 – 50		20 – 50	
	0,425	10 – 30		10 – 30		10 – 30	
0,075	5 – 15	5 – 15	5 – 15				
GRADING MODULUS (GM)			2,5≥GM≥1,5		2,5≥GM≥1,5		2,6≥GM≥1,2

Replace Table 3402/5 with:

**"TABLE B3402/5: REQUIREMENTS FOR CHEMICALLY STABILISED LAYERS**

Classification		C2	C3	C4
Type of material before stabilisation <sup>(1)</sup>		At least G4 quality	At least G5 quality	At least G6 quality
PI after stabilisation (maximum)		Non-plastic	6 <sup>(2)</sup>	6 <sup>(2)</sup>
UCS (Unconfined Compression Strength) (MPa) at 100 % of MDD	Min	3.0	1.5	0.75
	Max	5.0	3.0	
ITS (Indirect Tensile Strength) (kPa) at 100 % of MDD	Min	300	250	200
	Max	500	450	400 (350) <sup>4</sup>
WDD (Wet/Dry Durability) (mass loss maximum)		10 %	20 %	30 %

**Notes:**

- (1) Material type requirement only indicative and not compulsory to be met unless specified in the Contract Documentation.
- (2) For materials derived from the basic crystalline rock group, the plasticity index after stabilisation shall be non-plastic.
- (3) It is more important that the ITS requirement be met than the UCS, as the ITS affects both the structural behaviour of the layer and limits the potential to degrade should the durability decreases in time.
- (4) ITS in brackets apply for a stabilised base layer.

The UCS and ITS requirements in Table B3402/5 are determined at the standard 7-day curing, and not at the 24-hour rapid or accelerated curing testing. The 7-day cured strengths shall always be taken as the reference requirements, as the rapid curing may give a higher strength. Should rapid curing be done during the construction, both tests shall be done in parallel and a calibration factor derived for that material with that specific stabiliser. The rapid testing can then be used for acceptance control provided that regular calibration checks are made against the 7-day cured strengths to ensure that nothing has changed significantly. When significant variations are found in the relationship between the results of the two types of test, then all further test samples that are rapid cured shall have duplicate samples that are tested by the standard full 7-day acceptance test until a reliable, stable calibration factor has been reestablished.

Add the following tables after table B3402/5:

**"TABLE B3402/6: REQUIREMENTS FOR BITUMEN STABILISED LAYERS (BSM)**

Test <sup>(1)</sup>	Specimen size, compaction effort and curing	BSM Classification		
		BSM1	BSM2	
ITS <sub>DRY</sub> (Indirect Tensile Strength) (kPa)	150 mm dia x 95 mm high vibratory hammer or MDD compaction cured to constant mass <sup>(2)</sup>	> 225	> 175	
ITS <sub>WET</sub> (Indirect Tensile Strength) (kPa)		> 125	> 100	
Shear Properties	150 mm dia x 300 mm high vibratory hammer compaction cured at equilibrium moisture content <sup>(3)</sup>	Friction angle (°)	> 40	> 35
		Cohesion (kPa)	> 250	> 200
		Retained cohesion (%)	> 75	> 60

**Notes:**

- (1) All tests are carried out on specimens conditioned at 25 °C.
- (2) Specimens cured to constant mass at 40 °C. ITS values determined using constant displacement loading.
- (3) Specimens conditioned to 60 % – 65 % of OMC before sealing in a bag and curing at 40 °C for 48 hours.

TABLE B3402/7: TARGET GRADING ENVELOPE FOR COLD IN SITU RECYCLED PAVEMENT LAYERS

Sieve Size (mm)	Percent Passing		
	Cement / Lime	BSM-Emulsion	BSM-Foam
50	100	100	100
37.5	87 – 100	87 – 100	87 – 100
28	82 – 100	82 -100	82 – 100
20	72 - 100	72 - 100	72 - 100
14	60 -90	60 -90	60 -90
10	51 - 77	51 - 77	51 - 77
7	42 -65	42 -65	42 -65
5	36 - 57	36 - 57	36 - 57
0.425	12 – 26	10- 24	12 – 26
0.075	4 - 10	2 - 9	4 - 10

Materials to be used for the gravel wearing course shall be Type 1 as per Table 3402/4, with the following amendments:

- Maximum target size = 53 mm
- Oversize index = 10% maximum
- Maximum permitted oversize = 63 mm.”

### (b) Compaction requirements

Amend the compaction requirements as follows:

“Lower selected layer (G9) : 93 % or 100 % for sand of MDD  
 Upper selected layer (G7) : 95 % or 100 % for sand of MDD  
 Chemically stabilized subbase (C3) : 96 % of MDD  
 Bituminous stabilized base (BSM1) : 102 % of MDD  
 Shoulder & wearing course : 95 % of MDD”

### B3403 CONSTRUCTION

Add the following subclause:

#### “(f) Cold in situ recycling and mixing

Where the in situ layer consisting of granular or cemented layers, which may include asphalt or bituminous surfacing above granular or cemented support layer is to be recycled, with or without any make-up material, the layer must be constructed according to the method described in B3512.”

### B3405 CONSTRUCTION TOLERANCES

#### (a) Level

Replace the table in the subclause with the following:

Layer	H <sub>90</sub>	H <sub>max</sub>
Selected layers	25 mm	33 mm
Sub-base layers	15 mm	20 mm
Base layers	12 mm	15 mm
Shoulders and wearing course	N/A	25 mm

Add the following:

"Level control for the various pavement layers shall be done at least at the following intervals in the longitudinal direction:

Layer	Interval
Selected layer, sub-base, shoulders and wearing course	20 m
Base	10 m

#### (b) Layer thicknesses

Replace the table in the subclause with the following:

Layer	D <sub>90</sub>	D <sub>max</sub>	D <sub>ave</sub>
Selected layers	25 mm	35 mm	8 mm
Sub-base layers	18 mm	24 mm	5 mm
Base layers	15 mm	22 mm	5 mm
Shoulders and wearing course	N/A	30 mm	0 mm"

**(f) Surface regularity**

*Replace the subclause with the following:*

For new base layers and rehabilitation of existing base layers the roughness of the layer will be determined by using a rolling straight edge as described in subclause 8111(c), the number of surface irregularities shall not exceed those given below:

(i) the average number of irregularities per 100 m equal to or exceeding 5 mm when taken in the wheel paths over 300 – 600 m lengths: 3

(ii) the number of irregularities equal to or exceeding 5mm when taken in the wheel paths over 100 m lengths: 4

The maximum value of any individual irregularity measured with the rolling straight-edge or a 3m straightedge shall not exceed 10mm.

The measurements with a rolling straight edge or 3m straight-edge shall be done in each wheel path of each lane or shoulder over the full length of the section.

Where a 3m straight-edge is used it shall be placed in such a way that for a measured line each measurement shall overlap by at least 500mm with the previous measurement."

**B3406 QUALITY OF MATERIALS AND WORKMANSHIP**

*Replace the second paragraph with the following:*

"Test results and measurements will be assessed in accordance with the provisions of Section 8200."

**B3407 MEASUREMENT AND PAYMENT**

*Delete and replace the paragraph under the clause heading with the following:*

"For this Contract measurement and payment under items 34.08, 34.09 and 34.13 are not applicable. The cost of additional work in restricted areas shall be included in the bulk rates."

*Add the following:*

"The tendered rates for items under this sections shall also include full compensation for all additional cost related to construction joints in new layers, as specified in subclause B3208(d), due to the construction of layer in half-widths or partial-widths."

**Item****Unit**

*Amend item 34.01 to read as follows:*

**B34.01 Pavement layers constructed from gravel taken from cut, borrow or stockpile, including free haul of 1 km:**

*Delete and replace in the second line of the second paragraph of the item description the words "or pits" with the following:*

" , pits or stockpile"

**Item****Unit**

*Amend item 34.05 to read as follows:*

**B34.05 Extra over items B34.01 and 34.03 for the construction of gravel pavement layers from cut, borrow, stockpile or recovered pavement material mixed with existing milled bituminous material**

*Delete and replace the item description paragraph with the following:*

“The unit of measurement shall be cubic metre of existing milled bituminous material loaded from stockpile, hauled and mixed in with gravel pavement layers from cut, borrow, stockpile or recovered pavement material. The quantity of existing milled bituminous material shall be taken as 70% of the loose volume measured in trucks.

The tenderer extra-over rate shall include full compensation for loading from stockpile, haul over a freehaul distance of 1,0 km, adding and mixing in the milled bitumen material with the other material for construction of pavement layers.”

*Add the following new items:*

**“Item** **Unit**

**B34.14 Wet grading:**

(a) Specify roadway width ..... kilometre (km)

The unit of measurement shall be the kilometre of full width of gravel road bladed, inclusive of the formation and shaping of all the side and mitre drains, measured along the centre line of the road in terms of subclause B3408(a).

The tendered rate shall include full compensation for all the blading by motor grader, water cart and all labour required to remove large stones and keeping drainage clear from gravel spillage.

**Item** **Unit**

**B34.15 Dry grading:**

(a) Specify roadway width ..... kilometre (km)

The unit of measurement shall be the kilometre of full width of gravel road processed, inclusive of the formation and shaping of all the side and mitre drains, measured along the centre line of the road in terms of subclause B3408(b).

The tendered rate shall include full compensation for all the blading by motor grader and all labour required to remove large stones and keeping drainage clear from gravel spillage.

**Item** **Unit**

**B34.16 Accessibility grading:**

(a) Specify roadway width ..... kilometre (km)

The unit of measurement shall be the kilometre of full width of road processed, inclusive of the formation and shaping of all the side and mitre drains, measured along the centre line of the road in terms of subclause B3408(c).

The tendered rate shall include full compensation for all the blading by motor grader and all labour required to remove large stones and keeping drainage clear from gravel spillage.

**Item** **Unit**

**B34.17 Special grading:**

(a) Specify roadway width ..... kilometre (km)

The unit of measurement shall be the kilometre of full width of gravel road processed, inclusive of the formation and shaping of all the side and mitre drains, measured along the centre line of the road in terms of subclause B3408(d).



The tendered rate shall include full compensation for adding water, shaping and trimming by motor grader, and providing for the necessary compaction effort to achieve the required specification, as well as all labour required to remove large stones and keeping drainage clear of gravel spillage.

**Item** **Unit**

**B34.18 Reshaping:**

(a) Specify roadway width ..... kilometre (km)

The unit of measurement shall be the kilometre of full width of gravel road processed, inclusive of the formation and shaping of all the side and mitre drains, measured along the centre line of the road in terms of subclause B3408(e).

The tendered rate shall include full compensation for ripping, adding water, shaping and trimming by motor grader, and providing for the necessary compaction effort to achieve the required specification, as well as all labour required to remove large stones and keeping drainage clear of gravel spillage.

**Item** **Unit**

**B34.19 Heavy maintenance:**

(a) Specify roadway width ..... kilometre (km)

The unit of measurement shall be the kilometre of full width of gravel road processed, inclusive of the formation and shaping of all the side and mitre drains, measured along the centre line of the road in terms of subclause B3408(f).

The tendered rate shall include full compensation for ripping, grid rolling, adding water, shaping and trimming by motor grader, and providing for the necessary compaction effort to achieve the required specification, as well as all labour required to remove large stones and keeping drainage clear of gravel spillage.

**Item** **Unit**

**B34.20 Light roadbed preparation:**

(a) Specify roadway width ..... kilometre (km)

The unit of measurement shall be the kilometre of full width of gravel road processed, inclusive of the formation and shaping of all the side and mitre drains, measured along the centre line of the road in terms of subclause B3408(g).

The tendered rate shall include full compensation for shaping and trimming by motor grader and providing for the necessary labour required to remove large stones and keeping drainage clear of gravel spillage.

**Item** **Unit**

**B34.21 Heavy roadbed preparation:**

(a) Specify roadway width ..... kilometre (km)

The unit of measurement shall be the kilometre of full width of gravel road processed, inclusive of the formation and shaping of all the side and mitre drains, measured along the centre line of the road in terms of subclause B3408(h).

The tendered rate shall include full compensation for ripping, adding water, shaping and trimming by motor grader, and providing for the necessary compaction effort to achieve the required specification, as well as all labour required to remove large stones and keeping drainage clear of gravel spillage.”  
Add the following clause:

**“B3408 MAINTENANCE TO EXISTING GRAVEL ROADS**

This clause covers activities that are required to conduct routine and preventative maintenance to existing

gravel roads, including the use of self-propelled road graders to improve the overall ride-ability, safety aspects and correcting any drainage faults that may be present.

**(a) Wet grading**

The aim of the wet grading operation is to improve the riding surface and to remove the potholes, corrugations and rutting that have developed with time, as well as clearing the side and mitre drains within the road reserve and providing the correct cross sectional profile to the road prism.

Wet grading shall only be carried out when gravel is at the correct moisture content. Water is to be sprayed on the full width of road section to be worked before blading commences, to ensure that the material is at optimum moisture content. The material from both side drains of the road is to be cut into the road and spread with successive cuts towards the centre of the road. The depth of the cuts shall be sufficient to result in an even surface.

Hand labour is to fill all potholes and remove oversize and any vegetation from the roadway. Water is then again to be sprayed on the full width of road section being worked. The material windrow which has been formed in the centre of the road is now cut with successive cuts towards one side of the road. If a material windrow is formed at the shoulder of the road, this material needs to be cut out through the side drain. If this is not possible due to physical constraints, openings and mitres will be made to ensure that the side drain can function freely. Any drains blocked off by undercutting shall be opened and gravel spillage into outlets shall be removed.

Water is then again to be sprayed on the full width of road section that was worked.

The wet grading operation will also include for providing the required cross sections and cambers on the road, as well as cutting all the mitre and side drains complete, to ensure proper drainage.

**(b) Dry grading**

The aim of the dry grading operation is to improve the riding surface and to remove the potholes, corrugations and rutting that have developed with time, as well as clearing the side and mitre drains within the road reserve and providing the correct cross sectional profile to the road prism.

The Contractor shall also attempt to maximise the number of dry grades after rains or when soil conditions are close to optimum moisture content.

The material from both side drains of the road is to be cut into the road and spread with successive cuts towards the centre of the road. The depth of the cuts shall be sufficient to result in an even surface.

Hand labour is to fill all potholes and remove oversize and any vegetation from the roadway. The material windrow which has been formed in the centre of the road is now cut with successive cuts towards one side of the road. If a material windrow is formed at the shoulder of the road, this material needs to be cut out through the side drain.

If this is not possible due to physical constraints, openings and mitres will be made to ensure that the side drain can function freely. Any drains blocked off by undercutting shall be opened and gravel spillage into our outlets shall be removed.

**(c) Accessibility grading**

Accessibility grading will be instructed in cases where roads have deteriorated so far that no gravel remainson the road and where grading is required to ensure drivability.

The aim of the blading operation is to improve the riding surface by attempting to remove the potholes, corrugations and rutting that has developed with time, as well as clearing the side and mitre drains within the road reserve. The blading operation should also attempt to provide the correct cross sectional profile to the road prism. The first cut shall commence in the side drain collecting material in a windrow on the shoulder and blade towards the centre line. Hand labour is to fill all potholes and remove oversize material and any vegetation from the roadway. With successive cuts, the grader is to move the windrow across the full width of the road.

The depth of the first cut shall be sufficient to result in an even surface if possible. No undercutting or small windrows that will prevent water from flowing freely off the road surface or into culvert inlets shall be allowed. During the blading operations all large stones and vegetation shall be removed from the windrowed material. Any drains blocked off by under cutting shall be opened and gravel spillage into culvert inlets and outlets removed. The grading operation will also strive toward providing the required cross sections and cambers on the road, as well as cutting all the mitre and side drains complete, to ensure proper drainage.

**(d) Special grading**

The aim of special grading operation is to improve the riding surface and to remove the potholes, corrugations and rutting that have developed with time, as well as clearing the road reserve and providing

the correct cross sectional profile to the road prism.

Special grading shall only be carried out when gravel is at the correct moisture content. Water carts shall be used to water the road ahead of the grader and during the operation, as well as on completion of the shaping before compaction. The Contractor shall determine the optimum moisture content at which the material is to be graded.

The first cut shall commence in the side drain collecting material in a windrow on the shoulder and blade towards the centre line. With successive cuts, the grader is to move the windrow across the full width of the road. The depth of the first cut shall be sufficient to result in an even surface. No undercutting or small windrows which will prevent water flowing freely off the road surface or into culvert inlets shall be allowed. During the blading operations all large stones and vegetation shall be removed from the windrowed material. Any drains blocked off by under cutting shall be opened and gravel spillage into culvert inlets and outlets removed. The wet grading operation will also include for providing the required cross sections and cambers on the road, as well as cutting all the mitre and side drains complete, to ensure proper drainage. Compaction after the blading operation must ensure that at least 95% of MOD AASHTO is achieved for the gravel wearing course layer.

The special grading operation will also include for providing the required cross sections and cambers on the road, as well as cutting all the mitre and side drains complete, to ensure proper drainage.

#### **(e) Reshaping**

Reshaping will be instructed by the Engineer where the road cross section of the road profile has changed and needs to be reworked to achieve the required shape, which will facilitate a better riding quality and proper drainage.

Reshaping will consist of ripping (150 mm), adding water, mixing, shape and trimming to the required cross sections and cambers inclusive of cutting all mitre and side drains complete, to ensure proper drainage, and removing any oversize material.

Compaction during the operation must ensure that at least 95% of MOD AASHTO is achieved.

The operation will also include for providing the required cross sections and cambers on the road, as well as cutting all the mitre and side drains complete, to ensure proper drainage.

#### **(f) Heavy maintenance**

Heavy maintenance will be instructed by the Engineer where the existing material left on the road surface is extremely rough, due mainly to oversize material in it and needs to be reprocessed, to ensure that the material conforms to specification, as well as ensuring that the proper road profile is achieved, which will facilitate a better riding quality and proper drainage. Heavy maintenance will only be instructed if the existing road bed material conforms to the specified requirements.

If the insitu road bed material does not conform to the required specification, the Engineer will instruct the Contractor to blade the existing gravel material to windrow, perform the necessary road bed preparation and replace the gravel wearing surface. This operation will be measured separately and relevant items allowed for.

Heavy maintenance will consist of ripping (150 mm), re-processing, adding water, mixing, shaping, compacting and trimming to the required cross sections and cambers inclusive of cutting all mitre and side drains complete, to ensure proper drainage, and removing oversize material.

Compaction during the operation must ensure that at least 95% of MOD AASHTO is achieved for the gravel wearing course layer.

The operation will also include for providing the required cross sections and cambers on the road, as well as cutting all the mitre and side drains complete, to ensure proper drainage.

#### **(g) Light roadbed preparation**

Light roadbed preparation will be utilised to prepare the existing roadway to conform to the required design cross section before the regravelling operation commences, if so required. This item will be used when the above can be achieved by using a motorised grader unit without ripping the insitu material.

The Engineer will order light roadbed preparation before regravelling a section of road only if the insitu roadbed material conforms to the required specification.

Blading shall commence by first cutting and shaping the side and mite drains to the required specification to ensure proper drainage, as well as the shaping of the roadway. If in the opinion of the Engineer, the material so removed is suitable to be mixed in with the imported material, it should be bladed towards the centre line from both sides with successive cuts. If in the opinion of the Engineer the material from the formation of the cross section and drains is not suitable, it will be spread over the side slopes or disposed of as directed. During the blading operation all large stones and vegetation shall be removed from the

windrowed material. Any drains blocked off by under cutting shall be opened and gravel spillage into culvert inlets and outlets removed. The Contractor is to ensure that the required cross section is neatly trimmed and approved by the Engineer, before any material is imported.

The operation will also include for providing the required cross sections and cambers on the road, as well as cutting all the mitre and side drains complete, to ensure proper drainage.

Any drains blocked off by under cutting shall be opened and the spillage into culvert inlets and outlets removed. The Contractor is to ensure that the required cross section is neatly trimmed and approved by the Engineer, before any material is imported.

**(h) Heavy roadbed preparation**

Heavy roadbed preparation will be utilised to prepare the existing roadway to conform to the required design cross section before the regravelling operation commences if required. This item will be used when the above can only be achieved by using a motorised grader to rip the insitu material, scarify, add water, mix, shape and compact the material to achieve the required cross section before the regravelling operation.

The Engineer will order heavy roadbed preparation before regravelling the section of road only if the insitu road bed material is of such a nature that upon being processed, conforms to the minimum requirement to receive the imported gravel wearing course.

Heavy roadbed preparation will consist of ripping (150 mm), adding water, mixing, shape and trimming to the required cross sections and cambers inclusive of cutting all mitre and side drains complete, to ensure proper drainage.

The Contractor is to ensure that the required cross section is neatly trimmed and approved by the Engineer, before any material is imported.

Compaction during the operation must ensure that at least 95% of MOD AASHTO is achieved for the gravel wearing course layer.

Any drains blocked off by under cutting shall be opened and the spillage into culvert inlets and outlets removed. The Contractor is to ensure that the required cross section is neatly trimmed and approved by the Engineer, before any material is imported.

**(i) Quality / Standard**

The road surface on completion of the works shall give a smooth ride free from corrugation and be properly drained. The specified camber for straight sections of roads shall be maintained and super-elevation on curves shall extend across the full width of the roadway.”

**SECTION 3600: CRUSHED-STONE BASE****B3601 SCOPE**

*Delete and replace the first paragraph with the following:*

"This section covers the procuring, furnishing and placing of approved crushed stone pavement layers (base and subbase) on top of completed gravel material layers, and constructing crushed stone pavement layers in accordance with the requirements of these specifications."

**B3602 MATERIALS****(a) Requirements for crushed aggregate**

*After the first sentence delete the remainder of the paragraph and replace with the following:*

"The aggregate shall not contain more than 0,1% by mass of unwanted material such as wood, coal or similar organic material.

Aggregates containing mica, such as granite, gneiss, mica schist, pegmatite, sandstone shall not contain more than 2% by mass of free mica, especially muscovite, when assessed by visually separating the particles, or more than 4% by volume when assessed by means of microscopic slides. Aggregate containing easily detectable quantities (more than 1%) of olivine, serpentine and sulphide minerals such as pyrites and marcasite, must be considered with caution, and may warrant additional evaluation to the satisfaction of the engineer. Argillaceous rocks may only be used if specified in the project specifications, or with the engineer's written approval.

Soft or weathered particles shall be controlled by the Durability Mill Index values specified in B3602(e) Durability.

Provision has been made in clause B8108(b)(iii), calculation, for the determination and calculation of the Apparent Density for aggregates with a total water absorption greater than 1,5%, when total water absorption is determined according to SANS 3001-AG20 (replacing TMH1 method B14) and SANS 3001-AG21 (replacing TMH1 method B15)."

**(c) Grading requirements**

*Replace entire clause with the following:*

"The target grading, after compaction, shall be as near as possible to the mean of the specified grading envelope listed in table B3602/1 and shall be continuous with no marked gaps or excessive quantities of any particular size. The mean grading of each lot (minimum of 4 but preferably 6 test points per lot) shall conform to the approved target grading plus or minus the tolerances specified in table B3602/4. However, no target grading plus tolerance can be set outside the original grading envelope in table B3602/1."

Table 3602/1

*In table 3602/1 delete "85% of bulk relative density" and replace with:*

"86% of Apparent Density".

*Replace the grading section in Table 3602/1 with:*

	Sieve size (mm)	Percentage passing through sieve by mass			
		Nominal max size			
		G1	G2	G3	
		37,5 mm	37,5 mm	37,5 mm	28 mm
<b>GRADING</b>	37,5	100	100	100	100
	28	86 – 95	86 – 95	86 – 95	100
	20	73 – 86	73 – 86	73 – 86	87 – 96
	14	61 – 76	61 – 76	61 – 76	73 – 86
	5	37 – 54	37 – 54	37 – 54	43 – 61
	2	23 – 40	23 – 40	23 – 40	27 – 45
	0,425	11 – 24	11 – 24	11 – 24	13 – 27
	0,075	6 – 10	6 – 10	6 – 10	5 – 12

Replace Table 3602/4 with:

TABLE B3602/4

Sieve size (mm)	Permissible deviations by mean values (% by mass)		Permissible deviations by individual values (% by mass)	
	Nominal maximum size (mm)			
	37,5	26,5	37,5	28
28	± 5		± 5	
20	± 5	± 5	± 7	± 7
14	± 5	± 5	± 7	± 7
5	± 5	± 5	± 7	± 7
2	± 4	± 4	± 5	± 5
0,425	± 3	± 3	± 5	± 5
0,075	± 2	± 2	± 3	± 3

Add the following subclause:

“(e) Durability

The durability property of aggregates derived from the basic crystalline group shall be assessed by means of the Ethylene Glycol Durability Index. When tested in accordance with the method prescribed in B 8105(g) the Durability Index shall not exceed four. In addition, the 10% FACT value obtained after soaking in ethylene glycol for four days shall not be less than 50% of that obtained on the unsoaked sample. Where any values are obtained that fall outside the above requirements, a detailed assessment of the quarry shall be undertaken together with a specialist mineralogical evaluation of both the coarse as well as fine fractions in order to assess the long-term durability properties of the material.

For Basic crystalline rocks, Arenaceous rocks, Argillaceous rocks and Diamictites the Durability Mill Index (DMI) shall be less than 125. For all other rock types the Durability Mill Index (DMI) shall not be more than 420, subject to the % passing the 0,425mm sieve not increasing by more than 8 percentage points during the Durability Mill test.

## B3604 CONSTRUCTION

### (b) Compaction

Replace that last sentence of the first paragraph with:

“The density of the layer shall be tested at each third of the layer thickness.”

### (c) Surfacing preparation of the base

Replace the final paragraph in sub-subclause 3604(c)(i) with:

“Slushing of the base, is compulsory and shall be carried out within 48 hours after completion of the compaction. Even if the specified density is achieved without slushing or before completion of the slushing process, the full slushing process must still be completed.”

Delete subsubclause (ii) Multi-stage process (water or slurry rolling).

## B3605 PROTECTION AND MAINTENANCE

Replace “moisture content of the layer” in the first paragraph with “moisture content of the upper 50mm of the layer.”

Add the following to the end of the second sentence:

“as determined according to SANS 3001-GR30 (replacing TMH 1 method A7).”

## B3607 QUALITY AND WORKMANSHIP

Replace the last paragraph of this Clause with the following:

“Test results and measurements shall be assessed in accordance with the provisions of Section 8200. (Ls = 88% or 89 % as ordered).”

## B3608 MEASUREMENT AND PAYMENT

*Replace the relevant clauses under payment item B36.01 with the following:*

“Overhaul, Crushing and screening measured been measured under Section B1600 and Section B3200.”

*Delete and replace the paragraph under the clause heading with the following:*

“For this Contract measurement and payment under items 36.09, 36.10 and 36.14 are not applicable. The cost of additional work in restricted areas shall be included in the bulk rates.”

*Add the following:*

“The tendered rates for items under this sections shall also include full compensation for all additional cost related to construction joints in new layers, as specified in subclause B3208(d), due to the construction of layer in half-widths or partial-widths.”

**SECTION 4100 : PRIME COAT****B4102 MATERIALS****(b) Aggregate for blinding**

*Add the following sentence:*

"Blinding of the primed surface with aggregate shall only be permitted to facilitate vehicular access to adjoining properties"

**B4104 WEATHER AND OTHER LIMITATIONS**

*Replace paragraph (g) with the following:*

"(g) When at any position within the layer the moisture content of a granular base layer is more than 50% of the optimum moisture content determined according to SANS 3001-GR30 (replacing TMH 1, Method A7). In the event of rain after priming, the base shall be allowed to dry out to meet the above moisture content requirement prior to surfacing."

**B4106 APPLICATION OF THE PRIME COAT**

*Replace paragraph (c) with the following:*

"The type of prime and application rate best suited for the base shall be determined during construction. The Contractor shall provide about 20ℓ of each prime and apply it at different application rates with a brush on the base. Then engineer will then instruct the type of prime and application rate to be used. No payment shall be made for tests to determine the type of prime.

Unless directed otherwise by the engineer or indicated on the drawings, the edges of the primed surface shall be 150mm wider than the edges of the surfacing."

*Add the following subclause:*

"(j) Application in areas treated by reworking and construction of a new base shall be primed using a mechanical distributor complying with subclause 4103(a). The edges of the previously constructed or existing surfacing shall be adequately protected by approved means to ensure that an overlap of prime not exceeding 50mm is sprayed onto the previously constructed or existing surfacing."

**B4108 TOLERANCES**

*Replace the first paragraph with the following:*

"The actual spray rates measured at spraying temperature shall not deviate by more than 8.0% from that ordered by the engineer. The engineer may, at his discretion, conditionally accept application rates falling outside this tolerance at reduced payment in accordance with Table B4108/1.

**TABLE B4108/1: PAYMENT REDUCTION FACTORS FOR CONDITIONALLY ACCEPTED PRIME COAT**

Deviation specified spray rate at spraying temperature. (%)	Payment reduction factor of tendered rate.
±8,0	1.00
±9,0	0.97
±10,0	0.95
±11,0	0.90
±12,0	0.85
±13,0	0.80

Any deviation outside these limits shall not be paid for, however, the engineer shall have the right to instruct the contractor to make up any deficiency, or blind excessive prime without additional payment. Where so instructed, the material for blinding shall consist of approved, but shall consist of screened



5mm nominal single size aggregate. The use of crusher dust for blinding shall not be permitted. If under-spraying occurs, and it is accepted by the engineer, only the actual quantities applied shall be paid for.”

**B4109 TESTING**

*Add the following:*

“No payment will be made if this condition is not adhered to. The contractor shall provide, at his cost, representative samples of every batch of prime delivered onto site.”

**B4110 MEASUREMENT AND PAYMENT**

*Under the clause heading add the following:*

“For this Contract measurement and payment under item 41.03 is not applicable. The cost of additional work in restricted areas shall be included in the bulk rates.”

<b>Item</b>	<b>Unit</b>
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**B41.01 Prime coat:**

*Add the following subitem:*

(f) Spray-grade emulsion (30% bitumen) .....	litre (ℓ)
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<b>SECTION 4600 : BITUMINOUS SINGLE SEAL WITH SLURRY (CAPE SEAL)</b>
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**B4605 MEASUREMENT AND PAYMENT****Item****Unit****B46.02 Bituminous single seal with 20 mm aggregate and slurry.....square metre (m<sup>2</sup>)***Add the following:*

“The tendered rates shall include full compensation for all plant, labour and materials complete to conduct the said works, as well as for working in restricted areas and for placing by non-mechanical equipment. No extra over items for work in areas inaccessible to mechanical equipment will be allowed for. “

<b>SECTION 5200: GABIONS</b>
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**B5202 MATERIALS**

**(f) Filter fabric below the gabions**

Delete Sub-Clause 5202(f) and replace with the following :

“The filter fabric shall comply with the requirements of sub-sub-clause B2104(a)(iii) for Grade 5 geotextile.”

Add the following new sub-clause:

**(g) Concrete**

Concrete work shall be carried out in accordance with the provisions of Sections 6200, 6300 and 6400.

**B5204 CONSTRUCTING GABIONS**

**(c) Assembly**

Add to Sub-clause 5204(c) the following:

Gabion mattresses may be cut and rejoined, as shown on Drawing No. ECS/52/1/C2, to form any appropriate shape. An extra over rate shall apply when mattresses have to be cut and joined on instruction from the Engineer.

Add the following new sub-clause:

**(e) Blinding Layer**

Where indicated on the drawings, a blinding layer of 15 MPa concrete 75 mm thick shall be laid as a surface on which to place the gabions. The surface of the concrete shall be properly compacted and screeded to form a Class U1 surface finish as specified in Clause 6209 of the standard specification.

<b>SECTION 5600 :</b>	<b>ROAD SIGNS</b>
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**B5603 MANUFACTURING OF ROAD SIGN BOARDS AND SUPPORTS****(a) Road sign boards**

*Add the following:*

“The Contractor shall ensure that the signs and supports supplied by the manufacturers are correct in all respects.”

**(f) Road sign supports**

*Add the following:*

“All the ground-mounted signs shall be supported on creosote timber pole supports.”

*Add the following new sub clauses:*

**(h) Chromadek sections**

“Chromadek sections shall be assembled in accordance with the details of the standard plans.

Where joints are approved by the Employers Agent, they shall be constructed in accordance with the details shown on the standard plans and shall be covered on the rear face after assembly with a 20mm wide PVC corrosion protection tape. The PVC tape shall be covered by a 60mm wide self adhesive aluminium backed strip such as “Bostik Dit-Sit” or approved equivalent, all as indicated on the standard plans.

Retro-reflective material shall be applied to the section as specified for Aluminium Sections in Clause 5603(d) of the Standard Specifications, with the following additional requirement:

Where the letters or legends cross the horizontal joints of the sign panels the lettering or legend shall be cut along the joint and trimmed just short of the 3mm radius bend on the section.

**(i) Fastening details**

All fastening details to join the sign sections, to edge the assembled sign panel and to fasten the completed panel on to the timber supports shall be constructed in accordance with the details shown on the standard plans.”

**(j) Date of erection and sign identity number**

The manufacturer's name, month and year of erection of the sign shall be placed in the bottom left-hand corner when facing the back of the sign. An eleven (11) digit identity number supplied by the Employers Agent shall also be placed on the back of the sign above the date of erection. All lettering shall be 50mm high and shall be manufactured from 7 year cast enamel scotchcal or equivalent. All lettering will be located such that it is visible from the shoulder of the road. No reflective paint or reflective material will be permitted on the back of sign faces.

Single signs such as R and W series signs shall only have the manufacturer's name, date and month placed on the back.

**B5604 ROAD SIGN FACES AND PAINTING**

*Add the following new sub clauses*

**(e) Application of retro-reflective material**

All sign faces shall be faced with retro-reflective material. Painted front sign faces shall not be used. Colours, symbols, legends and borders shall comply with the regulations of the applicable Road Traffic Act, the South African Road Traffic Signs Manual, SABS 1519-1990, and the details shown on the Plans.

Where applied to Chromadek Sections retro-reflective material shall be applied as specified for aluminium sections in Clause 5603(d) of the Standard Specification, and of Clause B5603(h) of this Project Specification.

**(f) Silkscreening**

Silkscreening or inking over retro-reflective materials shall not be acceptable.

**B5605 STORAGE AND HANDLING**

*Add the following:*

“The following shall not be allowed on the sign face:

- (a) Drilling of holes
- (b) Application of any form of adhesive
- (c) Cleaning with any chemicals that are not specifically approved by the manufacturer of the retro-reflective material, and
- (d) Covering the sign face with an impermeable material that does not allow free circulation of air.

**B5606 ERECTING ROAD SIGNS**

**(a) Position**

*Add the following:*

“All signs are to be placed, where practically possible, at the “preferred” location as indicated in the table on drawing ECS/56/1/C1. Variations will only be allowed if the topography does not allow the sign to be placed in the preferred position.”

**(d) Field Welding**

*Replace the contents of this clause with the following:*

“No welding shall be allowed during the erection of any road signs.”

**(e) Time of Erection**

*Replace the contents of this clause with the following:*

“Road signs shall be erected during and without disrupting the normal free flow of traffic.”

*Add the following new sub clause:*

**(h) Fixing of signs to poles**

All sign faces will be affixed to the pole by means of clamps as indicated on drawing ECS/56/1/C7. An additional mild steel clamp (“ready-bar” ) will also be installed, together with one galvanised steel bolt fixed through the pole, as indicated on drawing CS/G/6/5.

W401 and W402 signs will only be affixed by means of two galvanised steel bolts through the face of the sign and pole.

**B5609 MEASUREMENT AND PAYMENT**

<b>Item</b>		<b>Unit</b>
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<b>B56.01</b>	<b>Road sign boards with painted or coloured semi-matt background. Symbols, lettering and borders in semi-matt black or in Class 1 retro-reflective material, where the sign board is constructed from:</b>	
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**(c) Pre-painted galvanised steel plate (1.2mm chromadek or approved equivalent)**

*Replace subitems (i) to (iii) with the following:*

“(i) Sign type and size to be specified separately ..... number (No)”

*Replace the first paragraph after item (e)ii with the following:*

“The unit of payment will be the number of completed sign boards.”

**SECTION 5700 : ROAD MARKINGS****B5702 MATERIALS****(b) Road studs**

*Add the following:*

“Permanent road studs used on this Contract shall be as specified in the drawings or similar approved. The road studs used shall as far as possible match existing road stud materials”

**B5706 SETTING OUT THE ROAD MARKINGS**

*Add the following before the first paragraph:*

“In accordance with the project specifications and prior to any obliteration of the existing road markings by sealing, patching or rehabilitation measures, the Contractor shall prepare and submit reference drawings to the Employers Agent, showing the position of existing road markings relative to control markers or reference beacons placed along both sides of the road carriageway. No additional payment shall be made for this referencing work.”

*Add the following before the third paragraph:*

“After completion of the seal, the position of the road markings shall be set out and re-established as directed by the Employers Agent from the established reference beacons or control markers placed along both sides of the road.”

**B5707 APPLYING THE PAINT**

*Add the following:*

“During the period between the obliteration of the existing and the application of new road markings, the Employers Agent may order that temporary road marking be carried out for the accommodation of traffic. Pre-marking in accordance with Clause 5706 of the Specifications except that paint spots of approximately 25mm in diameter should be used.

Unless otherwise prescribed by the Employers Agent, temporary road marking shall be completed before a particular section of road is opened to traffic.

Note, all paint used shall contain reflective glass beads.”

**B5708 APPLYING THE RETRO-REFLECTIVE CEMENTITIOUS ROAD MARKING COMPOUND**

*Add the following:*

Retro-reflective cementitious road marking compound shall meet the following minimum requirements:

Standards:	SANS 7321
Thickness:	2mm
Skid resistance:	greater than 40 BPA
Retro reflectivity:	greater than 150 mcd/rn2 ' lux
Drying time:	less than 45 minutes
Compressive strength:	58-60 m.p.a@24 hrs
Density:	2.2 kgs/m <sup>2</sup>
Product mix:	glass beads, cementitious powder, activator

**General**

The laying of Retro-reflective Cementitious Road Marking Compound (hereafter referred to as *permanent road marking*) must be in accordance with the South African Road Traffic Signs Manual and is regarded as Specialist Work.

Applied *permanent road marking* shall be durable and be expected to last for a minimum period of 5 years (60 months) reckoned from the completion date of the Contract and irrespective of traffic volume. Consequently, a five (5) year maintenance period is applicable.

*Permanent road marking* material shall comply with SANS 7321 and be delivered at the site in sealed containers bearing the name of the manufacturer and the type of material and the contractor shall at his own expense provide samples for testing as required by the Employers Agent.

Permanent road marking shall not be applied to a damp surface or at temperatures lower than 10° when the relative humidity exceeds 90% or when, in the opinion of the Employers Agent, the wind strength is such that it may adversely affect the road marking operations.

#### Surface Preparation

Before the permanent road marking material is applied, the surface shall be clean and dry and completely free from any soil, grease, oil, acid or any other material which will be detrimental to the bond between the permanent road marking and the surface. The surface where the permanent road marking is to be applied shall be properly cleaned by means of degreasing by combination of high pressure water and an approved degreasing agent or other approved method.

Where the road markings are to be applied to a new bituminous surface, the Contractor shall ensure that the surface to be painted has hardened sufficiently to enable the satisfactory application of the permanent road marking.

Where road markings are to be applied to a concrete pavement, loose particles shall be removed prior to application of the permanent road marking material.

### **B5709 ROAD STUDS**

*Replace the third and fourth paragraph with the following:*

“Permanent road studs shall be fixed after the painting of the road lines. Fixing shall be strictly in accordance with the manufacturer’s recommendations.

Prior to the application of the surface treatment, all existing road studs shall be adequately protected by covering with polyethylene sheeting at least 0,25 mm thick, specially reinforced paper or other approved material. Any existing road stud stained by bitumen shall be removed and replaced, unless all such bitumen is completely removed so as not to show any stains. Painting over stained road studs is strictly prohibited.

During laying of aggregate chips, rolling and brooming care shall be taken to protect all existing road studs against damage or breakage. The protective covering of existing road studs shall be firmly held in place during the reseal operation and shall only be removed after all rolling and brooming has been completed and prior to opening to traffic.

The Contractor shall replace at his own cost any road studs that have been stained and cannot be cleaned entirely or damaged by constructional activities.

Where ordered by the Employers Agent, the Contractor shall remove the existing road studs prior to the application of the surfacing seal. A sharp blow from a hammer and chisel at the epoxy base should be sufficient to dislodge the reflectors. Armourlite studs may be broken off flush with the road surface and the resulting broken glass removed from the road. All studs shall be removed from the road to the satisfaction of the Employers Agent. Any damage to the existing road shall be satisfactorily repaired by the Contractor at no extra payment.

Where ordered by the Employers Agent, temporary road studs shall be installed on completion of each section of seal prior to opening to traffic, Installation and fixing to the road surface shall be strictly in accordance with the manufacturer’s instructions and positioned such that the reflective face is square to a line parallel to the road centre line. Spacing of temporary road studs shall be at 48 metre centre to centre distance unless otherwise ordered by the Employers Agent. The Contractor shall maintain the temporary road studs in position, until the permanent road marking has been completed.”

### **B5711 GENERAL**

*Add the following:*

“If ordered by the Employers Agent, the Contractor shall apply a further application of paint to all road marking on the site of works within the maintenance period.”

## **SERIES 6000 : STRUCTURES**

### **General Note**

## **SCMU10-24/25-0021**

This section of the project specification is applicable to all structures. In the schedule of quantities, the general structural work required has been separated from the specific major structures, in particular the road over river bridges, as well as culverts

The general structures required under this Contract consist of cast in-situ concrete retaining walls.

The details for the retaining walls are shown on the drawings, including reinforcing details and bending schedules. Cast in-situ structures have been specified so as to maximise the employment opportunities for local residents along the route.



**SECTION 6100: FOUNDATIONS FOR STRUCTURES**

**B6103 GENERAL**

- (a) Subsurface data

*Add the following to the subclause:*

“It is expressly understood that, while all subsurface information is given in good faith, the correctness of the information furnished is not guaranteed. Where the actual foundation conditions encountered are considerably at variance with conditions visualized and described in the contract documents and those items for which the rate or price provided for in the contract is rendered unreasonable or inapplicable, such other rate or price consistent with the rates set out in the contract shall be fixed subject always to a founding depth variation not exceeding 5m in any foundation component of the permanent structure not, by itself, being held to constitute cause for variation for the contract rates or prices”.

**B6105 EXCAVATION**

*Add the following to the last paragraph:*

During construction of the vlei and river bridges and culverts the Contractor will only be permitted to construct, subject to the approval of the Directorate of Water Affairs, low level causeways access the rivers that cause negligible backing up and cofferdams around the piers and abutments for the construction of the foundations using material excavated in the road prism consisting of natural alluvial deposits of sand boulders, etc. These obstructions must be removed at the end of the contract and the river and banks restored to their original condition.

**B6106 FOUNDING**

*Add the following to the last paragraph:*

“All footings are to be keyed 500mm into the medium hard to hard sandstone.”

**B6111 FOUNDATION DOWELS**

*Delete the contents of clause 6111 and substitute with the following :*

Where required, foundation dowels of specified material, diameter and length shall be installed at the position and to the dimensions shown on the drawing or as directed by the Employer’s Agent.

After clearing and trimming the rock formation, holes of specified diameter and length shall be drilled into the rock.

Care shall be taken not to unnecessarily enlarge the drill hole. The diameter of the completed hole shall not be more than 4 mm greater than the dowel bar diameter.

Grouting may consist of:

- a) Cement grout shall be mixed in proportions of not more than 20 litres of water to 50kg cement and shall include an approved expansion/wetting agent.

After the holes have been cleared and pre-wetted, they shall be blown out with clean dry air before inserting the grout. If it is not possible to dry the hole the grout may be inserted with minimal water

movement in the hole. In either event the grout must be inserted through a tube down to the bottom of the hole so that the grout fills the hole from the bottom up.

Within 15 minutes of having been filled with grout, the dowels shall be carefully driven into the holes.

b) Resin Grout. Resin grout must be used in accordance with the manufacturer's specification.

The hole shall be cleared of all dirt and the grout poured into the hole so as to displace any water.

The dowel shall be inserted with an agitating motion to eject any entrapped air bubbles”.

**SECTION 6200: FALSEWORK, FORMWORK AND CONCRETE FINISH**

**B6202 MATERIALS**

(c) Formwork

(iii) Void Formers

Add the following:

“Permanent cylindrical formwork shall consist of “unbraced” watertight hollow cylinders of inside diameter 660 mm and 450 mm prefabricated to the lengths specified on the relevant drawings.

This formwork may be made of any approved galvanised sheet steel with a minimum thickness of 1,0 mm. It must be adequately strong and rigid to resist deformation or rupture under the pressure and during vibration of the fresh concrete. The Employer’s Agent shall have the right to reject any permanent formwork which he considers to be unsuitable. Attention shall be paid to the securing of the formwork to prevent flotation during placing of the concrete by tying it securely to the deck falsework.

**B6204 DESIGN**

(a) General

Add the following:

“The Contractor shall submit to the Employer’s Agent at least 4 weeks before the structure is scheduled for construction the design analysis and detail drawings of the falsework and formwork. The drawings shall be signed by a suitably experienced Professional Engineer. The cost of any additional reinforcing steel, concrete etc required as a result of the Contractor’s chosen method of construction shall be to the Contractor’s account. No construction shall commence until the Employer’s Agent has given his written approval”.

(b) Falsework

Add the following:

“Unless instructed otherwise by the Employer’s Agent, the Contractor shall submit his design criteria and detailed drawings of the staging and formwork signed by a suitably experienced Professional Engineer”.

(j) Formwork

Add the following:

“The height to which formwork for piers, walls and abutments may be erected at any one time shall be subject to the approval of the Employer’s Agent”.

**B6205 CONSTRUCTION**

(b) Formwork

(i) General

Add the following paragraphs:

“Formwork to faces of structures with a gradient equal to or greater than ten vertical to one horizontal shall be classified as vertical formwork.

Formwork to faces of structures with a gradient less than ten vertical to one horizontal, or equal to or greater than one vertical to ten horizontals, shall be classified as inclined formwork.

Formwork to faces of structures with a gradient of less than one vertical to ten horizontal shall be classified as horizontal formwork.”

“All form ties shall be provided with recoverable chamfered cones between tube ends and formwork faces to ensure that tube ends are not exposed on concrete surfaces. The cones shall have a minimum depth of 15 mm”.

Add the following new sub-sub-clause

(viii) Deck formwork

“The deck formwork should only be staged from overhead heavy duty temporary girders secured over the bridge supports. The tendered rate is deemed to include all materials, labour, equipment and incidentals”

**B6207 FORMED SURFACES: CLASSES OF FINISH**

(c) Class F2 surface finish

Add the following:

“The use of steel forms shall be permitted provided that only undamaged forms are used for such work and that the forms shall be subject to the approval of the Employer’s Agent.”

(d) Class F3 surface finish

Replace the second paragraph with the following:

“The use of steel forms shall be permitted provided that only undamaged forms are used for such work and that the forms shall be subject to the approval of the Employer’s Agent.”

**B6208 REMEDIAL TREATMENT OF FORMED SURFACES**

(a) General

Add the following:

“Agreement shall be reached with the Employer’s Agent regarding any remedial treatment to be given after the surfaces have been inspected immediately after the formwork has been removed, which treatment shall be carried out without delay. No surfaces may be treated before inspection by the Employer’s Agent.

The above requirement also applies to all patching of blow holes and tie holes to allow patches to cure with the concrete element”.

(b) Repairs to surface defects

Delete the contents of sub-clause 6208(b) and substitute with the following:

“Small surface defects such as cavities produced from ties, large isolated blow holes, broken corners and edges and honeycomb due to joint leaching shall be repaired as follows :

All defective concrete shall be removed to a minimum depth of 30mm and down to sound concrete such that no “feather edges” are formed. The area to be repaired shall be dampened with a cement slurry before patching.

The patching mortar shall consist of the same fine aggregate used in the concrete in the ratio of 1 cement to 3 sand by volume. The water content shall be such that the mix is apparently dry – the moisture coming to the surface, only after ramming with the end of a 38 x 38 timber or similar.

After firmly compacting until moisture appears at the surface, the patch shall be smoothed off with a wooden trowel and left to cure for 48 hours.

White cement of PBFC may be substituted for up to 35% of Ordinary Portland Cement in order to obtain a colour match.

For repairs to medium to large areas of honeycomb, particularly on the earth faces to bridge abutments and box culverts the preparation shall be as for small patches but a proprietary patching mix shall be used in accordance with the manufacturer’s specification.

Where this patching may be considered inadequate by the Employer’s Agent, other techniques such as pneumatically applied mortar, pressure grouting and epoxy bonding agents may be called for”.

**SECTION 6300: STEEL REINFORCEMENT FOR STRUCTURES**

**B6302 MATERIALS**

(a) Steel Bars

Add the following :

“Steel reinforcement shall comply with the following :

- (a) High yield stress deformed bars shall be hot rolled to SANS 920-2011.
- (b) Mild steel bars shall be plain hot rolled to SANS 920-2011.

Substitution of mild steel reinforcement as indicated on the drawings by an equivalent area of high tensile steel or vice versa will not be permitted”.

**B6306 PLACING AND FIXING**

Add the following to the second paragraph:

“Prior to fixing the steel, samples of the proposed spacers shall be submitted to the Employer’s Agent along with a written statement for in-situ manufacture, if applicable, for approval.”

“Overlap of steel reinforcement bars shall be such that the cover to the lapped bars remains constant at the specified cover.”

**B6307 COVER AND SUPPORTS**

Add the following to the second paragraph:

“However, the cover provided in the case of footings and foundation capping units of bridge structures shall be not less than 75 mm.”

Add the following to the fifth paragraph:

“Concrete cover blocks shall be made using the same cement and aggregate type as the main concrete with the same water/ cement ratio so that differences in shrinkage, thermal movements and strain are minimised. Cover blocks shall be water cured by submersion for a minimum of 7 days and thereafter kept submerged in water until immediately before fixing onto reinforcing steel. Where cover blocks, subsequent to fixing, have visually dried out they shall be remoistened by an appropriate method so that they are damp before the placing of concrete. ” Where fixing wire is inserted into cover blocks, it shall be galvanised. Cover and spacer blocks manufactured from other materials e.g. plastic, shall be approved by the Employer’s Agent prior to being used on site.”

**SECTION 6400: CONCRETE FOR STRUCTURES**

**B6402 MATERIALS**

(a) Cement

Replace the colon at the end of the first paragraph with a comma, and add the following:

“taking into account the adoption of the new SANS 50197-1:2013 code for cements:”

Add the following new paragraphs:

“The type of cement to be used in any concrete element shall take into account the environmental conditions and durability requirements at the location of the site of the works, and shall be as approved by the Employer’s Agent.

With the exception of the standard SANS approved cement blends supplied by the primary cement producers, the blending of CEM1 and extenders shall not be permitted unless specifically approved by the Employer’s Agent on the basis of an acceptable quality assurance procedure.

(b) Aggregates

Delete the remainder of the sentence after “exceed” in sub-sub-sub-clause (i) (1) and replace with the following:

“150% of that of the reference norite aggregate”

Delete the remainder of the sentence after “exceed” in sub-sub-sub-clause (i)(2) and replace with the following:

“200% and of the coarse aggregate 175% of that of the reference norite aggregate”

Delete the remainder of the sentence after “exceed” in the first paragraph of sub-sub-sub-clause (i)(3) and replace with the following:

“235% of that of the reference norite aggregate”

Delete the entire last paragraph of sub-sub-sub-clause (i)(3) commencing with “The drying shrinkage of concrete...”

Add the following new sub-sub-clause:

“(vi) The maximum chloride ion content of fine aggregate shall be 0,03% by mass of aggregate as measured by SANS 1083:2018. Where concrete is situated in a chloride environment the value shall be reduced from 0,03% to 0,01%.”

(d) Water

Add the following:

“Water for concrete, other than pre-stressed concrete, shall not contain chlorides, calculated as sodium chloride, in excess of three thousand (3 000) parts per million nor sulphate, calculated as sodium sulphate, in excess of two thousand (2 000) parts per million. Water for pre-stressed concrete shall not

contain chlorides, calculated as sodium chloride, in excess of four hundred (400) parts per million nor sulphate, calculated as sodium sulphate in excess of four hundred (400) parts per million.

Water for curing concrete shall not contain impurities in sufficient amount to cause discolouration of the concrete or produce etching of the surface.

No sea-water, or water otherwise salty, shall be used”.

No water shall be added on site to ready mix concrete prior to placing to improve workability. All concrete delivered to site shall be checked for workability using the slump cone test and slump measured outside of the limit set from the design mix shall be rejected.”

(e) Admixture

Add the following:

“Only admixtures of the type that reduce the water content of the mix will be considered by the Employer’s Agent”.

**B6404 CONCRETE QUALITY**

(a) General

Add the following:

“(i) In order to avoid the possibility of the deterioration of concrete due to alkali aggregate reaction, no Portland cement having an equivalent sodium monoxide content (calculated as  $Na_2 + 0,658 K_2O$ ) exceeding 0,60% and then on condition that the cement content of the concrete does not exceed 350 kg/m<sup>3</sup> shall be used in combination with any coarse aggregate to produce concrete for use in any of the structures on this contract unless a test certificate is produced from the CSIR stating that long term testing has proved the aggregate to be “non-reactive” or “slowly expanding” in terms of clause 8105(f) in which case the criteria of clause 8105(f) shall apply. Should the cement content exceed the 350 kg/m<sup>3</sup> then the equivalent sodium monoxide content must not exceed the 2,1 kg/m<sup>3</sup> of concrete limit.

(ii) The Contractor shall prior to the use of cement provide test certificates from an approved laboratory giving the equivalent sodium monoxide content of that batch of cement”.

(b) Strength Concrete

Add the following :

“For this contract the concrete shall comply with the requirements for “strength concrete”.

The following classes of concrete will be required :

Class of Concrete	Characteristic 28 day crushing strength (MPa)	Maximum Size of aggregate (mm)	Minimum Cementitious material contents kg/m <sup>3</sup>
W35/19 (W/1.9)	35	19	380*



20/19	20	19	Not Applicable
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\* of which 30% must be PFA

Add the following:

- (i) Minimum Cement to Water Ratios

For reasons of durability, the minimum cement to water ratios (C/W) of the mix for any class of concrete in the structures shall comply with the values specified, irrespective of whether the strength requirement can be met by a mix with a lower cement to water ratio. Such concrete shall in the schedule of quantities, be designated by the normal designation preceded by a "W" and the minimum C/W ratio in brackets, i.e (Class W35/19 (W/1.9) concrete is Class 35/19 concrete but with a minimum C/W ratio of 1,9).

The characteristic strength of the mix shall be based on the higher of the following two values:

- (a) The specified 28 day characteristic compressive strength of the concrete and
- (b) a characteristic compressive strength corresponding to the designated minimum Cement to Water Ratio  $\alpha = 0,85$ 
  - (i) The minimum cementitious content of structural concrete per kg per cubic metre is specified and the replacement of SABS ENV 197 CEM I : 42,5 cement with a CEM II : 42.5 shall be approved by the Engineer.
  - (ii) The cementitious content of any class of concrete shall not exceed 450 kg per cubic metre of concrete.
  - (iii) The conditions of exposure for the structures are deemed "severe" in terms of Clause 6.2.2 SANS 10100 – 2: 2014.

#### **B6407 PLACING AND COMPACTION**

- (a) General

Add the following:

"The pumping of concrete will only be allowed if it can be shown that the coarse aggregate content of the mix has not been significantly reduced to make pumping possible".

- (b) Placing

Add the following:

"Casting of the in-situ parapets or placing of precast parapets shall only commence after removal of the deck staging. The levels of the top rail of each panel of the balustrade/parapets shall be confirmed in writing by the Design Engineer.

#### **B6408 CONSTRUCTION JOINTS**

- (a) General

Add the following:

“(i) Horizontal construction joints in substructure

Horizontal substructure construction joints in abutment and pier walls and columns necessitated by the method of construction employed by the Contractor will be allowed subject to the approval of the Employer’s Agent. It is a requirement that the exposed surface be prepared to expose the aggregate prior to casting of the next concrete lift.

“(ii) Horizontal construction joints in superstructure

No horizontal construction joints will be permitted.

“(iii) Vertical construction joints

No vertical substructure construction joints other than those shown on the drawings will be allowed.

Vertical construction joints in the decks will only be permitted where approved by the Employer’s Agent. The construction joints must be at 90 degrees to the centreline of the deck or follow the skew in a series of steps those sides are either parallel or normal to the centreline of the decks.

The sequence of pouring of sections of the decks shall be as approved by the Employer’s Agent.

**B6409 CURING AND PROTECTION**

Add the following:

“The curing of concrete with the exception of ‘thin’ precast products shall be carried out by using an approved curing compound and shall also be wet cured as specified in Clause 6409(b), (c) & (d), i.e. a double system of curing is specified.

Where applicable formwork shall be removed as soon as practical in accordance with Clause 6206 and all concrete, except for the surfaces of construction joints shall be cured by applying a liquid type curing compound and also “wet cured”. The curing shall be applied to the concrete as soon as practical after the formwork has been removed.

The curing compound shall be an approved non-bituminous pigmented “wax” liquid compound conforming to the requirements of AASHTO Specification M 148, Type 1 (non-pigmented) and the compound shall be applied strictly in accordance with the manufacturer’s specification and shall be of such a nature that it will become inconspicuous within seven (7) days after application.

Samples of the curing compound offered are to be submitted to the Employer’s Agent for approval, and no curing compound is to be used until approved by the Employer’s Agent.

The curing compound shall be applied over the area of concrete required by spraying. Spraying equipment shall be of the fully atomizing type equipped with a tank agitator which provides for continual agitation of the curing compound during the time of application. The spray must be protected against the wind by means of a hood.

Concrete at construction joints shall be wet cured as specified in Clause 6409 (c) or (d).

**B6410 ADVERSE WEATHER**

Add the following new sub-clause:

“(d) Temperature and hydration of concrete

Site batched concrete: The temperature of concrete delivered to site shall be within the range 10°C to 30°C. Concrete which has a temperature outside of this range shall not be placed in the structure.

Care must also be taken not to cast concrete onto hot steel shutters as this might induce cracking.

The rate of hydration of the cement in the concrete shall be such that the concrete can be placed and properly compacted within 2 hours after the addition of water to the mix ingredients. The initial set of the concrete shall not be unduly delayed due to inappropriateness of admixtures or cement type, which could promote bleeding.”

**B6415 Demolition and removal of Existing Structural Concrete**

Add the following new clause:

“(c) The method and sequence of demolition or removal of concrete shall be in accordance with the drawings or as directed by the Employer’s Agent and the approved method statement submitted by the contractor following pre-construction testing if necessary.

**SECTION 6600: NO-FINES CONCRETE, JOINTS, BEARINGS, BOLT GROUPS FOR ELECTRIFICATION, PARAPETS AND DRAINAGE FOR STRUCTURES**

**B6603 JOINTS IN STRUCTURES**

(a) Materials

(i) General

Add the following new paragraphs:

Full Agreement certificate is required for bridge deck joints.

Joints specified for this contract, shall be considered to be proprietary expansion joints in accordance with this section of the specification. These joints shall only be installed by approved specialist subcontractors who have obtained appropriate certification for their Joint System by :

**AGRÉMENT SOUTH AFRICA**

P O Box 395

Pretoria 001

Tel.: 012 841 3708 Fax.: 012 841 2539

Prospective tenderers must provide details of the proposed specialist subcontractor in the schedule of specialist subcontractors of this tender document, which shall include a proven track record of the proposed Joint System as well as drawings, specifications and quality assurance procedures (Manufacturing and installation). Proof of the Agrément Approval and payment for certification must be also provided prior to the installation of the joints.

In addition, the successful contractor is to ensure that the subcontractor provide as-built drawings of the completed joint installation in hardcopy and digital format (AutoCAD).

(f) Proprietary expansion joints

(i) General

Add the following:

Proprietary Thorma Joints are specified.

(g) Installing the expansion joints

Delete the first paragraph and replace with the following:

Only approved specialist subcontractors shall install all deck expansion joints. Installed deck expansion joints shall have the following guarantees:

New asphaltic plug type installations	10 years
Joint Sealant	5 years

The joint guarantee shall be in both the names of the contractor and joint subcontractor and they shall be "jointly and severally liable until the end of the guarantee period".

Add the following new Clauses:

(h) Membrane Sealant

(i) General

The back (fill) face of all construction joints and specified abutment and retaining walls expansion or contraction joint shall be waterproofed with a minimum 1,5 mm thick and 300 mm wide membrane or rubberised asphalt integrally bonded to polyethylene sheeting which shall be applied in a double layer. (Bituthene 3000 or Derbygum, or equivalent).

(ii) Materials

The material shall conform to the following requirements:

Thickness – 1,5 mm (Min)

Permeance – 0,1 (Max) ASTM E96

Metric – Perms Method B (ng/Ns)

Pliability – ASTM D146 (180° bend over unaffected 25 mm mandrel) at minus 32°C

(i) General

All vertical contraction and expansion joints in the substructure shall be waterproofed with a minimum 1,5 mm thick and 300 mm wide membrane of rubberised asphalt integrally bonded to polyethylene sheeting which shall be applied in a double layer. (Bituthene 3000 or equivalent).

(i) Dowels & guides

To allow a certain degree of movement, the dowel bars connecting the approach slabs to the abutment seating nibs shall be wrapped with “Denso” tape, unless otherwise specified on the drawings

## **B6604 BEARINGS FOR STRUCTURES**

(a) Materials

Add the following sub-sub-clause:

(vii) Payment

In view of the small number of bearings required for this contract a selected subcontractor will not be employed to supply the bearings.

The tenderers are required to state in their tender the supplier and the mark-up they have based their tender on.

Also with their tender enclose any other quotes they may have received.

(d) Elastomeric Bearing

(i) Technical data

(2) Size and Construction of Bearing

Add the following:

“The bearing pads shall be totally encased in a layer of rubber at least three millimetres (3 mm) thick over the top and bottom plates as well as five millimetres (5mm) side cover to all plates”.

(3) Hardness and Type of Elastomer

Add the following:

“The rubber bearings shall consist of laminated layers of natural rubber and steel. The shore hardness of the rubber shall be 60 degrees. A minimum of 2,5% layout of a recognised anti-ozonant shall be incorporated in the natural rubber mixes.”

(iii) Inspection and Testing

Add the following:

“The Tenderer’s attention is drawn to the fact that the bearing pads supplied shall be subjected to the tests as detailed in the specification, and since these tests are time consuming, bearing pads must therefore be supplied at the earliest possible date as delays which may be caused through non-availability of bearing pads as a result of failure under tests, unsatisfactory test results, or of test results not yet being available, shall not be considered as ground for compensation either in time or in any other form.”

Testing of Bearings

- (1) All bearings shall be tested as specified in the 6th paragraph of clause 6604(d)(iii) at the Contractor’s cost.
- (2) In addition, 10% of all bearings as selected by the Employer’s Agent shall be tested as below, of which will be paid for under payment item 81.01 in the Schedule of Quantities.

Stiffness in Compression

Each bearing pad to be tested shall be loaded to fifty (50) per cent greater than the designed vertical load indicated on the drawings and this test load shall be maintained for a period of two (2) minutes. The test load shall then be reduced to ten (10) per cent of the design load and maintained at this value for ten (10) minutes when gauge readings shall be taken and recorded. The bearing pad shall be re-taken and recorded. The bearing pad shall then be re-loaded to fifty (50) per cent greater than the designed load and the test load maintained at this value for ten (10) minutes, after which gauge readings shall again be taken and recorded. All the gauge readings thus recorded shall be reported to the Employer’s Agent.

Stiffness in Shear

A testing procedure similar to that described in (a) above, shall be followed, the loading being such as to maintain steady shear deflections of respectively ten (10) and one hundred and fifty (150) per cent of the designed shear deflection as indicated on the drawings. In this case, deflection as indicated on the drawings. In this case, all the test load values to maintain these deflections shall be recorded and reported to the Employer’s Agent”.

Add the following new sub-sub-clauses:

(iv) Approval of Elastomeric Bearings

The Contractor shall obtain the approval of the Employer’s Agent before any bearings are ordered.

(v) Rejection

Bearing components improperly manufactured or improperly stored, handled or transported such as to cause deterioration, corrosion or damage, and bearing assemblies failing to display claimed by the manufacturer or displaying test properties inconsistent with the specifications shall be rejected and on written advice of such rejection, shall be removed immediately and permanently from the site of the works by the Contractor. Assemblies improperly installed shall likewise be rejected and shall be rectified failing which the assembly shall be removed and rebuilt by the Contractor, all to the satisfaction of the Employer's Agent".

**B6606 DRAINAGE FOR STRUCTURES**

Add the following new sub-clause:

“(e) Drainage Flownet

The system shall consist of an extruded high profile mesh made from low density polyethylene and covered with a filter fabric (such as Netlon FN6 covered with Geotextile Grade 3 - non-woven such as Kaytech Bidim U12) together with M150 mm dia Netlon drainage pipes.”

**SECTION 8100: TESTING MATERIALS AND WORKMANSHIP****B8103 THE COSTS OF TESTING****(a) Process control**

*To the end of the first paragraph add:*

“and he shall, at his own cost, remove material from the Works which have been found unsuitable.

The Contractor shall supply the Employer’s Agent with copies of all his process control test results as soon as they become available.”

**B8105 TESTING THE AGGREGATES**

*Add the following Subclause to this Clause:*

**"(g) Determination of Ethylene Glycol Durability Index**

The Ethylene Glycol Durability Index shall be determined as follows:

**(i) Apparatus**

Suitable pans or basins  
Ethylene Glycol solution  
Stirring rod

**(ii) Method**

Obtain three or more representative samples from the source to be evaluated.

If not already crushed, crush the material in order to obtain sufficient minus 19 mm plus 13 mm sized aggregate in order to totally cover the bottom of the basin or pan with a single layer of stone. Add sufficient ethylene glycol to each basin ensuring that every aggregate particle is completely submerged.

After soaking for 24 hours, gently stir the aggregate, allow to settle and observe and record the response of the aggregate to the ethylene glycol according to the criteria listed in (iii) below. Continue the above cycle at intervals of 24 hours for a further 4 days, in each case recording the observed response. After 5 days allow the samples to remain submerged in the solution and observe and record the disintegration response after a total period of 15, 30 and 60 days has elapsed.

**(iii) Classification of response**

After each cycle, classify and record the response of the aggregate as follows:

**DISINTEGRATION CLASS**

- Class 1:** No obvious effects, or only very minor spalling of sand particles or very small flakes.
- Class 2:** Splitting of rock, accompanied by any other disintegrative effects.
- Class 3:** Fracturing (spheroidal and / or internal) without extensive spalling or distortion.
- Class 4:** Fracturing (spheroidal and / or internal) with extensive spalling or distortion.
- Class 5:** Complete disintegration.



The time factor in the above disintegrative process is classified according to the time taken for the most serious effect of the expansive stresses to occur i.e.

#### TIME CLASS

**Class 4:** 0 - 5 days

**Class 3:** 6 - 15 days

**Class 2:** 16 - 30 days

**Class 1:** 31 - 60 days

**Class 0:** Over 60 days

- (iv) Determination of Glycol Durability Index

The Ethylene Durability Index is determined by adding the class number as assigned for the specific disintegrative response observed to the class number as assigned for the period for this response to occur. A durability index ranging from 1 (no response) to 9 (rapid and complete disintegration) is thus determined."

#### B8110 TESTS RELATING TO CHEMICAL STABILIZATION

*Add the following subclause:*

**“(d) The Wet-Dry Durability Test for cement-treated materials using the hand brush method.**

- (i) Scope

This method covers the procedure for determining the soil-cement losses obtained by repeated wetting, drying and hand brushing of hardened soil-cement specimens (see (v)(3) below).

- (ii) Apparatus

- (1) A moisture curing room capable of maintaining a relative humidity of 95 to 100 percent and a temperature of 22 to 25°C, or suitable plastic bags capable of holding specimens and carriers in an air tight condition in a water bath as described in (ii)(2) below.
- (2) A suitable water bath with thermostatic control capable of maintaining a temperature of 22 to 25°C.
- (3) A balance to weigh up to 10 kg, accurate to 0,5 g.
- (4) A drying oven capable of maintaining temperatures of 71 ±3°C and 110 ±5°C.
- (5) A wire scratch brush made of 50 mm by 1,6 mm flat 26 gauge wire bristles assembled in 50 groups of 10 bristles and mounted to form five longitudinal rows and 10 transverse rows on a 200 by 65 mm wooden block.

- (iii) Method

- (1) Preparation of specimens

Prepare specimens in accordance with the procedure described in the Appendix to method A19 in the TMH 1 with the following exceptions:

Use the material passing the 37,5 mm sieve and discard the material remaining on the sieve.

Use the apparatus and compaction method as described in TMH 1 method A7 ( Modified AASHTO).

(2) Curing of specimens

Rapid cure the specimens (see (v)(5) below). Alternatively, the specimens may be cured for seven days at a relative humidity of 95% to 100% and a temperature of 22°C to 25°C in a suitable curing room or in plastic bags and a suitable water bath.

(3) Wetting, drying and brushing

After curing, remove the specimens from the curing room or plastic bags, allow to cool if necessary, and submerge them in water at room temperature for a period of five hours.

Remove the specimens from the water and place them in an oven at 71°C for 42 hours.

Remove the specimens from the oven. Give each specimen two firm strokes on all areas with the wire scratch brush. The brush must be held parallel to the long axis of the specimen or parallel to the ends as required to cover all areas of the specimen. Apply these strokes to the full height and width of each specimen with a firm stroke corresponding to approximately 13,5 kN force (see note (v)(2) below).

(4) Determination of soil-cement losses

After 12 cycles, dry the specimens to constant mass at 100°C and determine the oven dry mass of the specimens. The data collected will permit the calculation of the soil-cement losses of the specimens after the prescribed 12 cycle test.

(iv) Calculations

- (1) Calculate the soil-cement loss of the specimens as a percentage of the original oven-dry mass of the specimens as follows:

$$L = \frac{W - M}{W} * 100$$

Where

L = soil-cement loss (%)

W = original calculated oven-dry mass (g) (calculated according to paragraph (iii)(5) in the Appendix to method A19 in the TMH 1).

N = final oven-dry mass (g).

- (2) The percentage loss shall be calculated and reported to the nearest 0.1 percent. The results are normally required for designing a mix and are reported graphically against relevant cement contents.

(v) Notes

- (1) Mass determination of the specimens before and after brushing are usually made at the end of each cycle during research or special investigations.

- (2) If it not possible to run the cycle continuously because of Sundays of holidays or for any other reason, the specimens should be held in the oven during the lay-over period.
- (3) The test was originally developed to determine wet-dry durability of cement-treated material. It can, however, be used with equal success on material tested with other chemical stabilisers, and milled blast furnace slag, or cement and milled blast furnace slag.
- (4) The pressure is measured as follows:

Clamp a specimen in a vertical position on the edge of a platform scale and zero the scale. Apply vertical brushing strokes to the specimen and note the force necessary to register approximately 1,36 kg.

- (5) Rapid curing:

Seal each specimen air tight in a suitable container or plastic bag. Carefully place the briquettes on suitable holders or in pans and place in the oven at the relevant temperature and period given below:

<b>Stabilising agent</b>	<b>Temp (°C)</b>	<b>Time (Hours)</b>
Cement	70 -75	24 ±0.5
PBFC	70 -75	24 ±0.5
Lime	60 ±2	45 ±1
Lime/FA	60 ±2	45 ±1
Lime/MBFS	60 ±2	45 ±1".

*Add the following new Clause:*

#### **"B8118 FIELD BINDER TRANSVERSE DISTRIBUTION ("BAKKIE") TEST**

##### **(a) SCOPE**

This method sets out the procedure for the simple field determination of the transverse distribution of a binder distributor. Certain statistical criteria are applied to the results to determine conformance with requirements.

##### **(b) DEFINITION**

The purpose of the test is to determine conformance of the transverse distribution of the spray bar, as measured by direct discharge from sets of 3 nozzles, using the project binder.

##### **(c) APPARATUS**

- (i) Steel troughs

Steel troughs fitted with handles and manufactured from 3 mm mild steel plate, conforming to the following or similar dimensions:

Width – 265 mm  
Depth – 405 mm  
Height – 300 mm

A total of 14 troughs are required for a 4,2 m wide spray bar. Each trough must be clearly numbered on its side.

(ii) Balance

A balance capable of weighing up to 50 kg to an accuracy of 20 g.

(iii) Personal protective clothing

The appropriate safety gear must be worn when performing this test and should include a pair of appropriate gloves, face shield and approved overalls.

(iv) Cleaning fluid

Diesel or other suitable fluid.

**(d) PREPARATION OF THE BINDER DISTRIBUTOR**

Ensure that all the binder strainers on the sprayer have been cleaned.

Preheat the binder in the distributor tank to within  $\pm 5$  °C of the required spray temperature.

Circulate the binder through the spray bar for at least 15 minutes.

Position the spray bar over a full-length drip tray. A short preliminary spray is made to ensure that all the nozzles are functioning and that the machine is in normal working condition. Suck back the binder from the drip tray into the distributor tank on completion of test spray.

If necessary, correct any malfunctioning of the spray bar.

**(e) METHOD**

(i) Ensure that all troughs are clean and free of any water or other materials.

(ii) Place the pre-weighed steel troughs described in (c)(i) under the spray bar in such a manner that the discharge of each set of three nozzles are collected in one trough. Ensure that the troughs are placed in numerical order.

(iii) Adjust the spray bar height to ensure that the nozzles are below the sides of the trough.

(iv) Increase the bitumen pump speed to yield the desired triple spray overlap in accordance to the type of nozzles and type of binder being used. Typically, this could vary between 12 and 20 litres per minute for conventional binders.

(v) Open the nozzles and spray sufficient binder to fill the troughs without risking spillage during handling.

(vi) Weigh the troughs to determine the mass of binder sprayed.

(vii) On completion of the weighing and before the binder cools suck back the binder into the distributor tank.

(viii) Only clean the troughs with a suitable cleaning fluid once they have cooled down to room temperature.

(ix) Store used cleaning fluid in a suitable container for re-use.

**(f) CALCULATION AND REPORT**

(i) Determine the net mass of binder in each trough to the nearest 20 grams.

$$\text{Net mass binder} = (M_1, M_2, M_3 \dots M_n).$$

(ii) Calculate the average mass of the binder collected in all the troughs.

$$M_{ave} = \sum (M_1 \dots M_n) / n$$

where n = number of troughs

(iii) Calculate the deviation from the average mass for every trough and express the value as a percentage.

$$\% \text{ Deviation} = (M_{ave} - M_i) / M_{ave} \times 100$$

(iv) If the transverse distribution is out of specification, make the necessary adjustments to the spray bar and repeat the test.

(v) Report results on a suitable report sheet.

(vi) Update the 'bakkie' test record with the relevant information for the distributor.

**(g) ACCURACY**

Due to the varying nature of the different types of binders, cognisance must be taken of the respective binder's viscosity at spray temperature when establishing achievable tolerances, namely:

- Conventional binders 40 – 100 CPs
- Polymer modified binders 120 –200 CPs
- Bitumen rubber 2,000 – 3,000 CPs".

**B8117 MEASUREMENT AND PAYMENT**

**B81.02 Other tests required by the Engineer**

*Add the following subitem to this item:*

<b>Item</b>	<b>Unit</b>
“(a) Cost of Testing	Prov Sum”
(b) Handling cost and profit in respect of item B81.02(a) above	%

PROVINCE OF THE EASTERN CAPE

DEPARTMENT OF TRANSPORT

TENDER NO. SCMU10-24/25-0021

BRIDGE CONSTRUCTION FOR HAMBURG CONSTRUCTION PROJECT FOR A PERIOD OF 12  
MONTHS

**C3.3 SECTION C: OCCUPATIONAL HEALTH AND SAFETY SPECIFICATIONS**

<b>SECTION C: OCCUPATIONAL HEALTH AND SAFETY SPECIFICATIONS</b>
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## **C1 INTRODUCTION**

### **C1.1 List of Abbreviations**

CHSA	Construction Health and Safety Agent
CHSO	Construction Health and Safety Officer
DoT	Department of Transport of the Eastern Cape Provincial Government
DME	Department of Mineral and Energy
DMR	Department of Mineral Resources
DoL	Department of Labour
DSTI's	Daily Safe Task Instructions
EA	Employers Agent
EAR	Employers Agents Representative
EEA	Employers Environmental Agent
FEMA	Federated Employers Mutual Association
H&S	Health and Safety
HIRA	Hazard Identification Risk Assessment
MH&SA	Mine Health and Safety Act No. 29 of 1996 (as amended)
OHS	Occupational Health and Safety
OHSA	Occupational Health and Safety Act No. 85 of 1993 (as amended)
PSHSS	Project Specific Health and Safety Specification
PC	Principal Contractor
PPC	Personal Protective Clothing
PPE	Personal Protective Equipment
SANS	South African National Standards (Authority)
SMME	Small, Micro, Medium Enterprise
SoP's	Safe Operating Procedures
SWP	Safe Work Procedure
TMS	Technical Method Statement
WCC	Workman's Compensation Commissioner

### **C1.2 Definitions**

The definitions used will be those set out in the Regulation Gazette No 37305 of 7<sup>th</sup> February 2014 with the following additions or amendments;

**Client:**

Hereafter referred to as the Employer in terms of the Contract.

**Employers Agent:**

Means a competent person appointed by the Client to design, supervise and monitor construction on their behalf.

**Hazard Identification and Risk Assessment (HIRA) and Risk Control:**

Means a documented plan, which identifies hazards, assesses the risks and details the control measures and safe working procedures which are to be used to mitigate and control the occurrence of hazards and risks during construction or operational phases.



**Induction Training:**

Means once off introductory training on general health and safety issues given to all employees and visitors to the site before commencement of work on site.

**Mine:**

Any excavation from which material (soil, gravel, stone etc.) is taken for use on the construction site.

**Site:**

Means the area in the possession of the Principal Contractor for the construction of the works. Where there is no demarcated boundary it will include all adjacent areas and haul roads which are reasonably required for the activities for the Principal Contractor, and approved for such use by the Engineer.

**The Act:**

Means, unless the context indicates otherwise, the Occupational Health and Safety Act, No. 85 of 1993 and Regulations promulgated thereunder, as amended.

**Health and Safety Plan:**

The Pre-Construction Health and Safety Plan is the foundation upon which the health and safety management of the construction phase of a project needs to be based.

**C1.3 Key Role-Players**

Client	DoT represented by the Head of Department and/or such other person or persons, authorised thereto in writing.
Designer / Engineer	As appointed in terms of the Contract. The Designer/Engineer as referred to in CR6 is hereafter referred to as the Employers Agent.
CHS Agent	As appointed by the Employer in terms of CR5(5) of the OHS Act
Principal Contractor	As appointed in terms of CR5.1(k) of the OHS Act.
Contractor	A Contractor appointed by the Principal Contractor in terms of CR7.1(c)(v) of the OHS Act.

**C1.4 Key References**

Occupational Health and Safety Act No. 85 of 1993 and Regulations (as amended)  
 Mine Health and Safety Act and Regulations No. 29 of 1996 (as amended)  
 Compensation for Injury and Occupational Diseases Act No. 100 of 1993 (as amended)  
 Committee of Land Transport Officials (COLTO) South African Roads Specifications for Road and Bridge Construction  
 South African National Standards  
 General Conditions of Contract 2015 (GCC) Edition 3  
 Traffic Safety Manual (SARTSM) Chapter 13, Volume 2 of 1999  
 Road Traffic Act No. 93 of 1996 (as amended)

**C2 PURPOSE OF THIS PROJECT SPECIFIC HEALTH AND SAFETY SPECIFICATION (PSHSS)**

This PSHSS highlights the aspects to be implemented over and above the minimum requirements of current legislation. Requirements may be changed should new risks or issues be identified that could not have been foreseen during the design phase of the project.

**C2.1 Preamble**

The Department of Transport DoT is tasked to provide infrastructure within the Eastern Cape including the construction of roads and civil structures.

Each year fatalities and serious injuries mar the reputation of the Construction Industry. The DoT has a responsibility to limit such injuries by ensuring a zero tolerance approach to Contractors and those affiliated to a particular project. Thus a high premium is placed on the Health and Safety DoT stakeholders, which include its employees, professional service providers, public and its physical assets. The responsibilities that the DoT and relevant stakeholders have toward its employees are captured in this document. The responsibilities stem from both moral, civil and a variety of legal obligations.

The Principal Contractor is to take due cognisance of the above statement.

This PSHSS is a performance specification to ensure that the DoT and any bodies that enter into formal agreements with the DoT, i.e. Engineers, Principal Contractors (PC) and Contractors, achieve an acceptable level of OHS compliance.

No advice, approval of any document required by this PSHSS (i.e. hazard identification and risk assessment, action plans) or any other form of communication from the Client shall be construed as an acceptance by the Client. Nor shall such communication relieve or absolve the PC from any obligation or from achieving compliance with legal requirements. The PC remains responsible for achieving the required performance levels.

### **C3 IMPLEMENTATION OF THE PROJECT SPECIFIC HEALTH AND SAFETY SPECIFICATION (PSHSS)**

This PSHSS forms an integral part of the Contract, and the Principal Contractor is required to make it an integral part of their Contracts with Contractors and Suppliers. A PSHSS is to be available for each level of Contract and Contractor, and must be complied with.

This PSHSS must be read in conjunction with the OHSA, its Regulations (as amended) and any other standards relating to work being done, and ensure compliance thereto. The information relative to the scope of the project, the works etc. is detailed in the tender document, and is to be taken into account when developing the H&S Plan and associated documentation.

The Employers baseline design risk assessment is included, as is a summary of risks identified. Refer to **Annexure J** in these specifications

#### **C3.1 Summary of Risks Identified During Design**

- C3.1.1 General Requirements and Provisions (Series 1000)
- C3.1.2 Drainage (Series 2000)
- C3.1.3 Earthworks (Series 3000)
- C3.1.4 Asphalt Pavements and Seals (Series 4000)
- C3.1.5 Ancillary Roadwork's (Series 5000)
- C3.1.6 Structures (Series 6000)
- C3.1.7 Sundry Structures (Series 7000)
- C3.1.8 Sundries (Series 8000)
- C3.1.9 Specified Hazardous Chemical Substances

Should there be design changes, or change in the scope of works, an amended PSHSS may be issued. Where amended PSHSSs are issued, the PC will be required to ensure a resubmission of an amended H&S Plan and OHS BoQ for approval. Further to this, the PC must ensure that a similar system must be implemented between all their Contractors and Suppliers.

### **C4 REQUIREMENTS AT TENDER STAGE**

#### **C4.1 Documentation required from the Tenderer;**

- C4.1.1 Declaration – Fulfilment of the Construction Regulations 7<sup>th</sup> February 2014 and any subsequent additions
- C4.1.2 OHS BoQ - Adequate pricing for Occupational Health and Safety is required, and the appropriate section in the BoQ is to be completed.

These documents can be found in the Tender Document and are to be completed by the tenderer where applicable. These documents shall be deemed to form part of the returnable Contract Documents.

## **C5 REQUIREMENTS PRE-COMMENCEMENT OF WORKS**

### **C5.1 Documentation required from the Principal Contractor;**

C5.1.1 The successful tenderer must provide a Project Specific Health and Safety Plan within 14 days of the award of the tender. Refer to “**Annexure A**” in these specifications.

C5.1.2 Mandatory Agreement “SECTION 37.2”

### **C5.2 Documentation required from the Employers Agent;**

C5.2.1 Construction Specification and Scope of Works

C5.2.2 Contract Construction Drawings

C5.2.3 Geotechnical Reports

### **C5.3 Documentation required by the Employer or his/her appointed CHSA;**

C5.3.1 Letter of Approval of the PC’s OHS Plan.

C5.3.2 Application for a Permit to do “CONSTRUCTION WORK ANNEXURE 1”

The application will not be submitted until the PC’s OHS Plan has been approved by the Client/CHSA and the Annexure 1 – Application for a Permit to do Construction Work being correctly completed by the Client/CHSA and the PC.

The Client or his/her appointed CHSA shall submit all the relevant documentation to the Provincial Director of the Department of Labour (DoL) once the OHS Plan has been approved, with the form as in Annexure 1 of the Construction Regulations-2014.

The following needs to be submitted with the Annexure 1 (but not limited to)

- Baseline risk assessment
- H&S Specification
- Approved H&S Plan
- Appointment letter for the Construction manager and Construction health and safety officer together with certified copies of the identity document and training certificates. Registration certificate of the CHSO from the SACPCMP
- Letter of award from the Client
- Approved drawings
- Appointment letter as per CR 5(1) (k)

The site-specific Construction Work Permit Number must be displayed conspicuously at the main entrance to the site on its own. The size of the permit board should be clearly visible from a distance of 20 meters the site-specific number is not transferable.

The Principal Contractor must keep a copy of the construction work permit in the health and safety file. Should any changes be made to the Construction manager and Construction health and safety officer as per the submitted construction work permit, the Principal Contractor must provide the replacement persons documentation for approval to the CHSA.

## **C6 REQUIREMENTS FOR COMMENCEMENT OF THE WORKS**

No work may commence until the following has been complied with;

- Work Permit issued by the Department of Labour to the Employer/CHSA
- An acknowledgement letter must be signed by the Principal Contractor on receipt of Construction Work Permit from the Employer/ CHSA

## **C7 REQUIREMENTS DURING THE CONSTRUCTION STAGE**

### **C7.1 Requirements from the Principal Contractor**

- C7.1.1 Compilation and continuous updating of the H&S Plan. Refer to “**Annexure B**” in these specifications
- C7.1.2 Action plans as well as close out reports for all non-conformances issued by the Employer, his/her Agent, CHSA or any other parties who have the necessary powers to conduct legal inspections on the construction site
- C7.1.3 Construction Appointments. Refer to “**Annexure C**” in these specifications.

### **C7.2 Requirements from the Employer/CHSA**

- C7.2.1 Conduct at least a monthly or more frequently if deemed necessary OHS Compliance Audit of the PC’s H&S File as well as the Works
- C7.2.2 All activities on the site and all appropriate documentation will be monitored and reported on to the Client, Engineer and PC.
- C7.2.3 Discuss all findings of an audit with the PC and/or his/her representative
- C7.2.4 Submit an audit report with findings within seven (7) days of the actual audit taking place
- C7.2.5 Issue the PC with a non-conformance report within seven (7) days for action by the PC
- C7.2.6 Non-conformance close out to be completed within 3 days of issue of audit report.
- C7.2.6 Penalties or work stoppage instructions will be issued where appropriate.
- C7.2.7 Communication between the CHSA and the PC will be through the Employers Agent.

## **C8 APPOINTMENTS**

### **C8.1 Appointment of Competent Site Personnel**

The CEO (OHSA S16.1) of the PC will take overall responsibility for the appointment of competent site personnel for the duration of the contract. Should the CEO not be personally involved in the project, the H&S responsibilities are to be delegated to the Construction Manager (OHSA 16.2. and CR8.1)

In terms of the OHSA the PC is required to make the following minimum appointments for the duration of the Contract (or part thereof).

#### **C8.1.1 Construction Manager (CR8.1)**

- Appointment of the Construction Manager (CR8.1) is subject to approval by the Employer in terms of the Contract Data
- In the absence of the CR8(1) an alternate manager suitably qualified shall be appointed to manage the site.

#### **C8.1.2 Assistant Construction Managers (CR8.2)**

Appointment of Assistant Construction Manager(s) (CR8.2) is subject to the size and complexity of the Contract as determined by the PC.

#### **C8.1.3 Construction Work Supervisors (CR8.7)**

Appointment of construction work supervisors shall be concluded by the construction manager for construction activities.

#### **C8.1.4 Construction Health and Safety Officer (CR8.5)**

PC’s H&S obligations

For this Contract it is a requirement that the PC appoint at least one (1) approved full-time CHSO to manage the on site OHS for the duration of the Contract.

The above CHSO’s will report directly to the Construction Manager and The PC’s Construction Health and Safety Manager.( if applicable)

SMME Contractor(s) H&S obligations

Furthermore to the above the PC is required to appoint an additional at least one (1) approved full-time CHSO to manage the appointed SMME work packages on site for the duration of the works.

Please note that the full time CHSO appointed to manage the H&S obligations of the SMME Contractor(s) shall be assisted by Health and Safety Representatives (as referred to in "Clause C8.2.2" of this specification) as appointed by the SMME Contractor(s).  
The SMME CHSO will report directly to the PC CHSO.

CHSO's CV's , qualifications and SACPCMP registration certificates are to be submitted to the Engineer and CHSA for approval.

Candidate Construction Health and Safety Officers will not be accepted.

**Approval of the CHSO's is subject to the following minimum requirements:**

- Professionally registered with the South African Council for the Project and Construction Management Professions (SACPCMP) at a minimum as a Professional Construction Health and Safety Officer (Pr CHSO).
- Accredited Qualifications regarding the Occupational Health and Safety Act Procedures and Regulations.
- Valid South African driver's license
- Minimum two (2) years' experience related to Health and Safety on road construction projects.

**The PC is required to provide each of the approved CHSO's with the following minimum resources:**

- Suitable dedicated construction vehicle
- Mobile phone and airtime
- Computer with internet access and printer
- Camera with; Time, Date and GPS stamp facilities
- Vehicle dash camera for daily site video recording. (Allow for digital storage capacity)
- Two way radios for communication
- Any other equipment or facilities to enable him/her to carry out their duties effectively

**Restrictions applicable to the approved CHSO's:**

- May not be appointed or be responsible for any other work activity on site.
- May not be appointed as the Traffic Safety Officer in terms Clause B1502 (i), Section B, Part 3 of 4 of the Contract.

In the case of a contract where Contractors are employed, the CHSO must have the competence to evaluate the Contractors Health and Safety Plans.

The Construction Manager assisted by the CHSO's will be held responsible for all H&S on the project. Senior Site Staff, Supervisors and Contractors are to follow systems, instructions etc. given by the CHSO at all times. No new workers or Contractors may commence work without the required site inductions and approval of the H&S Plan as submitted by Contractors.

**The CHSO will be responsible for ensuring that daily Traffic Management is adequately managed for the entire construction site.**

A monthly report compiled by the CHSO of all H&S activities and incidents is required by the end of the first week of each month, or at a date agreed to by the CHSA and the CHSO. Refer to "**Annexure G**" in these specifications.

The CHSO will be responsible for collating the H&S documentation (electronically) at the close out of the project. A list of the typical aspects are included in these specifications. Refer to "**Annexure D**" in these specifications.

## **C8.2 Health and Safety Representatives and Committee (OHS Act 17 & 19)**

C8.2.1 H&S Representatives are to be appointed following the start-up of the project, to be made up from both Principal Contractor, Contractors and Local Labour. Representatives from local labour can be appointed to represent such labour for the duration of the contract. Local labour should not be responsible for H&S duties unless appropriate training has been provided and the CHSO deems such labour competent to do so. Development in H&S of such labour would be an advantage to the community and the PC. H&S Representatives are to be actively involved with H&S and serve on the H&S Committee.

The CHSO shall ensure that there is a H&S Committee made up of active site staff and H&S Representatives, representing each work area, including all Contractors. Meetings will be held at least monthly, and more frequently if so instructed. Key site staff is to be appointed. Issues arising from the CHSA audits are to be discussed, as well as all H&S related issues.

Minutes are to be distributed and discussed among all workers and Contractors and records kept thereof.

H&S Committee Meetings are to be held in the first week of each month

C8.2.2 The Health and safety Representatives as appointed by the SMME Contractors will also be required to train Safety Representatives for their respective works packages in the following fields to assist the CHSO appointed to manage the H&S for the SMME's

- Safety Representative
- HIRA
- Incident Investigation
- Level One First Aid
- Basic Fire Fighting

### **C8.3 Appointment of Competent Contractors (CR7.3)**

C8.3.1 The Principal Contractor is to ensure compliance with the Clients minimum standards and all legislative requirements. The same H&S standards required of the PC are to be applied to all Contractors. A register of all Contractors and Suppliers is to be on file and kept updated at all times. The PC is to ensure there is sufficient funding for H&S compliance by each Contractor.

The following minimum aspects are applicable to any Contractor appointed:

- The CHSO is to ensure a Contractors appointment and approval of H&S documentation at least seven (7) working days prior to commencing work.
- No Contractor may work under the PCs Compensation Registration Number. If required the PC may assist SMMEs with their registration with the Compensation Commissioner. However, such Contractors will not be able to commence work until proof of registration or Letter of Good Standing has been received.
- No work may commence without the following documentation in place:
  - \* The Contractor is to have an appointment letter
  - \* Mandatory (37.2) agreements between parties in place.
  - \* Valid letters of Good Standing or proof of application (not older than 3 months)
  - \* OHS Plan Approval Letter issued by the PC

C8.3.2 The following aspects are applicable to Suppliers or short-term works (surveying, repairs, servicing, deliveries etc.). Cognisance is to be taken of the level of risk involved and the CHSO is to ensure the level of H&S documentation is appropriate:

Mandatory Agreements in place  
Letter of Good Standing  
TMS and Risk Assessments  
Competencies for drivers and operators of delivery vehicles

## **C9 GENERAL RISK MANAGEMENT**

### **C9.1 Health Risks and Medical Surveillance**

A Contractor must ensure that all his or her employees have a valid medical certificate of fitness specific to the construction work to be performed as per **Annexure I** and issued by an Occupational Health Practitioner CR7.8.

Medical surveillance will commence at pre-employment. All workers (including Professional Team, Principal Contractor and Contractors) are required to be in possession of a medical certificate of fitness prior to commencing work. Annual medical surveillance is required (unless identified as being required more frequently), as well as an exit medical.

Given the potential health risks the following aspects are to be included in each medical surveillance intervention:

- Full medical, surgical and occupational history;
- Full physical examination of all systems, and
- Referral if required for the management of identified health issues that may affect the worker.

Specific testing for existing conditions and limitations relative to exposure could include, but are not limited to:

- Audiometry (hearing tests);
- Spirometry (lung function testing);
- Chest X-rays;
- Liver function testing (volatiles), and
- Any other tests identified as relevant

#### C9.1.1 Noise Risks

All plant and equipment is to be measured for noise levels as soon as the majority of plant is on site (including Contractors construction plant and equipment).

The CHSO shall provide a list of all plant on site with their individual noise levels as assessed. Findings are to be discussed at the H&S Committee and H&S Representatives and Supervisors are to ensure that noise zones are identified and wearing of the appropriate PPE is enforced.

#### C9.1.2 General Environmental Conditions

Any spillages of substances which could be toxic to persons must be dealt with adequately. The PC must include his spillage procedure in the OHS Plan in the OHS File.

### C9.2 Emergency Procedures

Attention to emergency planning and procedures is very important. The full emergency plan must form part of the supporting documentation with the H&S Plan. The CHSA approval of all emergency plans and procedures is required prior to commencement on site. It is advised that the system should be simple and easy for any worker to follow. The plan must be updated should new information or risks be identified.

First aiders shall be available in each working team, and be able to work as a team when responding to any emergency on the project.

The procedure shall detail the response plan in relation to the works, and include at least (but are not limited to) the following key elements:

- Appointment of a competent emergency response co-ordinator and wardens;
- Lists of first aiders, and
- Requirement in terms of identified risks:
  - . Fire;
  - . Explosions;
  - . Falls from heights, and
  - . Motor vehicle accidents.

The emergency plan is to ensure the inclusion of relevant local service providers. Such arrangements should be made with these persons prior to the commencement of the project. Local emergency telephone numbers must be displayed and made part of the emergency procedure.

#### C9.2.1 First Aiders and First Aid Equipment

Competent, trained First Aiders are to be formally appointed for the project. If the project is in a remote area, at least 3 workers are to be trained to Level 3. In urban areas and close to medical assistance 2 Level 3 first aiders are required. First aiders are to be available at all times and be able to cover each working team. Further first aiders from the community or SMMs, if not already accredited, are to be sent for SAQA accredited first aid training. Contractors are expected to ensure compliance and manage their own first aiders and equipment.

The PC shall provide an on-site First Aid Station with first aid facilities, including first aid boxes containing, at least the requirements to manage the type of emergencies identified. All Supervisors are to carry a Regulation 3 first aid kit in their vehicles at all times.

#### C9.2.2 Fires and Emergency Management

The PC shall ensure that any fire risks will be managed appropriately. Trained fire fighters shall be appointed at offices or areas where fire risks are deemed high. The emergency plan shall include the risk of fire at site camps, on site and related to any specific activities.

Fire extinguishers are to be appropriate for the risk and in sufficient numbers to deal with the type of fires that could occur. Every item of heavy plant, e.g. Graders, TLBs, Rollers etc., must be fitted with at least a 4.5Kg DCP fire extinguisher.

#### C9.2.3 Incident Management and Compensation Claims

The PC will ensure there is a management system to investigate all incidents. All serious incidents involving any form of disabling injury or fatality are to be reported to the Engineer and CHSA telephonically immediately. This shall be confirmed in writing as soon as possible after the incident. Full details are to be included in the H&S meetings, and each site meeting. The details are also to be included in the CHSO monthly report.

### C9.3 Personal Protective Equipment (PPE) and Clothing (PPC)

The wearing of the identified SANS approved PPE and PPC at all times is non-negotiable. The PC shall ensure that all workers (Including Contractors and other PCs) are issued with and shall wear PPE/PPC as per the OHS BoQ.

Adequate quantities of PPE shall be kept on site at all times. This shall include necessary PPE for visitors.

### C9.4 Occupational Health and Safety Signage

On-site H&S signage is required. Signage shall be posted up at the appropriate fixed or temporary working areas, on scaffolding, and other potential risk areas/operations including vehicles. These signs shall be in accordance with the requirements of the General Safety Regulations or SANS requirements as amended. Signage is to be noted on the site drawings indicating where fixed signage is required.

Signage is to include (but not be limited to) the following:

- 'no unauthorised entry';
- 'report to site office';
- 'site office';
- 'beware of overhead work';
- 'hard hat area' or other PPE / PPC requirements noted;
- First aid box positions (including vehicles), and
- Fire extinguishers

Signs shall be posted permanently or temporarily at areas of work onsite indicating that a construction site is being entered and that persons should take note of safety requirements.

The Contractor shall establish a system for controlling and recording entrance to the Site Office and camp area, which shall include a visitors site induction

### C9.5 Induction of Employees and Visitors, General H&S Training

A formal induction programme is to be submitted as an addendum for approval with the H&S plan. Inductions must be carried out for all workers and visitors to the site. Pre-task training is required to ensure workers are familiar with the risks and H&S measures of the work or tasks to be done. Such training is to be done at least daily. Records of inductions and pre-task training are to be kept in the H&S file.

Any person found on site without proof of induction will be removed from site until the proof of their induction is supplied.



## **C9.6 Testing Laboratory and the use of Radioactive Equipment**

A joint laboratory may be required, or a service provider will be appointed for the project. The service provider will be seen as a Contractor, or where appointed as a joint laboratory, as a PC. All the H&S rules and requirements are to be met. Where appointed as a PC, the CHSA will be responsible for approving the initial H&S plan and ensuring on-going compliance. All other requirements of the construction PC are to be met. Each PC is to be familiar with the H&S rules of each party. Mandatory Agreements, Inductions and Emergency requirements among other are to be addressed and managed to ensure limitation of H&S risks.

The use of radioactive equipment for the measuring of compaction parameters shall conform to the requirements of the "Code of Practice for the safe use of soil moisture and density gauges containing radioactive sources" as published by the Department of Health: Directorate: Radiation Control Soil revised September 2001. TMS, risk assessments and the appropriate training will be required.

## **C9.7 Use of Support Work, Scaffolding and other Temporary Works**

Where temporary works are envisaged on the project, these must be properly designed and signed off by a competent person. In these instances a competent person is defined as a Professional Engineer (registered with ECSA) who has sufficient experience in the design of the type of temporary work in question to be able to assess the design. The appropriate competent persons are to be appointed to manage and monitor such works to the satisfaction of the Engineer. Where the scaffolding, and /or support work is to be supplied and designed by a specialist company, care must be taken to comply with all the requirements of the supplier. Records and registers are to be properly completed and kept in the H&S file.

All formwork must be designed and approved by a competent person.

## **C9.8 Quarries, Borrow Pits, Crushers, Blasting and Batch Plants**

It must be noted that the use of quarries and borrow pits falls under the Mine Health and Safety Act 29 of 1966 and its Regulations. Work in these areas must comply with these requirements and separate appointments and CoP's will be required.

Where single or multistage crushers are established on site, for quarries or borrow pits, the requirements of the MH&SA as well as the OH&SA and Regulations shall apply.

The Department of Mineral Resources (DMR), as well as the CHSA will carry out audits on this aspect of the project. Non-conformances raised by either party will require closeout within specified time periods negotiated at the time.

All blasting must comply with the Explosives Act No. 15 of 2003 and the OHS&A and MH&SA or other legislation as applicable.

Blasting activities will only be allowed to take place from Tuesday's to Thursdays between the hours of 09:00 and 15:00. These times are to include the actual blast as well as clean-up of material.

If any blasting activities are to take place within 500m of any Eskom installation, including sub-stations and power lines. The Principal Contractor will be required to notify the local Eskom Depot Manager in writing seven (7) days before the blasting is to take place. This is due to Eskom having their own regulations regarding blasting in the vicinity of their installations

TMS and Risk Assessments will be required before blasting will be permitted. The Engineer and CHSA will be required to approve the arrangements. Should a blasting Contractor be used, the requirements relating to the management of Contractors shall apply. A Blasting Application is attached, refer to "Annexure F" in these specifications.

## **C9.9 Management of Plant and Equipment**

A substantial amount of large plant and equipment will be used. Close control of the PCs plant and equipment is required, including that of Contractors.

Daily monitoring of all plant and equipment is required prior to commencing work. Full lists of hired and own plant are to be available during the CHSA's audit. Copies of all daily inspection records are to be

retained in the H&S file. Registers are not to be more than 1 week behind. Plant Hire or Haulage Contractors are to comply with the requirements, and comply with all H&S standards for the project. All supervisory vehicles and construction plant are to be fitted with beacon/s capable of emitting an intermittently-flashing amber light in any direction.

All operators on site are to be competent and medically fit.

The following documentation is to be supplied for each operator on site:

- Valid medical certificate issued by an OH Practitioner and Annexure 3
- Valid driver's licence
- Applicable PrDP for vehicle or plant
- Appointment letter
- Competency certificate for the specific vehicle or plant to be operated

Movement of plant in closures and in confined working areas is to be closely monitored and managed by the CHSO and CTSO and Supervisors. The blind spots of plant are to be taken into account and workers and Contractors protected accordingly.

### **C9.10 Excavations**

Steep slopes require careful management. A Geotechnical report is available and is to be utilised to assess ground conditions. Shoring may be required, where indicated in the Geotechnical report or by the Engineer. The PC is to ensure that the Community Liaison Officer (CLO) and the local community, schools and general public are aware of the dangers of open excavations.

All excavations are to be securely barricaded at all times. Only barrier netting will be allowed. Initial barricading will be the responsibility of the Excavation Inspector. Once the excavations have been barricaded this information will be submitted to the CHSO for continuous monitoring. Continuous monitoring of all barricading around excavations will be the responsibility of the Excavations Inspector CM, CHSO and CTSO.

### **C9.11 Inclement Weather**

High levels of humidity and temperatures during the summer months may be experienced. Workers are at greater risk of heat exhaustion where the discomfort index rises above 100. A weather station has been allowed for to monitor temperature and humidity specifically. Should the discomfort index rise above 105, work may be partially or totally stopped.

During winter in areas known for cold weather, notice must be taken of the wind-chill factor. Workers must be supplied with adequate protective clothing and shelters provided as necessary.

Flooding may occur during the rainy season. High winds may be experienced and to limit dust or danger when working at heights, a wind speed should be set at which work may be stopped or the workers in an affected area moved.

The emergency plan is to include how these and other weather extremes identified are to be managed. The general aspects as detailed in the Environmental Regulations will be applied.

All decisions regarding work stoppage will be decided between the PC, the CHSO and the Engineer.

### **C9.12 Internal Auditing**

The PC will ensure that all their Contractors are internally audited by the CHSO at least monthly prior to the CHSA monthly audit by the CHSO and these audit reports are to be available for perusal by the CHSA during the audit.

The PC audits may be done more frequently where short term contracts are in place, or deemed high risk. Audit results will be acted upon and non-conformances and penalties issued. The Client, Engineer or CHSA may act or require further outcomes if non-compliances are noted or unsafe acts are noted on site. Internal audits are to include site conditions as well as ensuring H&S files are appropriate, and compliant.

### **C9.13 Communication on Site**

All communication on site will be done through the Engineer to the PC and be in writing, including the issue and responses to non-conformances and H&S audit results.

### **C9.14 Care of Workers on Site (Welfare)**

Toilets for each sex where applicable, will be within reasonable distance of workers, or placed with each working team in safety, with reasonable privacy. Only bacterial or enzyme based products may be used in portable toilets; the use of products containing Formaldehyde is not allowed. The ratio of portable toilets on site will be a minimum of 1:30. Daily cleaning and increased removal of waste may be required if deemed necessary. Proof of safe disposal of waste will be required. Waste Removal Contractors or the PC are to ensure the appropriate H&S systems are available to limit exposure to sewage.

Hand washing facilities will be provided. The Environmental and Facilities Regulations will be adhered to at all times.

### **C9.15 Discipline, Alcohol and Substance Abuse**

All employees (management included) are to follow instructions given in the interest of H&S. Disciplinary action is to be imposed on those who do not follow such instructions or company rules or policies.

No person is allowed to work or access site if under the influence of alcohol or other substances that could impact on their own or others safety. The PC is to have a drug and alcohol policy available to manage such instances.

### **C9.16 Electrical Equipment**

In addition to the requirements of the Electrical Machinery Regulations and the General Machinery Regulations any electrical distribution board used for construction work shall be fitted with suitable earth leakage protection. Leads must be properly and firmly connected, they should be so placed as to avoid damage especially if they cross portions of the site. Plugs and sockets shall be in good and safe condition.

All electrical apparatus, other than electrical hand tools, shall have a physical "lock out" system which will prevent any operation other than that authorized by a supervisor. A "lock out" sign shall be displayed when the apparatus is not in use.

TMS and Safe Work Procedures will be required for all work involving electrical apparatus.

The relevant certificate of compliance (COC) must be issued for the site camp and any other establishment with regards to the project.

### **C9.17 Traffic Accommodation**

Traffic accommodation is covered under section 1500 of the COLTO specifications which form part of this contract and as amended by the requirements listed in the Amendments to the Standard Specification.

Traffic accommodation drawings will be according to SARTSM Chapter 13 Volume 2, and any changes suggested or required are to be discussed with the Engineer.

Speed controls must be clearly stipulated and managed.

Speed limits must be strictly adhered to by all construction traffic. Unreasonable limits may be revised by the Engineer and/or CHSA. Additional care must be taken where workers and construction traffic interface. This should be in the form of trained competent flag persons to direct vehicular traffic and adequate signage as directed by the Engineer.

**C9.18 Transportation of Workers to and on Site**

Transportation of workers shall comply with the relevant legislative requirements. Vehicles used to transport workers to, from, or on site, shall have secure seats with seat belts and be covered. No equipment or materials shall be transported in the same vehicle at the same time as workers.

The CTO's and their teams are to have vehicles which are designed to safely transport employees as well as equipment at the same time. Preferably crew cab type vehicles.

Tenderers must indicate in their OHS Plans what type of transport is envisaged for the general employees and how this will be managed.

**C10 HEALTH AND SAFETY FILE CLOSEOUT AT THE END OF THE PROJECT**

The H&S File shall be closed out following the hand-over of the project.

For closeout requirements refer to “**Annexure D**” in these specifications.

**C11 NON-CONFORMANCES**

Should, at any time, the works, or part of the works, be stopped due to unsafe acts or non-compliance with the Clients or PCs H&S Plan; neither the PC nor any other Contractor shall have a claim for extension of time or any other compensation.

The following constitute examples of the types of non-conformances that will attract penalties:

<b>Minor Penalty: R500.00 / count</b>	<b>Medium Penalty: R1000.00 / count and a non-conformance</b>	<b>Severe Penalty: R5000.00 / count, a non-conformance and / or activity stoppage</b>
Non-use of PPE supplied	Toilets not supplied or regularly serviced Lack of drinking water	Contractors working without Health and Safety Plan approval
Non completion of registers for plant and equipment on site	Contractors not audited	Workers transported in contravention of the OHS plan or legal requirements
Lack of H&S signage at work areas	Working without training or the appropriate H&S TMS	Invalid Letters of Good Standing
Tools and equipment identified in poor condition during inspections	Legal non-conformances identified during the previous audit and not addressed within the agreed time frame	Non-compliance with traffic accommodation requirements: layout or physical conditions
	No monthly OHS report at site meeting to report on	Fall protection harness not tied off / not worn
	No certificates of fitness for workers as required	Any breach of legal requirements
	Working without approved TMS	

**C11.1 Failure to Comply with Provisions**

Failure or refusal on the part of the contractor to take the necessary steps to ensure the safety of workers and the general public in accordance with these specifications or as required by statutory authorities or ordered by the engineer or the Client’s H&S Agent, shall be sufficient cause for the engineer to apply penalties as follows:

- C11.1.1 A penalty as shown in the Table above shall be deducted for each and every occurrence of non-compliance with any of the requirements of the PSHSS.
- C11.1.2 In addition a time-related penalty of R500.00 per hour over and above the fixed penalty shall be deducted for non-compliance to rectify any non-conformance within the allowable time after a site instruction to this effect has been given by the ER or Engineer. The site instruction shall state the agreed time, which shall be the time in hours for reinstatement of the defects. Should the Contractor fail to adhere to this instruction, the time-related penalty shall be applied from the time the instruction was given.

**FAILURE TO COMPLY WITH ANY OF THE ABOVE AS WELL AS ANY OTHER LEGAL REQUIREMENT WILL BE CONSIDERED A SERIOUS OFFENCE.**

**C12 MEASUREMENT AND PAYMENT**

Payment items to cover the Principal Contractor’s cost related to Occupational Health and Safety Compliance are included in the bill of quantities. These items are described under SCHEDULE A – GENERAL in SECTION C: OCCUPATIONAL HEALTH AND SAFETY in SECTION C : OCCUPATIONAL HEALTH AND SAFETY.

**Item** **Unit**

**C10.01 Preparation of Principal Contractor's site specific Health and Safety Plan .....lump sum**

The lump sum tendered shall include full compensation for the Principal Contractor to prepare and submit, for approval by the Employer’s Health and Safety Agent, a site specific health and safety plan as detailed in these specifications.

Payment of the once-off tendered lump sum shall be made only once the Employer’s Agent has issued the instruction to commence the works.

**Item** **Unit**

**C10.02 Principal Contractor's initial obligations in respect of the Occupational Health and Safety Act and Construction Regulations .....lump sum**

The lump sum tendered shall include full compensation for the Principal Contractor’s initial obligations in respect of the Occupational Health and Safety Act and Construction Regulations as detailed in these specifications.

Payment of the once-off tendered lump sum shall be made only once the Employer’s Health and Safety Agent has verified that the Principal Contractor has fulfilled the required initial obligations.

**Item** **Unit**

**C10.03 Principal Contractor's time related obligations in respect of the Occupational Health and Safety Act and Construction Regulations .....month**

The tendered rate per month represents full compensation for that part of the Principal Contractor’s obligations in respect of the Occupational Health and Safety Act and Construction Regulations which are mainly a function of construction time.

The tendered rate will be paid monthly, pro-rata for parts of a month, from the date on which the Employer’s Agent issue the instruction to commence the works to the date on which the Employer’s Agent issue the Certificate of Completion in terms of the contract.

Payment shall be made when the Employer’s Health and Safety Agent has verified the Principal Contractor’s compliance as part of his monthly audit report.

**Item** **Unit**

**C10.04 Provision of personal protective equipment (PPE):**

(a to ....) As per Bill of Quantities..... number (No)

The unit of measurement shall be the number of each type of PPE, specified in the bill of quantities, issued to local labours employed by the Principal Contractor in terms of the contract.

The tendered rate shall include full compensation for the procurement, delivery, storage, issuing and maintenance (replacement PPE) of all PPE required by local labours of the Principal Contractor. Payment shall be based on first time issuing of PPE, specified in the bill of quantities, to local labours employed by the Principal Contractor in terms of the contract. The issue register for PPE as kept by the Construction Health and Safety Officer shall be used to verify quantities of PPE claimed under this item.

General:

Only first PPE items, specified in the bill of quantities, issued to local labours employed by the Principal Contractor shall be paid for under this pay item. Replacement PPE issued to local labours shall not be paid for under this pay item and the cost thereof shall be deemed to be included in the rate of each type of PPE as specified in the bill of quantities. Any other PPE, not specified in the bill of quantities, issued to local labours such as standard overalls and standard workshop safety equipment shall be at the Principal Contractor’s own cost.

The cost of required PPE for the Principal Contractor’s site staff, operators and skilled labours shall be at the Principal Contractor own cost.

**Item** **Unit**

**C10.05 Provision of full time Construction Health and Safety Officer:**

- (a) To manage the Principal Contractor’s H&S obligations on site (No. required).....month
- (b) To manage the appointed SMME’s H&S obligations on site (No. required).....month

The tendered rate per month represents full compensation for providing full time Construction Health and Safety Officer(s) in terms of these specifications; to manage the Principal Contractor’s H&S obligations on site for subitem C10.05(a) and to manage the appointed SMME’s H&S obligations on site for subitem C10.05(b).

The tendered rate shall include full compensation for employment of full time Construction Health and Safety Officer(s) in terms of these specifications, overheads, provision of transport and all other equipment and resources necessary to carry out their duties effectively.

The tendered rate will be paid monthly, pro-rata for parts of a month for:

Subitem C10.05(a), from the date on which the Employer’s Agent issue the instruction to commence the works to the date on which the Employer’s Agent issue the Certificate of Completion in terms of the contract

Subitem C10.05(b), from the date on which the first SMME is appointed by the Principal Contractor to the completion of the last SMME works.

**Item** **Unit**

**C10.06 Costs of medical certificates and medical surveillance:**

- (a) Initial (baseline) medical, including audiometric and lung function testing .....Number (No)
- (b) Annual or Periodic examinations .....Number (No)
- (c) Exist examinations .....Number (No)

The unit of measurement shall be the number of medical testing and surveillance of local labours employed by the Principal Contractor in terms of the contract.

The tendered rates shall include full compensation for the obtaining of baseline, periodic (at least annually) and exit medical certification and conducting medical surveillance for all workers and especially operators of construction vehicles and mobile plant as contemplated in CR 23; Workers at Heights CR16 and workers exposed to hazardous chemicals including bituminous fumes under Regulation 7 of the HCSR; for temporary workers and workers exposed to noises at or above the limits given in the Noise-Induced Hearing Loss Regulations, as stipulated above.

Chest X-rays will be required in the case of local labours who may be exposed to high concentrations of dust (silica) working in the quarry and/or borrow pits

Medicals and medical surveillance of the Principal Contractor’s site staff, operators and skilled labours shall be at the Principal Contractor’s own cost.

**Item** **Unit**

**C10.07 Environmental monitoring:**

- (a) Air quality monitoring.....Number (No)
- (b) Compliance with Amendment of the Occupational Exposure Control  
Limit for Silica in Table 1 of the Hazardous Chemical Substances  
Regulations (February 2010) .....Number (No)
- (c) Air sampling in situ .....Number (No)
- (d) Analysing sample .....Number (No)
- (e) Tests on workers.....Number (No)

The unit of measurement shall be the number environmental monitoring, sampling and testing required in terms of the contract.

The tendered rate shall include full compensation for testing and monitoring the environment in respect of general health hazards including the presence of hazardous chemicals, as required by the Construction Regulations and the Mine Health and Safety Act. Furthermore the costs shall include for all air monitoring, air sample testing and tests on workers for silica exposure as required by the above amendment. It should be noted that these items must be under the control of an authorised inspection authority which would normally be a registered H&S Hygienist or Occupational Health Practitioner familiar with the Hazardous Chemical Regulations and include for all necessary costs in this regard including travelling to and from site and all required reporting.

**Item** **Unit**

**C10.08 Establishment of noise zones .....Number (No)**

The unit of measurement shall be the number of noise zones established on site in terms of Regulation 9, of the Noise-Induced Hearing Loss Regulations.

The tendered rate shall include full compensation for establishment of noise zones on site, including any workshops, in terms of Regulation 9, of the Noise-Induced Hearing Loss Regulations.

All equipment established on site by the Principal Contractor are required to have noise zones established before coming onto site and therefor any noise level testing for establishment of noise zones are at the Principal Contractor’s own cost.

Where a zone has previously been established for a particular item of equipment within the last two years, the test need not be repeated but must be kept valid for the duration of the contract.

**Item** **Unit**

**C10.09 Payment for Health and Safety Representatives at meetings .....hour (hr)**

The unit of measurement shall be the number of hours appointed Health and Safety Representatives attend monthly meetings.

The tendered rate shall include full compensation for the loss of productive time while attending monthly meetings as specified in these specifications.

Payment shall be based on attendance registers of monthly meetings submitted to the Employer’s Health and Safety Agent for verification.

**Item** **Unit**

**C10.10 Provision of First Aid Boxes .....Number (No)**

The unit of measurement shall be the number of first aid boxes provided by the Principal Contractor on site.

The tendered rate shall include full compensation for the provision and maintenance of first aid boxes in terms of these specifications.

**Item** **Unit**

**C10.11 Transportation of workers.....month**

The tendered rate per month represents full compensation for the safe transportation of workers in terms of these specifications.

The tendered rate will be paid monthly, pro-rata for parts of a month, from the date on which the Employer’s Agent issue the instruction to commence the works to the date on which the Employer’s Agent issue the Certificate of Completion in terms of the contract.

**Item** **Unit**

**C10.12 Submission of the Occupational Health and Safety File .....lump sum**

The lump sum tendered shall include full compensation for the Principal Contractor’s to fulfil all his close-out obligations in respect of the Occupational Health and Safety Act and the Construction Regulations and has submitted his Health and Safety File complete as envisaged in these specifications to the Employer’s satisfaction.

The Principal Contractor’s Health and Safety File must be submitted to the Employer’s Health and Safety Agent prior to the Employer’s Agent issuing the Certificate of Completion in terms of the contract.

**Item** **Unit**

**C10.13 Construction Work Permit Board .....lump sum**

The lump sum tendered amount shall include compensation for the Principal Contractors obligation to prominently display the permit number at the site entrance, in respect of the Construction Regulations.

**Item** **Unit**

**C10.14 Compliance with COVID-19 Guidelines and Regulations for the duration of the contractlump sum**

The lump sum tendered amount shall include compensation for the Principal Contractors obligation in respect of the compliance with COVID-19 Guidelines and Regulations for the duration of the contract.

Payment shall be made when the Employer’s Health and Safety Agent has verified the Principal Contractor’s compliance as part of his monthly audit report.



**ANNEXURE A CONTENTS AND NUMBERING FOR THE H&S PLAN**

1. Index of the H&S Plan
2. Letter of Good Standing from Workman's Compensation Commissioner or with a licensed compensation insurer as contemplated in COIDA
3. Appointment letter from the Employer
4. Signed Section 37(2) Agreement between the Employer and the Principal Contractor
5. Occupational Health & Safety Policy
6. Quality Policy
7. Environmental Policy
8. Waste Management Policy
9. HIV AIDS Policy
10. Alcohol / Drug Policy
11. PPE / PPC Policy
12. Health & Safety BoQ
13. Employers Site Specific Safety Specification
14. Project Specific Baseline Hazard Identification and Risk Assessment
15. Site Specific Risk Assessment
16. Technical Method Statements, Safe Operating Procedures and Safe Work Procedures for the first three (3) months planned project works
17. Site Specific Organogram
18. Signed Appointment Letters and CV's for the following Site Personnel
 

18.1	Responsible Person	16.2
18.2	Construction Manager	CR8.1
18.3	Assistant Construction Manager	CR8.2
18.4	Construction Health and Safety Officer	CR8.5
18.5	Construction Supervisor	CR8.7
18.6	Risk Assessor	CR9
18.7	Construction Traffic Safety Officer	S 8(2)(d)
18.8	Incident Investigator	GAR9
18.9	First Aider	GSR3.4
19. A Site Plan indicating the following;
  - 19.1 Positions of emergency assembly points and equipment at the site camp, or each fixed working area
  - 19.2 Traffic routes for plant and pedestrians as well as parking areas
  - 19.3 Storage areas (flammable stores, materials etc.)
  - 19.4 Location of facilities
  - 19.5 Electrical installations
20. First Aid, Accident, Incident and Emergency management procedure
21. Safety and Access Signage management procedure
22. Traffic Safety management procedure
23. Waste management procedure
24. Hazardous chemical substances management procedure
25. Construction plant and machinery management procedure
26. Public Health and Safety management procedure
27. Employee facilities management procedure
28. PPE management procedure
29. Occupational medical examinations procedure
30. Safety inspections and Inspection register management
31. Internal Audit management procedure
32. Contractor management procedure

## **ANNEXURE B CONTENTS AND NUMBERING SYSTEM FOR THE H&S FILE**

Approved H&S Plan (as submitted at Pre-Construction Stage for approval by the Employer)

All Construction/TMS and SWP are to be generated by senior site personnel, and the appropriate Risk Assessments developed therefrom in conjunction with the CHSO.

The TMS and SWP are to be signed by the CM, CHSO and EAR on site

The construction team is to ensure that the CHSO is kept up to date with all planned activities, to ensure all H&S requirements are met.

1. Index of the H&S File
2. Updated COIDA Letter of Good Standing
3. Updated organizational organogram and signed Letters of Appointment
4. Registrations, qualifications and other proof of competency
5. Training and Competency Matrix
6. Medical Certificates of Fitness
7. Risk monitoring and review records
8. Procedures
  - 8.1 Training and OHS competency
  - 8.2 General record keeping
  - 8.3 Issue based risk, risk review and risk monitoring management procedure
  - 8.4 Night work
  - 8.5 Excavation management (include hard rock)
  - 8.6 Temporary work management
  - 8.7 Fall protection plan
  - 8.8 Demolition management
  - 8.9 Electrical management
  - 8.10 Delivery, offloading, stacking, storage and housekeeping
  - 8.11 Concrete and batching management
  - 8.12 Hired plant and machinery management
  - 8.13 Lifting and rigging management
  - 8.14 Water environments
9. Registers
  - 9.1 Issue based Risk Assessments
  - 9.2 Inspection Registers
  - 9.3 DSTI records
  - 9.4 MS & SWP training records
  - 9.5 Induction training programme & records
  - 9.6 Visitor Induction records
  - 9.7 Inspection & Maintenance records
  - 9.8 PPE Issue and Condition check
  - 9.9 Incident registers & Investigation reports
10. COIDA accident and incident management
11. Waste manifests
12. Safety Data Sheets
13. Internal audits
14. Letters of Approval Contractors H&S plan
15. Letters of Appointment of Contractors
16. Audits by Employers Agent
17. Corrective/Preventive action plans for clients audits
18. Contractors audits
19. Certified documents and Permits (CoC – PV Test – Lifting Equipment Certificates – Haz.Substance Permits)
20. Archived Documents

**ANNEXURE C CONSTRUCTION APPOINTMENTS**

<b>No</b>	<b>Designation</b>	<b>Legal Reference</b>
1	Principal Contractor	CR 5.1(k)
2	Contractor	CR 7.1(c)(v)
3	Construction Manager	CR 8.1
4	Assistant Construction Manager	CR 8.2
5	Construction Health and Safety Officer	CR 8.5
6	Construction Supervisor	CR 8.7
7	Assistant Construction Supervisor	CR 8.8
8	Risk Assessor	CR 9.1
9	Fall Protection Plan Developer	CR 10.1(a)
10	Fall Protection Plan Supervisor	CR 10
11	Temporary Works Designer	CR 12.1
12	Temporary Works Supervisor	CR 12.2
13	Excavation Supervisor	CR 13
14	Blaster	CR 13.2(k)
15	Demolition Supervisor	CR 14
16	Explosive Method Plan Designer	CR 14.11
17	Scaffold Supervisor	CR 16.1
18	Suspended Platform Supervisor	CR 17.1
19	Rope Access Work Supervisor	CR 18.1(a)
20	Material Hoist Inspector	CR 19.6
21	Material Hoist Inspector	CR 19.7(a)
22	Bulk Mixing Plant Supervisor	CR 20.1
23	Bulk Mixing Plant Operator	CR 20.2
24	Explosive Actuated Fastening Device Controller	CR 21.2(g)(i)
25	Construction Vehicle and Mobile Plant Inspector/Operator	CR 23.1(d)(k)
26	Electrical Installation Controller	CR 24(c)
27	Electrical Installation Inspector	CR 24(d)
28	Housekeeping Supervisor	CR 27
29	Stacking and Storage Supervisor	CR 28
30	Fire Extinguisher Inspector	CR 29(h) & PER 19
31	Assigned Responsibilities	OHSA S 16.2
32	Scaffold Inspector	SANS 10085-1:2003 Item 16.1(c)
33	Scaffold Erector	SANS 10085-1:2003 Item 16.1(a)
34	Traffic Control Planner	OHSA S 8.2(d)
35	Traffic Control Supervisor	OHSA S 8.2(i)
36	Emergency / Fire Co-ordinator	OHSA S 8
37	Incident Investigator	GAR 9
38	First Aider	GSR 3
39	Ladder Inspector	GSR 13A
40	Lifting Machine Operator	DMR 18
41	Portable Electrical Equipment Inspector	EMR 9
42	Radiation Protection Officer	National Nuclear Regulatory Act 1999
<b>Additional appointment could be added as and when required</b>		

## ANNEXURE D CLOSE OUT REQUIREMENTS

CONSOLIDATED HEALTH & SAFETY FILE			
Construction Regulations - February 2014 7(1b,e & f)			
1	<b>DEFINITION: CONSOLIDATED HEALTH AND SAFETY FILE</b>		
	A file or other means containing record in permanent form, of the information required as contemplated in the Construction Regulations of February 2014: Regulation 7(1b, e & f)		
	<p>The H&amp;S files for the Principal Contractors and all Contractors require closure and handover to the Client at the completion of the project.  The following list is an example of what should be included, but is not exhaustive.  The OHS Agent or the Client may require further information at the time of completion and the Principal Contractor is to ensure that all instructions are met. Documentation would include all records from the start of the project.  Daily or monthly plant inspection records are not required unless they are related to an accident.  All records to be in electronic format and submitted to the OHS agent for approval in adequately formatted lists and folders.  Layout should be logical and in the same order as in the site files.</p>		
<b>REQUIRED DOCUMENTATION</b>			
2	The Principle Contractor submits a formal letter to the project appointed Agent, consolidating and Confirming the H & S history of the project.		<b>INCLUDED</b>
	The following summary of information is required in the letter, but not limited to:		<b>YES</b> <b>NO</b>
a	Client H&S Specification		
b	Principal Contractor's OHS Plan(s)		
c	Organograms		
d	Legal Appointments		
e	Notification to Department of Labour of commencement of work		
f	Letters of Good Standing for the Project		
g	Full files for all Contractors as well as their close out reports		
i	List of Contractors		
ii	Letters of Approval of Contractors		
iii	Mandatory Agreements		
iv	Letters of Good Standing		
v	Appointments		
h	Incident Records		
	Non- Conformance records		
	Agent's Audits		
	TMS		
	Risk Assessments		
	Safe Work Procedures		
	Medical surveillance certificates of fitness. Medical records are to be kept according to the OH&S Act as amended.		
	All drawings for temporary structures (suspended beams/scaffolds etc)		
	Copies of test results, policies and procedures for environmental monitoring (silica, noise, dusts etc.)		
<b>Please Note:</b>			
3	The Client's appointed OHS Agent will verify the submission of the Principal Contractor in writing before handing the above documentation to the Client		
4	The Client / Agent need to evaluate the SHE performance of the Principal Contractor i.e. Compliance, Performance, Quality and refer same in their cover letter which will be added to the Principal Contractor's portfolio of evidence.		
5	<b>Defect and Liability Period</b>		
	The H&S files are to be kept 'live' for the defect and liability period by the Principal Contractor, including those of their Contractors. Any work required during the defect and liability period will require an assessment of the H&S file by the OH&S Agent prior to any work commencing. A copy of the as-built Drawings is to be placed on file by the Designers once complete.		

**ANNEXURE E SPECIFIED HAZARDOUS CHEMICAL SUBSTANCES**

<b>PRODUCT</b>	<b>POTENTIAL HEALTH OR OTHER RISKS</b>
CEM II grade 32,5N / Cement	Hand mixing may occur, will be used for structures, stabilizing. 50kg bags delivered on pallets, ergonomic risk from handling, dust exposure, chromates. Eye, skin and respiratory irritant
Shutter Oil	Usually hand application prior to placing formwork in position. Volatiles present. Skin and respiratory irritant.
Penetration grade bitumen 70/100	Vapours, overexposure to fumes- loss of consciousness, respiratory problems.
Polymer modified bitumen-Class S-E1 (Hot applied)	Avoid skin contact with hot emulsions, Burns
Polymer modified emulsion (cold Applied)	Principal Contractor to ensure use of SDSs and appropriate protection measures
Petroleum based pre-coating fluid	Danger of cutaneous absorption, irritation to the skin
Polymer modified binder conforming to class A-E2	Principal Contractor to ensure use of SDSs and appropriate protection measures
Asphalt	Inhalation will cause headaches, nausea, respiratory, eye and skin irritation. Carcinogen. Burns from hot mix. Hydrogen Sulphide and carbon monoxide emitted as by-product. Breaking or cutting will release silica (crystalline)
Retro-reflective Road paint	High levels of volatiles, Products have narcotic effect. Carcinogen
Lime	Dust, eye and respiratory irritation
Petrol/Diesel/Lubricants	Storage tanks/ bowsers on site. Fire, spillage, fumes
Superphosphate Fertilizers	Eye, respiratory and skin irritant
Limestone Ammonium Nitrate Fertilizer (LAN)	Prolonged skin or eye contact could cause irritation. Explosive and will release toxic fumes if heated
Formula 2:3:2 Fertilizer	Prolonged skin or eye contact could cause irritation. Explosive and will release toxic fumes if heated.
Creosote (pre-treated poles)	Eye and skin irritation and minor burns, carcinogen
Herbicides and Ant Poison	Type not specified, but will be used. Principal Contractor to ensure use of SDSs and appropriate protection measures
Epoxies and Epoxy Resins	Type not specified, but will be used. Principal Contractor to ensure use of SDSs and appropriate protection measures
Coatings	Type not specified, but will be used. Principal Contractor to ensure use of SDSs and appropriate protection measures
Grouts	Will be determined by the Principal Contractor; various grouts will be required, cementitious or other, may contain silica (crystalline - quartz), hexavalent chromium, respiratory, skin and eye irritant

**ANNEXURE F REQUEST TO CONDUCT BLASTING ACTIVITIES**

<b>PART 1 REQUEST TO CONDUCT BLASTING ACTIVITIES</b>						
Request Date:						
Blast Date:						
Blast Time:						
Blasting Company:						
Project:						
Project Number:						
Blast Number:						
Request Submitted By:						
<b>Blast Details</b>						
Blaster Name:						
Location GPS:						
Chainage No:						
Average Hole Depth:						
Number of Holes:						
Type of Explosives:						
Estimated Quantities of Explosives to be Used:						
Estimated Rock Volume:						
<b>Blasting Company's Documentation</b>						
Blasting Certificate of Registration:						
Letter of Good Standing:						
Explosives Permit:	No:		Expiry Date:			
Explosives Transport Permit:	No:		Expiry Date:			
Risk Assessment:						
Legal Appointments:						
Competency Certificates:						
<b>Hazards</b>						
Distance to Nearest Structures and Services in meters:						
Vibration Recorder to be Placed at:						
Photographic Evidence of Nearby Structures:						
Copies Attached:						
Other Comments:						
Notices Distributed to:	Contractor	Client	Engineer	Safety Agent	Community	Media
Accepted by Principal Contractor:	Date		Name		Signature	
Construction Manager:						
Construction Safety Officer:						
Accepted by Client Representatives:	Date		Name		Signature	
Engineer:						
Construction Safety Agent:	Date		Name		Signature	
Refused by Client Representatives:						
Engineer:						
Construction Safety Agent:						

Reason for Refusal:			
<b>PART 2 POST BLAST REPORT</b>			
Blast Date:			
Blast Time:			
Blasting Company:			
Project:			
Project Number:			
Blast Number:			
Report Submitted By:			
Blast Details			
Blaster Name:			
Location GPS:			
Chainage No:			
Post Blast Report			
Average Vibration:			
Damage to Structures, Vehicles and / or Services:			
Photographic Evidence of Damages:			
Injuries to People / Animals			
Other Comments:			
	Date	Name	Signature
Received by Principal Contractor:			
Construction Manager			
Construction Safety Officer			
Received by Client Representatives:			
Engineer:			
Construction Safety Agent			

**ANNEXURE G CONSTRUCTION HEALTH AND SAFETY OFFICER MONTHLY REPORT****MONTH ENDING:****YEAR:**

Manpower Returns		Current Month	Project to Date
Total Number Principal Contractors employees			
Total Number Contractor employees			
Total Number of Contractors			
No. Shifts/Days Worked (incl. Weekend & Public Holidays)			
Man Hours Worked			
Total for Principal Contractor			
Total for Contractor/s			
Total All Man-Hours For Current Month	Total All Man-Hours Worked	LTI Free Hours (From Last Incident)	Target LTI Free Hours

List of Contractors	No. of Employees	No. of Vehicles

Incident Report	Current Month	Project to Date	Investigation Status
No. of First Aid Cases			
No. of Medical Cases			
No. of Lost Time Injury (LTI) excluding Fatalities			
No. of Occupational Disease Cases			
No. of Fatalities			
No. of Reportable Incidents			
No. of Environmental Incidents			
No. of Property Damage			
No. of Near Misses			
No. of Vehicle related Accidents			
Disabling Injury Frequency Rate	Current Month	Project to Date	
(LT Injuries x 200 000) / man hours			

**Incident Details**

Incident No.	Brief Details (incl. Nature of Injury, e.g. Laceration on Right Hand)	Status of Injured Employee/s	Incident Type (e.g. Fall to Below, Struck By)

**Incident Analysis and Trends and Action Plans**

(Including new or revised risk assessments)

Corrective Actions Implemented	Actioned By	Date Completed



OHS Training		Current Month	Year to Date
Induction			
Safety Representative			
First Aid			
Fire Fighting			
Scaffold Erection and Inspection			
Vehicle (stipulate)			
Safety Harness			
Other			
Other			

Site Audits & Inspections			
Management			
Client			
External			
Additional Comments / Remarks (e.g. site issues or concerns)			
<b><u>Awards or Achievements:</u></b>			
Submitted By			
Name	Designation	Signature	Date

**ANNEXURE H NON CONFORMANCE CLOSEOUT REPORT**

**NON CONFORMANCE REPORT  
HEALTH AND SAFETY SITE AUDIT**

Project			
Client			
Principal Agent			
Principal Contractor			
CHSA			
OHS Audit No		Date of Audit	
Non-Conformance No		Non-Conformances to Date	
<b>ASPECTS NOTES IN OHS AUDIT</b>	<b>COMMENTS BY THE AUDITOR</b>	<b>PENALTY</b>	<b>CLOSE-OUT DATE</b>
		500,00	
		500,00	
		500,00	
		500,00	
		500,00	
		500,00	
<b>Penalty's to Date</b>	<b>5 000,00</b>	<b>TOTAL</b>	<b>3 000,00</b>

**PHOTOGRAPHIC EVIDENCE**

1	2
3	4
5	6
<b>Engineer's Representative (RE)</b>	<b>Principal Contractors - CM (8.1)</b>
<b>Date</b>	<b>Date</b>
<b>Principal Contractors CHSO (8.5)</b>	<b>Client / CHSA</b>
<b>Date</b>	<b>Date</b>

NON-CONFORMANCE CLOSE-OUT REPORT			
Project			
Client			
Principal Agent			
Principal Contractor			
CHSA			
OHS Audit No		Date of Audit	
Non-Conformance No		Non-Conformances to Date	
COMMENTS ON WHAT WAS DONE (ATTACH PROOF IF AVAILABLE)	DATE COMPLETED	VERIFIED BY CLIENT / AGENT	
PHOTOGRAPHIC EVIDENCE			
1	2		
3	4		
5	6		
Engineer's Representative (RE)		Principal Contractors - CM (8.1)	
Date	Date		
Principal Contractors CHSO (8.5)		Client / CHSA	
Date	Date		

ANNEXURE I EXAMPLE OF MEDICAL CERTIFICATE OF FITNESS

<b>ANNEXURE 3</b> <b>OCCUPATIONAL HEALTH AND SAFETY ACT, 85 OF 1993 CONSTRUCTION REGULATIONS, 2014</b> <b>Medical Certificate of Fitness</b>			
Name of Employee:	ID Number:	Co. Number:	
*Occupation  e.g. General Worker, Welder, Bricklayer, Steel Fixer, Mobile Crane Operator, etc.	*Possible Exposures  e.g. Noise, Heat, Fall Risk, Confined Space, etc.	*Job Specific Requirements e.g. Operating Mobile Crane, Digging Trenches, Erecting Formwork & Support Work, etc.	*Protective Equipment e.g. Dust Respirator, (Light Duty), Welding Gloves, etc.
* The Employer to complete the information in the spaces marked with an * before sending the Employee for a medical examination			
<b>Declaration by the Medical Examiner:</b> I certify that I have, by examination and testing, using the above criteria specified by the employer, satisfied myself that the above mentioned employee is fit to perform the duties as described by the employer in the matrix above.			
Occupational Medicine Practitioner / Occupational Health Nursing Practitioner: (Please Print Name: _____)			
Signature: _____		Date : _____	
Address: _____		Practice Number: _____	

## ANNEXURE J DESIGN HAZARD IDENTIFICATION AND RISK ASSESSMENT

DESIGN HAZARD IDENTIFICATION AND RISK ASSESSMENT			
<b>Risk Rating Multiplier: Low = 1; Medium = 2; High = 3</b>			
<b>Baseline Raw Design Risk - Typical behaviour given the design / factors present</b>			
<b>Residual Risk - The extra factors noted that must be in place to reduce the risk</b>			
<b>Low Risk - Does not mean that the activity is safe, or that potential injuries and / or fatalities are eliminated</b>			
<b>Key Risks will be assessed and reported on in the Site Specific H&amp;S Specification</b>			
<b>New tasks require re-assessment as the project progresses</b>			
<b>GAR</b>	General Administration Regulations	<b>GMR</b>	General Machinery
<b>GSR</b>	General Safety Regulations	<b>OHS Act</b>	Occupational Health
<b>SANS</b>	South African National Standards	<b>SWP</b>	Safe Work Procedures
<b>SABS</b>	South African Bureau of Standards	<b>MS</b>	Technical Method Statements
<b>NIHL</b>	Noise Induced Hearing Loss	<b>HCS</b>	Hazardous Chemicals
		<b>PrDP</b>	Professional Driving

COLTO / LEGISLATION REF	Design aspect present	Yes / No	Describe the conditions and activities associated with the task	Baseline Raw Design Risk				me
				Likely Consequences of an Accident	Frequency of Exposure	Probability of Harm	Risk Rating Risk Category	
<b>SERIES 1000 - GENERAL REQUIREMENTS AND PROVISIONS</b>								
1202	Services- Eskom, Telkom lines, underground water, and sewage. Telkom and Eskom will remove own services where required.	Yes	PC will expose and protect services.	2	2	2	8	Com and train
1202		Yes	May be illegal connections	2	2	2	8	Rem pipe the / Reg
1202		Yes	Asbestos pipes	2	2	2	8	All e long to be netti leas of th and for th serv app prior activ
1219	Water	Yes	All water will be treated as contaminated and maybe unfit for human consumption	3	2	2	12	Trea cont be re testi regul water to be othe

COLTO / LEGISLATION REF	Design aspect present	Yes / No	Describe the conditions and activities associated with the task	Baseline Raw Design Risk				me
				Likely Consequences of an Accident	Frequency of Exposure	Probability of Harm	Risk Rating Risk Category	
1219		Yes	Potable water is available in the towns and rural water schemes are available for use. Alternate water sources/supplies will have to be approved by DWA	3	2	2	12	
1302	Construction plant workshops and camps to be established and maintained by the contractor for the duration of the contract	Yes	A number of camps may be established and maintained for various activities to construct what is required to undertake the works	2	3	3	18	The to su tend TMS and docu ensu are r
1402	Offices and Laboratories	Yes	Offices required for staff and a Laboratory for onsite testing	2	3	3	18	All b SAN and spec tend
1403	Housing	Yes	Housing for the engineers employees who operate the laboratory	2	3	3	18	All b SAN and spec tend
1404	Electricity, Telkom, Water, Sewerage, Gas and Sanitation	Yes	Depends on the site chosen by the PC. May be septic tanks and or French drainage system. Temporary chemical toilets for use by workers Local or imported water supply, ESKOM, Telkom and gas supply River water is to be treated as contaminated, and workers may well be exposed when working around bridges and culverts	2	3	2	12	The requ sani on s requ his p the T asse supp docu ensu activi man ensu serv toile mon cher more Form in th

COLTO / LEGISLATION REF	Design aspect present	Yes / No	Describe the conditions and activities associated with the task	Baseline Raw Design Risk				me
				Likely Consequences of an Accident	Frequency of Exposure	Probability of Harm	Risk Rating Risk Category	
1502(a)	Traffic Safety	Yes	The whole site will require traffic accommodation All deviations and Stop/Go controls to be conspicuously sign posted There will be public and construction traffic on the road during construction	3	3	3	27	Con to be acco with Vol. asse man Ded Offic emp thes
1502(b)(f)	Temporary deviations	Yes	All deviations and Stop/Go controls to be conspicuously sign posted There will be public and construction traffic on the road during construction	3	3	3	27	Con to be acco with Vol. asse man Ded Offic emp thes
1502(e)(h)	Are there specific concerns regarding public access?	Yes	All deviations and Stop/Go controls to be conspicuously sign posted There will be public and construction traffic on the road during construction	3	3	3	27	Con to be acco with Vol. asse man Ded Offic emp thes
1502(i)	Traffic Safety Officer (TSO) will be appointed?	Yes	All deviations and Stop/Go controls to be conspicuously sign posted There will be public and construction traffic on the road during construction	3	3	3	27	Ade TSC TSC Offic

COLTO / LEGISLATION REF	Design aspect present	Yes / No	Describe the conditions and activities associated with the task	Baseline Raw Design Risk				me
				Likely Consequences of an Accident	Frequency of Exposure	Probability of Harm	Risk Rating Risk Category	
1503(a)	Construction will be under traffic?	Yes	Construction in half widths and single lane closures will be used for the project (24 hr) Stop/Go required	3	3	3	27	Traf main clos draw prov acco with Vol cont exce hour
1503(b)	Erection of signage	Yes	Digging of holes and mounting of signs on poles, planting of poles, use of lifting equipment	3	3	3	27	PPE Stat Liftin certi and of th
1511	Dust from vehicles on the road	Yes	Dust suppression to be carried out in built areas and where employees are working and to improve driving visibility	3	3	3	27	Wat road requ
1700	Clearing and Grubbing	Yes	All Material to be stock piled for further use. Conservation of top soil	3	3	3	27	Perr engi disp TMS app
<b>SERIES 2000 - DRAINAGE</b>								
2100	Drains	Yes	Open earth drains, Banks and dykes and sub-soil drains	2	2	2	8	Tren mini Exca on a com TMS Ass
2200	Prefabricated culverts Concrete kerbing, concrete	Yes	Where insitu casting is not preferred	2	2	2	8	Pref are spe mov liftin Meth Risk
2300	channelling, chutes and down pipes and concrete linings for open drains	Yes	Pre-cast kerbs, insitue concrete pavement construction in rural areas	2	2	2	8	Tren mini Exca on a com TMS Ass
<b>SERIES 3000 - EARTHWORKS AND PAVEMENT LAYERS OF GRAVEL OR CRU</b>								



COLTO / LEGISLATION REF	Design aspect present	Yes / No	Describe the conditions and activities associated with the task	Baseline Raw Design Risk				me
				Likely Consequences of an Accident	Frequency of Exposure	Probability of Harm	Risk Rating Risk Category	
3100	Borrow Pits	Yes	Borrow pits will be spread to cover most of the site.	3	3	2	18	All b fenc auth gran All o com spec Reh pits
3200	Stock piling	Yes	Stock piling will take place at the different sites along the route	3	3	2	18	Perm engi disp TMS app fenc com safe
3300	Haulage of material in tipper trucks	Yes	Material will be hauled on the entire project from a commercial source and borrow pits	3	3	2	18	Dus supp regis oper SWP
3400	Pavements	Yes	Excavation, compaction and placement of pavement	3	2	2	12	Alter pede requ pave cons SWP
3500	Stabilization	Yes	Use of chemicals to be in line with safety regulations and MSDS's	2	3	3	18	PPE state requ
3600	Crushed stone base	Yes	Transportation and storage on site Hauled from commercial source and stock piles	3	2	2	12	TMS
<b>SERIES 4000 - ASPHALT PAVEMENTS AND SEALS</b>								
4102 4300 4600	Single and double layer seals will be used with slurry will be used. Mixes may change during the project. Applications may be "hot" or "cold" mixes	Yes	SDS's, fire fighting and first aid equipment, bunded storage areas and correct disposal from site	3	3	3	27	First train med SWP
4103a,b,c,d 4303	Use of binders, water carts, rotary brooms, hand tools, spreaders, cutters, rollers and hand spraying	Yes	Operation may be conducted by Principal Contractor or Contractor	3	3	3	27	Nois sup indu

COLTO / LEGISLATION REF	Design aspect present	Yes / No	Describe the conditions and activities associated with the task	Baseline Raw Design Risk				me
				Likely Consequences of an Accident	Frequency of Exposure	Probability of Harm	Risk Rating Risk Category	
4302	Chips will be coated on site	Yes	Inhalation of fumes, exposure to dust	3	3	3	27	Limit Train med and stor facil
4400	Cationic spray emulsion bitumen will be used. Material will be used at different temperatures 0C to 220C	Yes	SDS's, Inhalation of fumes, burns	3	3	3	27	First train med SW
<b>SERIES 5000 - ANCILLARY WORKS</b>								
5100	Stonework	Yes	Transportation of material to site. Manual labour. Vehicle traffic	3	3	3	27	TMS PPE
5200	Gabions	Yes	Transportation of material to site. Manual labour. Vehicle traffic	3	3	3	27	TMS PPE
5400	Guardrails	Yes	Working on roadway while open to the traffic. PPE required and traffic control Steep drop offs	3	3	3	27	TMS Wor issu glov
5600/5700	Road signs & markings	Yes	Manual labour on roadway while open to traffic Use of crane truck - Use of ladders	3	3	3	27	Com shou this equi insp to be test requ traff plan
5800	Landscaping	Yes	Use of chemicals and manual labour Poisons, Phosphates and Herbicides	3	3	3	27	TMS SDS train
<b>SERIES 6000 - STRUCTURES</b>								
6100	Foundations	Yes	Transportation of material to site Excavations, Structures and culverts	3	3	3	27	TMS to be
6113	Foundation Piling	Yes	Use of certified contractor for the piling works	3	3	3	27	TMS to be
6200	Formwork	Yes	Manual construction of formwork Shutter oil Manual labour	2	3	2	12	All f insp TMS and
6300	Steel reinforcement	Yes	Steel fixing	3	3	3	27	Train surv work

COLTO / LEGISLATION REF	Design aspect present	Yes / No	Describe the conditions and activities associated with the task	Baseline Raw Design Risk				me
				Likely Consequences of an Accident	Frequency of Exposure	Probability of Harm	Risk Rating Risk Category	
6400	Concrete	Yes	Precast lintels, beams and culverts Batch plant and pouring	3	3	3	27	Mixi Tran conc com and oper com spec
	Demolitions	Yes	Demolish existing concrete culverts and bridges	3	3	3	27	SW be s dem Com PPE of ru
6500	Pre-stressing	Yes	Pre-stressed beams and bridge beams	3	3	3	27	TMS Spe
6600	Bearings and Joints	Yes	Bridges will have bearings and joints	3	3	3	27	TMS Spe
<b>SERIES 7000 - SUNDRY STRUCTURES</b>								
7100	Concrete Pavements	Yes	Excavations, compacting and pouring of concrete	3	3	3	27	TMS Spe
7200	Reinforced earth	Yes	Retainer walls and Gabions	3	3	3	27	To b desi regu
7400	Earth retaining systems	Yes	Retainer walls and Gabions	3	3	3	27	To b desi regu
F1200	Concrete extensions	Yes	Some bridges and culverts will be lengthened and widened	3	3	3	27	To b desi regu
<b>OHS SPECIFICATIONS</b>								
OHS Specification	Drilling	Yes	Holes for blasting will take place as follows; Borrow Pits and Road, TMS	3	3	3	27	Use blas com Risk SAN
OHS Specification	Weather	Yes	High as well as low temperatures as well as humidity will be encountered	3	3	3	27	Wea mon conc
	Labour	Yes	Local labour as well as SMME's will be used	3	3	3	27	Loca med proc befo of w
	Preparation of blast areas	Yes	Preparation as per TMS	3	3	3	27	Use blas com Risk SAN

COLTO / LEGISLATION REF	Design aspect present	Yes / No	Describe the conditions and activities associated with the task	Baseline Raw Design Risk				me
				Likely Consequences of an Accident	Frequency of Exposure	Probability of Harm	Risk Rating Risk Category	
	Blasting	Yes	Blasting on the road	3	3	3	27	Use blas com Risk San and blas ER a 48 h plan
	All materials will be considered containing Silica	Yes	Risk Assessments, medical surveillance and chest x-rays for all workers and operators	3	3	3	27	PC i com surv ade
	Crane Work	Yes	Cranes could be used to position bridge beams and / or culverts	3	3	3	27	Cer TMS
OHS Specification	Transportation	Yes	Vehicles will be used on entire project	3	3	3	27	All o valic (P.G com med issu Occ Prac have ligh hoot che
	Hazardous Chemicals	Yes	HCS's will be used during the project Construction Vehicles	3	3	3	27	Med for p Med issu Occ Prac SWI
	Transportation	Yes	All vehicles to be identified as	3	3	3	27	Amb licen oper
	Lifting Equipment	Yes	Lifting equipment will be used on the project	3	3	3	27	All li to be equi acco
	Fire Fighting Equipment	Yes	Fire fighting equipment will be used on site	2	3	2	12	All fi equi reco acco 1475

COLTO / LEGISLATION REF	Design aspect present	Yes / No	Describe the conditions and activities associated with the task	Baseline Raw Design Risk				me
				Likely Consequences of an Accident	Frequency of Exposure	Probability of Harm	Risk Rating Risk Category	
OHS Specification	First Aid Equipment	Yes	First Aid equipment will be used on site	3	3	3	27	All fi be r ched OHS area eme to be acco resu of op take for th aid e
	River work will be required in the dry season	Yes	There may be a need to construct coffer dams or pump water from excavations	3	3	3	27	Wor eme asse state work
	Hazardous Chemicals	Yes	<b>SEE ANNEXURE</b>	3	3	3	27	PPE Stat Med

PROVINCE OF THE EASTERN CAPE

DEPARTMENT OF TRANSPORT

TENDER NO. SCMU10-24/25-0021

BRIDGE CONSTRUCTION FOR HAMBURG ROAD CONSTRUCTION PROJECT FOR A PERIOD OF  
12 MONTHS

**C3.5 SECTION E: EMPLOYMENT AND TRAINING OF LOCAL LABOUR  
SPECIFICATIONS**

## SECTION E: EMPLOYMENT OF LOCAL LABOUR AND TRAINING SPECIFICATIONS

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## E1 SCOPE

The specification sets out the requirements relating to the employment and training of local labour by involving the community through the established structures as well as the training requirements for these labourers.

## E2 DEFINITIONS

The definitions given in the conditions of contract, the Contract Data and the Works specifications, together with the following additional definitions shall, unless the context dictates otherwise, apply:

**'Key Personnel'** means all contract managers, site agents, materials and survey technicians, trainers, supervisors, foremen, skilled plant operators and the like, and all other personnel in the permanent employ of the Contractor or Sub-contractor who possess special skills and/or who play key roles in the Contractor Sub-contractor's operation.

**'Labourer'** means a worker statutorily defined as employees in the Basic Conditions of Employment Act, 1997, who is temporarily or permanently employed by the Contractor or Sub-contractor to perform prescribed work on this Contract. 'Labour' means labourers or workers.

**'Labour Register'** means the list of available Local Labourers compiled by the Project Liaison Officer (PLO) in co-operation with the Project Liaison Committee (PLC) in accordance with the results of their negotiations with the Contractor and the Local Community subsequent to the awarding of the Contract.

**'Local Labourer'** means a worker who is normally permanently residing in the target area(s) as defined by the Employer in the Works Specifications and who is available to be temporarily employed by the Contractor or Sub-contractor to perform prescribed tasks that form part of the Works.

**'Targeted Labour'** means the Local Labourers, who are defined as the target group for the Contract as normally permanently residing in the target area(s) as defined by the Employer in the Works Specifications. It is incumbent on individuals defined as Target Labour to demonstrate their claims to such residency on the basis of identification and association with and recognition by members of the community residing within the target area. It is incumbent on individuals to provide evidence of qualifying for the target groups.

**'Worker'** for the purposes of this specification means any person, not being one of the Contractor's key personnel, nor any key personnel of any Sub-contractor, who is engaged by the Contractor, a Sub-contractor or the Employer and paid on an hourly paid basis to participate in the execution of any part of the contract works and shall include unskilled labour, semi-skilled and skilled labour, artisans, clerical workers and the like.

**'Workforce'** means the aggregate body comprising of all workers and shall, unless the context dictates otherwise, include the workforces of the Contractor and Sub-contractor.

## E3 ENGAGEMENT OF LOCAL LABOUR

The temporary workforce shall, as far as practically possible, and with the exception of key personnel, be recruited/selected from the local communities living in the target area the project.

Prior to the award of the Contract, the Employer shall, at his own cost, take all necessary actions to advertise within the local communities of the fact that the Contract will provide temporary employment opportunities and preference will be given to the use of the Local Labour on this Contract. Labourers and workers of the local community required by the Contractor shall be recruited/chosen from a Labour Register and appointed for work to enable the Contractor to comply with the specific minimum target value set for the Local Labour Goal (LLG) for the Contract. Labourers and workers of the Local community who are engaged by other employers, other sub-Contractors in paid positions of employment shall not be eligible for inclusion on the Labour Register.

### E3.1 Employment of Local Labourers

Upon the award of the Contract the Contractor shall without delay consult with the Project Liaison Committee (PLC), the Employer's Agent and the Employer, and appoint a Project Liaison Officer (PLO) from a shortlist provided by the PLC, if so instructed, who is mutually acceptable to all parties. The Project



Liaison Officer shall negotiate with the Contractor and the PLC and compile the required list of available Local Labourers called the Labour Register (Labour Desk).

The Contractor shall select and appoint temporary contract workers required for work included in the Contract from the available Local Labourers listed in the Labour Register with due observance of the skills required for the work in question.

### **E3.2 Selection of Local Labourers**

The Contractor shall advise the PLO and the PLC in writing of the various categories of Local Labourers required for construction and the number of Local Labourers required in each category, together with the personal attributes which he considers desirable that each category of Local Labourers shall possess, taking due cognisance of the provisions of the Contract relating to Training.

The Contractor shall make his selection of Local Labourers from the applicants in the Labour Register, taking due cognisance of his requirements for the workforce and the provisions of the Contract in regard of the provision of Training to the workforce and in accordance with the following principles:

- (a) No potential Local Labourer shall be precluded from being employed by the Contractor on the execution of the Works by virtue of his lack of skill in any suitable operation forming part of the Works unless:
  - (i) All available vacancies have been or can be filled by labourers who already possess suitable skills; or
  - (ii) The completion period allowed in the Contract, or the remaining portion of the Contract period (as the case may be) is sufficient to facilitate the creation of the necessary skills;
- (b) Preference shall be given to the long-term and single heads of households;
- (c) The Contractor shall, in so far as is reasonably practicable, accommodate the applicant's expressed preferences regarding the types of work for which they are selected;
- (d) The selection process shall make provision for, but shall not be limited to, the inclusion in the Labour Register of disabled Local Labourers who are deemed capable to perform selected tasks, youths who are older than sixteen but not older than thirty five years and women.

After making his selection, the Contractor shall advise the PLO and the Employer's Agent thereof in writing, and the Employer's Agent, with the assistance of the PLO has the right to call a meeting with PLC and the Local Community for the purpose of ratifying the Contractor's selection. The Contractor shall attend such meeting and where reasonably required, shall motivate his selection. Should the Employer's Agent or the Local Community make reasonable objection to the selection of any particular applicant by the Contractor, the Contractor shall not employ such applicant and shall select another suitable applicant acceptable to the Employer's Agent and the Local Community as a replacement of the rejected applicant, in order to finalize the composition of the workforce.

The provisions this clause shall also apply in respect of the selection of additional or replacement members of the workforce as may be necessary from time to time for the execution and completion of the Works.

## **E4 CONTRACTUAL REQUIREMENTS**

### **E4.1 Legislation**

The onus shall be on the Contractor to ensure that all statutory requirements applicable to the employment of Labour are observed.

### **E4.2 Labour content**

The Labour Content (LC) of the Contract shall be determined as follows:

LC = total value of wages, allowances and costs paid to local labourers, including those employed by the Contractor and Sub-contractor.

The total Rand value of the Labour Content, expressed as a percentage of the total Award Value (Contract Price exclusive of VAT, and allowances for contingencies and escalation), shall be defined as the Labour Content Percentage or the local labour goal as stated in Part C4. .

#### **E4.3 Targeted labour**

The targeted labour shall be as specified above. The definitions, provisions and specifications of the South African National Standard Specification SANS 10845-8:2015, Construction Procurement : Part 8 : Participation of targeted labour in contracts will apply to this contract. Should there however be conflict between SANS 10845-8:2015 and the Works Specification, the latter shall take precedence and prevail.

The Contractor shall engage targeted labour directly in the execution of the Works to the extent that the monetary value (Labour Content) of such engagement, expressed as a percentage of the Award Value (Contract Price exclusive of VAT, Provisional Sums, Prime Cost Sums and allowances for contingencies and escalation), is not less than that specified in Part C 4.of this tender document.

#### **E4.4 Records and reporting**

The Contractor shall maintain accurate and comprehensive records of all local labourers engaged on the contract. Monthly local labour reports (as attached to this specification) shall be completed and submitted to the Employer's Agent at the end of each month, from the Commencement date up to the completion of the Contract.

The completed forms shall accompany the Contractor's monthly claim presented to the Employer's Agent for payment of certified completed work. The Employer reserves the right to delay payments due to the Contractor should the Contractor fail to provide any item of required documentation to the approval of the Employer's Agent.

The Contractor's Labour Content performance will be measured at the end of each month in order to monitor the extent to which he is striving to reach the Local Labour Goal specified in Part A of the Works Specification.

The Contractor shall, on completion of the contract, and as a pre-requisite event to the release of any retention money in terms of the conditions of contract, provide the Employer's Agent with independently audited documentary evidence of the total actually paid to the workforce and the number of workers days generated during the contract.

#### **E5 SANCTIONS**

In the event that the Contractor fails to substantiate that any failure to achieve the Local Labour Goal was due to quantitative under runs, the elimination of items, or any other reason beyond the Contractor's control which may be acceptable to the Employer, the Contractor shall be liable to pay to the Employer a financial penalty (P) calculated in accordance with the following formula:

$$P = 1,05 \times (L_M - L_A) \times V_A.$$

Where:

P = Rand value of penalty payable.

V<sub>A</sub> = Award value (Contract Price exclusive of VAT, and allowances for contingencies and escalation)

L<sub>M</sub> = Local Labour Goal % stated in the Project Document

L<sub>A</sub> = The local labour component % which the Employer's Representative certifies as being achieved upon completion of the contract.

## **E6 PROJECT LIAISON COMMITTEE**

When required a Project Liaison Committee (PLC) shall be established to manage the project, consisting of members elected from each of the wards along the project road. The Contractor will have one senior member of his staff as representative on the PLC without any voting powers.

The Contractor will report all progress, deviations from the Contract, deviations from the programme, labour related matters, and financial progress to the PLC.

The PLC will act as liaison channel between the Contractor and the community. The PLC will assist the Contractor in identifying and recruiting local labour for the project.

The Contractor shall hold meetings with the PLC on a regular basis (at least once per month but not more than twice per month) to ensure that the PLC is informed and aware of progress and problems that may arise.

Allowance is made for the payment of subsistence/travel allowances to the members of the PLC attending meetings with the Contractor, by the Contractor in the Schedule of Quantities.

## **E7 PROJECT LIAISON OFFICER**

### **E7.1 Appointment**

The Contractor shall appoint a Project Liaison Officer (PLO) after consultation with the Project Liaison Committee (PLC), the Employer's Agent and the Employer, as a link between the PLC and the Contractor. The Project Liaison Officer shall be nominated by the PLC and shall be appointed as a member of the Contractor's management personnel and the Contractor's normal employment conditions shall be applicable to the appointment. The Contractor shall disclose his normal employment conditions to the Employer's Agent when called upon to do so.

### **E7.2 Duties of the Project Liaison Officer**

The Project Liaison Officer shall:

- (a) be available on Site daily between the hours agreed on by the Contractor, the Employer and the Employer's Agent from time to time;
- (b) assist the Contractor in the identification of suitable trainees and shall attend one of each of the training sessions;
- (c) communicate with the Contractor and the Employer's Agent to determine the labour requirements with regard to the numbers and skills;
- (d) assist in maintaining good labour relations, and when applicable partake in Labourers' grievances and dispute procedures;
- (e) assist in and facilitate the recruitment of suitable temporary labour and the establishment of the Labour Register (Labour Desk);
- (f) attend all meetings in which the Local Community and/or Labourers are present or are required to be represented;
- (g) assist in the identification, and screening of Labourers from the Local Community in accordance with the Contractor's requirements;
- (h) inform temporary Labourers of their conditions of temporary employment, and inform temporary Labourers as early as possible when their period of employment will be terminated;
- (i) attend disciplinary proceedings to ensure that hearings are fair and reasonable;
- (j) keep a daily written record of his interviews and community liaison activities;
- (k) carry out specific tasks ordered by the Employer's Agent;
- (l) perform such other duties as required and agreed upon between all parties concerned.

### **E7.2 Remuneration**

The remuneration of the Project Liaison Officer shall be determined jointly by the Contractor, Employer's Agent and the Employer. A Provisional Sum is provided in the Schedule of Quantities to cover the remuneration of the Project Liaison Officer.

The Project Liaison Officer shall only be employed and paid for the period in which the duties of a Project Liaison Officer are required as agreed on by the Employer's Agent and the Contractor.

### **E7.3 Transport of the Project Liaison Officer**

The Contractor shall provide transport for the Project Liaison Officer as agreed upon between the Employer, the Employer's Agent and the Contractor.

A Provisional Sum is provided in the Bill of Quantities to cover the provision of transport for the Project Liaison Officer.

## **E8 TRAINING REQUIREMENTS**

Where training is specified in the Contract, the Contractor shall implement a formal training programme in which the various skills required for the execution and completion of the works are imparted to the workers, and where applicable, Sub-contractors engaged therein, in a programmed and progressive manner. Workers shall be trained progressively throughout the duration of the contract in the various stages of a particular type of work.

All Training shall take place during normal working hours and the Contractor shall make adequate allowance in his programme of work to accommodate the Training to be provided in terms of the Contract and shall ensure that the workers are available at the appropriate times to undergo such Training.

The Contractor shall submit with his tender full details of the formal training which he intends to implement on the Contract. Details of the proposed Training shall be provided on Schedule of Proposed Training in the: Returnable Schedules and shall include the following:

- (a) The name of the training institution and course programme.
- (b) Each type of training and course content synopsis.
- (c) The manner in which the training is to be delivered.

The cost of the Training in accordance with the Contractor's Schedule of Proposed Training programme shall not exceed the sums provided for Training in the relevant pay items in the Bill / Schedule of Quantities.

The Contractor's Training schedule shall be subject to the approval of the Employer's Agent, and the Contractor shall, if so instructed by the Employer's Agent, alter or amend the Training schedule and its contents to suit changing conditions on the Site and changes in the Contractor's programme of work.

### **E8.1 Training of Local Labourers**

Depending on the requirements of the Contract the Training shall make provision for on-site hands-on Training, courses presented in-house by the Contractor, and selected courses presented by institutions accredited by the Construction, Education and Training Authority (CETA) or other institution recognized by the Department of Labour and the Employer.

Each Labourer shall receive basic instructions and on-site hands-on training for the category of work required to be executed by him/her.

An approved number of Local Labourers chosen by the Contractor in conjunction with the Employer's Agent shall attend in-house courses conducted by trainers in the employ of the Contractor in accordance with the approved Training programme to satisfy the need for trained Labourers on the Site.

Where formal accredited training is specified in the Contract, Local Labourers with the required aptitude shall be nominated by the Contractor, and subject to the approval of the Employer's Agent, shall attend approved formal training courses presented by accredited institutions and considered essential for the execution of the Works.

For this purpose the Contractor shall submit a selection of courses from known training institutions accredited by the Construction, Education and Training Authority (CETA) or other institution recognized by the Department of Labour and the Employer from which the Employer's Agent will choose the courses to be attended by the nominated and approval Local Labourers.

### **E8.2 Labourers remunerated during training**

All Local Labourers employed by the Contractor shall be remunerated in respect of the time spent undergoing formal training. Payment for Labourers in respect of training periods during which no productive work is executed, shall be reimbursed to the Contractor as provided for in the Bill / Schedule of Quantities.

### **E8.3 Non-compliance**

If at any stage the Employer's Agent notifies the Employee in writing that the Contractor is not complying with the requirements of the Contract in respect of the training to be provided to Local and other Labourers and to the Emerging Contractors, then the Employer is entitled to appoint competent firms or persons to conduct the specified training at the Contractor's expense and the amounts paid to such firms or persons will be deducted from the Contractor's payment.

The Contractor shall be obliged to make Local Labourers and other employees available for Training when so required by the Employer's Agent.

## **E9 FORMAL TRAINING**

### **E9.1 General**

The formal skills training programme to be implemented by the Contractor shall comply with the following minimum standards:

- (a) Be accredited by the Construction, Education and Training Authority (CETA) or other institution recognized by the Department of Labour, as being appropriate for this project.
- (b) Be delivered by suitably qualified and experienced trainers accredited to do so.
- (c) Be delivered in the modules as described by an authorized Training Centre. The modules listed are those considered applicable to most civil Engineering projects and shall serve as a guide only for planning purposes. The actual training needs, training agency and programme shall be agreed with the Employer's Agent prior to implementation.
- (d) Be responsible for the provision of everything necessary for the delivery of the skills training programme, including the following:
  - (i) Sufficient skilled, competent and accredited trainers to deliver the training programme to all workers in accordance with the training programme;
  - (ii) A suitably furnished venue (if required)
  - (iii) Transport to and from the works (as necessary)
  - (iv) Tools, equipment and teaching aids;
  - (v) Stationery and all other necessary materials

All members of the workforce will initially receive training in the module. Road safety for construction workers followed by training in the various work activity modules depending on the activities for which they will be employed. Each worker employed must be given the opportunity of completing at least one of the work activity modules during the initial training period, with further training being given on merit.

The Contractor shall keep comprehensive records of the training given to each worker as well as the nature and number of work tasks executed by the worker and whenever required shall provide copies of such records to the Employer's Agent.

The Contractor shall in so far as it is reasonable and practical taking due and cognisance of the nature of the works to be executed at any given time, use training workers on those aspects of the works for which they have been trained.

### **E9.2 Accredited training and attendance**

Only qualified trainers employed by training agencies that are accredited by the Construction, Education and Training Authority (CETA), or other institution recognized by the Department of Labour shall deliver all training. Accredited training referred to both the trainers as well as to the training material. Certificates affirming the successful participation in the various courses shall be presented to each attendant.

The Contractor shall facilitate in the delivery of training by instructing and motivating the hired local Labour, supervisors and sub-Contractors regarding attendance and participation.

All training shall take place within normal working hours or as agreed with the trainees.

### **E9.3 Supervisors**

Attention shall be given to the formal and informal training of supervisors.

Candidates having the potential to become supervisors shall be selected from amongst the workforce and be given additional formal and informal training as outlined above. This selection will take place only once the initial skills training have been completed and workers have been given sufficient opportunity to prove their worth.

### **E9.4 Training records and certificates**

The Contractor shall keep comprehensive records of the formal training given to each Labourer and principal of the Emerging Contractor and whenever required shall provide copies of such records to the Employer's Agent. At the successful completion of each course each participant shall be issued with certificate indicating the course contents as proof of attendance and completion.

### **E9.5 Labour / Training Agent**

If specified in the Contract, the Contractor shall appoint a Labour / Training Agent, subject to the written approval of the Employer's Agent. The Labour / Training Agent shall be on the Site at all times when Local and other Labourers are executing work allocated to them.

The labour / Training Agent shall report in writing to the Employer's Agent on a daily basis on the work executed by the Local and other Labourers in the employ of the Contractor, the quality of the work the progress and all other information that the Employer's Agent may require. The Labour / Training Agent shall also be responsible for those aspects of training which are assigned to him the Contract.

### **E9.6 Training centre**

If so specified in the Contract a suitable on-site Training centre shall be provided by the Contractor to the satisfaction of the Employer's Agent. The Training centre shall comply with the specifications for site offices as specified in the Specifications Measurement and payment of the Training centre and the required equipment shall be as specified in the Project Specification.

## CONTRACTOR MONTHLY LOCAL LABOUR REPORT

PART 1

Contract No.:

Contract Name:

Contractor Name:

Claim No.:

For Period Ending:

Date of Report:

The Contractors Monthly Report comprises an integral part of the Contractors Payment Claim and processing of the payment claim is not permitted without this report also being submitted i.e.

"NO REPORT – NO PAYMENT".

### Attachments:

**Part A:** Overall Project Worker Schedule: Schedule of all local labourers employed since the start of the project (BENEFICIARY LIST)

**Part B:** Monthly Wage Summary

**Part C:** Local Labour & Materials Summary Schedule









PROVINCE OF THE EASTERN CAPE

DEPARTMENT OF TRANSPORT

TENDER NO. SCMU10-24/25-0021

BRIDGE CONSTRUCTION FOR HAMBURG CONSTRUCTION PROJECT FOR A PERIOD OF 12  
MONTHS

**C3.6 SECTION F: ENVIRONMENTAL MANAGEMENT PLAN  
IMPLEMENTATION SPECIFICATIONS**

## SECTION F: ENVIRONMENTAL MANAGEMENT PLAN IMPLEMENTATION SPECIFICATIONS

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<b>SECTION F-1:</b>	<b>CONSTRUCTION</b>	<b>ENVIRONMENTAL</b>	<b>MANAGEMENT</b>	<b>PROGRAMME</b>
	<b>IMPLEMENTATION SPECIFICATION</b>			

**F1001 SCOPE**

This Specification covers the requirements for the effective implementation of an Environmental Management Programme for controlling the impact on the environment during the road construction activities. It is a generic specification and therefore certain aspects may not be directly relevant to this particular project.

The purpose of the Environmental Management Programme (EMPr) is to help control those construction activities that can have potentially adverse environmental implications on the site and surrounding areas. In short, the EMPr describes good environmental practice principles which must be applied for the duration of the construction activities.

The environmental specifications should be read in conjunction with the Environmental Assessment and Environmental Management Programme for materials sources as well as the conditions of authorisation issued by the Department of Economic Development, Environmental Affairs and Tourism (DEDEAT), the Department of Mineral Resources (DMR) and the Department of Water and Sanitation (DWS). It should be noted that the conditions of the DEDEAT, DMR and DWS Authorisations are legally binding.

The contractor is furthermore required to comply with other relevant legislation which may apply to the proposed activities. This may include, but not be limited to:

- (a) A water utilization permit for water abstraction, issued in terms of the National Water Act (Act No 36 of 1998).
- (b) General Authorisation/Licence required for alterations to a river bank or permanent deviation of a stream flow, issued in terms of the National Water Act (Act No 36 of 1998).
- (c) Licence required for alteration of wetlands, issued in terms of the National Water Act (Act No 36 of 1996)
- (d) Permit for atmospheric emissions produced by an asphalt plant, issued in terms of the Atmospheric Pollution Prevention Act (Act No 45 of 1965).
- (e) Permit for the removal or destruction of protected plants or removal of indigenous trees within a forest, issued in terms of the National Forestry Act (Act No 84 of 1998).

**F1002 INTERPRETATIONS****(a) Supporting Documents**

Where this specification is applicable, the following documents shall inter alia be read in conjunction with this document.

- (i) Statutory requirements of the National Environmental Management Act (Act No 107 of 1998) and regulations promulgated in terms of Section 24 of NEMA;
- (ii) Statutory requirements of the Minerals and Petroleum Resource Development Act (Act No 28 of 2002);
- (iii) Statutory requirements of the National Water Act (Act No 36 of 1998);
- (iv) Statutory requirements of the National Environmental Management: Waste Management Act (Act No 59 of 2008);
- (v) Statutory requirements of the National Forests Act (Act No 84 of 1998); and
- (vi) Statutory requirements of the National Heritage Resources Act (Act No 25 of 1999).

**(b) Applications**

The provision of this specification shall apply in respect of all Contractors, Sub-contractors and to any of their site personnel, workforce or suppliers, who are engaged in the execution of the works.

**F1003 DEFINITIONS AND ABBREVIATIONS**

<b>DEDEAT</b>	Department of Economic Development, Environmental Affairs and Tourism.
<b>DAFF</b>	Department of Agriculture, Forestry and Fisheries
<b>DWS</b>	Department of Water and Sanitation
<b>EEA</b>	External Environmental Auditor
<b>EIA</b>	Environmental Impact Assessment
<b>EMPr</b>	Environmental Management Programme
<b>ENVIRONMENT</b>	The surroundings within which humans exist and that could be made up of: the land, water and atmosphere of the earth; micro-organisms, plant and animal life; any part of combination of the aforementioned and the interrelationships among and between them; and, the physical, chemical, aesthetic and cultural properties and conditions of the foregoing that influence human health and wellbeing.
<b>ENVIRONMENTAL IMPACT</b>	The 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.
<b>INVASIVE ALIEN VEGETATION</b>	An undesirable plant growth which shall include, but not be limited to, all declared category 1 and 2 listed invader species as set out in the Conservation of Agricultural Resources Act.
<b>MSDA</b>	Material Safety Data Sheets.
<b>EARS</b>	Employer's Agent's Representative on Site.
<b>NO-GO AREAS</b>	Generally those areas outside the designated working areas, including but not limited to: existing services and infrastructure, occupied property; grave sites; cultivated lands, wetland areas, 'Special or Sensitive Environments' as defined in the EMPr.
<b>TOPSOIL</b>	Natural soil covering, including all the vegetation and organic matter, with variable depth.
<b>WORKING AREAS</b>	Working areas are those areas required by the Contractor to construct the works, as approved by the Employer's Agent.

**F1004 OBJECTIVES OF THE ENVIRONMENTAL MANAGEMENT PROCEDURES**

The Environmental Management Programme which is in accordance with the Environmental Policy of the Employer is intended primarily as a management tool, for the guidance of the Employer's Agent, the Contractor and his sub-contractors.

The objective of the Environmental Management Programme (EMPr) is to control the impacts firstly of materials, plant and facilities and secondly construction activities. The effective implementation of an EMPr will ensure that the required works are conducted in an environmentally sound manner and that the negative impacts of the works are minimised or prevented. This management programme contains the necessary environmental requirements to the Contractor and his staff, including all sub-contractors and on-site workers are required to adhere to.

The Environmental Management Programme outlines structures and procedures to be implemented by the Contractor and his sub-contractors to minimise and manage potential environmental impacts which the Contractor's construction activities might have on the receiving environment.

An Employers' Environmental Agent (EEA) will be appointed by the Employer to ensure that the EMPr is being effectively implemented. The EEA shall undertake monthly site inspections, the results of which will be reported to the Employer, Employer's Agent, Contractor and to the relevant government departments.

## **F1005 ROLES AND RESPONSIBILITIES**

### **(a) Responsibilities of the Employer's Agent**

Specific to environmental management, the role of the Employer's Agent will be to ensure enforcement of the Environmental Management Programme and Procedures and supplementary recommendations made by the EEA; review and approve the Method Statements submitted by the Contractor; and liaise with the Contractor, the EEA and DEDEAT on environmental matters as necessary.

Responsibilities of the Employer's Agent will include, but not be limited to:

- Communicating the advice of the EEA and/or contents of the EEA's reports;
- Issuing site instructions where applicable;
- Communicating to the EEA any new/amended construction activities;
- Informing the EEA of any infringements/accidents or incidents that have occurred on/off site;
- Implementing any Temporary Work Stoppages where serious environmental infringements and non-compliances have occurred;
- Issuing penalties as and when necessary; and,
- Maintaining a record of complaints and communicating these to the Contractor and EEA.

Should the Employer's Agent be of the opinion that the environmental management measures are not being adhered to, and that the appropriate corrective action is not being implemented, the Employer's Agent, advised by the EEA, will be at liberty to instruct the Contractor to cease the related operations until the contractor complies with the relevant requirements. The contractor will not be entitled to any extension of time for such stoppages.

### **(b) Responsibilities of the Employer's Environmental Agent (EEA)**

The role of the EEA will be to monitor, review and verify the implementation of the EMPr and liaise with the Employer's Agent and/or Employer, and DEDEAT to confirm the level of compliance achieved and make appropriate recommendations on improvements/actions required.

The responsibilities of the EEA will include, at a minimum:

- Advising the Employer's Agent on the interpretation and enforcement of the Environmental Specifications;
- Assisting with the review of Method Statements;
- Demarcating particularly sensitive areas;
- Monitoring any basic physical changes to the environment as a consequence of the construction works – e.g. evidence of erosion, dust generation and littering;
- Undertaking monthly site inspections and submitting reports on the level of compliance to the EMPr demonstrated by the Contractor;
- Undertaking quarterly audits, with reporting to the relevant authorities;
- Undertaking any damage assessments with the Employer's Agent where incidents, accidents and/or serious infringements have occurred on/off site, and advising on remedial actions required;
- Liaising with the relevant authorities as required; and
- Updating the EMPr as and when appropriate and communicating these changes to the Employer's Agent and Contractor.

### **(c) Responsibilities of the Contractor**

The Contractor will be contractually required to undertake his activities in an environmental responsible manner. The role of the Contractor will include the following, at a minimum:

- To implement the EMPr (and any subsequent revisions) for the duration of the construction activities;
- To provide reasonable resources for the effective control and management of environmental risks associated with the construction activities, as per the EMPr;
- To assign tasks to personnel as necessary and ensure appropriate accountability and responsibility is assigned to enable the carrying out of these duties;
- To maintain incident, training and other relevant administrative records; and

To ensure all personnel, sub-contractors and other workers appointed by the Contractor are aware of the environmental responsibilities on site.

These roles will, at a minimum, translate into the following environmental responsibilities:

Be familiar with the contents of the EMPr and to comply with the EMPr;  
Submit the necessary Method Statements and plans to the Employer's Agent for approval;  
Review the EEA Reports and take cognisance of the information/recommendations made;  
Notify the Employer's Agent immediately in the event of any accidental infringements of the Environmental Specifications and ensure appropriate remedial action is taken;  
Notify the Employer's Agent in advance of any amendments/changes to the proposed work activities to enable environmental impacts to be confirmed and mitigation measures identified; and  
Maintain records – e.g. photographic records, complaints records, training records and incident records.

**(d) Responsibilities of the Environmental Representative**

The Contractor shall on commencement of the Project appoint an Environmental Representative who, in addition to his normal duties, shall have direct responsibility for the implementation and monitoring of the Environmental Management Programme.

The Environmental Representative shall liaise with the Employer's Agent, the EEA and the Contractor, in order to ensure effective implementation of the Environmental Management Programme at site level. The Environmental Representative will be responsible for the practical implementation and monitoring of the Environmental Management Programme and he shall report directly to the Employer's Agent in this regard. The Environmental Representative shall periodically inspect and monitor operations on and off site and shall take the necessary action where required to ensure compliance with the requirements of the Environmental Management Programme. The Environmental Representative shall attend all regular site Works meetings for reporting, discussing and reviewing the performance of the Environmental Management Programme (which shall be a standard item on the agenda).

**F1006 METHOD STATEMENTS**

The Contractor shall be required to submit Method Statements to the EEA outlining proposed construction activities, phasing and procedures and methods to comply with the targets stipulated in the Environmental Management Programme. Method Statements shall, where applicable, include Site Establishment Drawings with sufficient detail to assess the potential impact of the site facilities or to assess the degree of safeguarding provided against pollution.

Method Statements shall indicate how the procedures will be applied in order to meet the relevant targets and are central to the proper implementation of the Environmental Management Programme. It is anticipated that in addition to assessing the systems and performance of the Environmental Management Programme, the external audit will scrutinise the formulation of, and adherence to Method Statements in some detail.

Method Statements must be submitted at least 10 days prior to the proposed commencement of related activities and must be approved by the EEA, in consultation with the Employer's Agent. The Environmental Representative shall keep copies of these Method Statements and letters of approval (including conditions attached) in a Method Statement file.

Any deviations from the approved Method Statements must be submitted to the EEA for approval and any amendments submitted to the Employer's Agent.

The following Method Statements shall be submitted by the Contractor 14 days prior to the commencement of works on site:

- (a) Layout and preparation of the construction camp;
- (b) Location, layout and preparation of cement/concrete batching facilities including the methods employed for the mixing of concrete including the management of runoff water from such areas;
- (c) Contaminated water management plan, including the containment of runoff and contaminated water;
- (d) Dust control;
- (e) Source of water for compaction and dust suppression;
- (f) Method for the control of erosion during bulk earthwork operations, including erosion of spoil material;



- (g) Methods for abstracting water from rivers or other water sources including measures to prevent pollution and sedimentation;
- (h) Emergency spillage procedures, including hydrocarbons, and compounds to be used;
- (i) Method of diverting stormwater during construction; and
- (j) Solid waste control and removal of waste from Site;

## **F1007 MATERIALS, PLANT AND FACILITIES**

### **(a) Materials handling, use and storage**

The Contractor shall ensure that any delivery drivers are informed of all procedures and restrictions (including “no go” areas) required to comply with the Specifications of the EMPr.

The Contractor shall ensure that these delivery drivers are supervised during off-loading by someone with an adequate understanding of the requirements of the EMPr.

Materials shall be appropriately secured to ensure safe passage between destinations. Loads including, but not limited to sand, stone chip, fine vegetation, refuse, paper and cement, shall have appropriate cover to prevent them spilling from the vehicle during transit. The Contractor shall be responsible for any clean-up resulting from the failure by his employees or suppliers to properly secure transported materials.

All lay down areas for manufactured/imported material outside of the construction camp shall be subject to the Employer’s Agent’s approval, which shall not unreasonably be withheld.

### **(b) Hazardous substances**

Hazardous chemical substances (as defined in the Regulations for Hazardous chemical Substances) used during construction shall be stored in secondary containers.

The relevant Material Safety Data Sheets (MSDS) shall be available on Site. Procedures detailed in the MSDS’s shall be followed in the event of an emergency situation.

Potentially hazardous substances shall be stored, handled and disposed of in a suitable manner.

### **(c) Fuel (petrol and diesel) and oil**

The Contractor shall ensure that all fuels and chemicals are handled and stored in a manner so to minimise the risk of spills, leaks or structural failures.

Fuel may be stored on Site and the fuel storage area shall be located at the workshop or a fuel storage depot located within the construction camp.

The Contractor shall ensure that all liquid fuels (petrol and diesel) are stored in tanks with lids, which are kept firmly shut or in bowsers.

The tanks/bowsers shall be situated on a smooth impermeable surface (plastic or concrete) base with an earth bund (plastic must have sand on top to prevent damage and perishing). The impermeable lining shall extend to the crest of the bund and the volume inside the bund shall be 110% of the total capacity of all the storage tanks/bowsers.

The bunded area shall be covered to prevent the accumulation of rainwater within the bunded area.

The Contractor shall prevent unauthorised access into the fuel storage area.

The Contractor shall have on Site all the necessary materials and equipment to deal with spills of any of the substances stored on Site.

The Contractor shall set up a procedure to deal with a spillage or pollution event; this should include immediate communication with the Employer’s Agent and EEA. A number of the Contractor’s staff shall be appropriately trained to deal with any spills or pollution threat.

No smoking shall be allowed within the vicinity of the fuel storage area.

The Contractor shall ensure that there is adequate fire-fighting equipment at the fuel stores.

Gas and fuels shall not be stored in the same storage area.

Where reasonably practical, plant shall be refuelled at the depot or at the workshop as applicable. If it is not reasonably practical then the surface under the refuelling area shall be protected against pollution to the reasonable satisfaction of the Employer's Agent prior to any refuelling activities.

The Contractor shall ensure that there is always a supply of absorbent material readily available to absorb/breakdown and where possible be designed to encapsulate minor hydrocarbon spillage. The quantity of such materials shall be able to handle a minimum of 200 litre of hydrocarbon liquid spill. This material must be approved by the Employer's Agent prior to any refuelling or maintenance activities.

Drip trays shall be inspected and emptied daily, and serviced when necessary. Drip trays shall be closely monitored during rain events to ensure that they do not overflow.

The appropriate signage must be erected at the diesel bowser and workshops.

**(d) Ablution facilities**

A sufficient number of chemical toilets shall be provided by the Contractor in the construction camp area and at appropriate locations agreed by the Employer's Agent. The ratio of toilets to site staff shall not exceed 1:30 (for each sex (refer to the Health and Safety Specification in Section C of the Contract Document), and the closest toilet shall never be further than 100 m away from the area where work is currently under way.

Toilets shall not be located in river courses or flood plains.

Washing, whether of the person or of personal effects and acts of excretion and urination are strictly prohibited other than at the facilities provided.

All temporary/portable toilets shall be secured to the ground to the satisfaction of the Employer's Agent to prevent them toppling due to wind or any other cause.

All toilets are to be maintained in a clean, sanitary condition. The Contractor shall be responsible for cleaning, maintenance, servicing and emptying the toilets on a regular basis. The Contractor shall supply adequate toilet paper at all toilets.

The Contractor shall ensure that no spillage occurs when the toilets are cleaned or emptied and that the contents are properly stored and removed from Site.

Discharge of waste from toilets into the environment and burial of waste is strictly prohibited.

Septic tanks may be used only once the soil conditions have been checked and found to be suitable.

The contractor may make use of a waste water treatment plant (or sewage package plant), should this be required, provided such a facility has been authorised and/or registered by the relevant authorities (DEDEAT and DWS) according to the NEMA EIA Regulations (Government Notice No R. 385) and the National Water Act (Act No 36 of 1998).

**(e) Living Accommodation (if necessary)**

The location of the living accommodation must be approved by the local authorities and the traditional leadership.

The living accommodation should be located on already transformed and disturbed areas.

The living accommodation should not be located within the Coastal Conservation Area, ie within 1,0 km of the coast or high water mark of any estuary.

The living accommodation should not be located at the coastal development nodes, unless prior permission has been obtained in writing from the DEDEAT.

Living accommodation for workers on Site should comply with minimum standards.

All temporary structures shall be removed and the area rehabilitated on completion of the works.

The Contractor shall designate eating areas for his employees. The Contractor shall provide bins with lids in these areas.

The source of energy/fuel for use by the workers residing in the area must be clearly specified. There must be no collection of wood outside the designated area.

**(f) Solid waste management**

No on-site burying or dumping of any waste materials, vegetation, litter or refuse shall occur.

The Contractor shall provide sufficient bins with lids on Site to store the solid waste produced on a daily basis. Bins shall not be allowed to become overfull and shall be emptied a minimum of once daily.

The waste may be temporarily stored on Site in a central waste area that is weatherproof and scavenger-proof, and which the Employer's Agent has approved.

No burning of refuse is permitted.

All solid waste shall be disposed of off-site at least once weekly at a licensed landfill site. The nearest licensed landfill site is at Hamburg or as indicated by the Employer's Agent.

The Contractor shall supply the Employer's Agent with a certificate of disposal.

**(g) Contaminated water**

The Contractor shall set up a contaminated water management system, which shall include collection facilities to be used to prevent pollution, as well as suitable methods of disposal of contaminated water.

The Contractor shall notify the Employer's Agent immediately of any pollution incidents on Site and liaise with the local irrigation board and farming interests.

The Contractor shall prevent discharge of any pollutants, such as cements, concrete, lime, chemicals and fuels into any watercourses, estuaries or stormwater channels.

Water that has been contaminated with suspended solids, like soils and silt may be released into natural watercourses or stormwater channels. However, all suspended solids shall be removed from water before it is discharged by settling out these solids in settling ponds.

**(h) Site camp**

All site establishment components (as well as equipment) shall be positioned to limit visual intrusion on neighbours and the size of area disturbed.

The Contractor shall provide the Employer's Agent with a plan of the site camp showing the layout/positioning of all infrastructure including wash bays, fuel storage areas, materials storage areas, sewage infrastructure and buildings. The Contractor shall maintain a map of the site layout that indicates where the wash bays, fuel storage areas, topsoil sites etc are located. The Employer's Agent and EEA must approve this.

Where site camps are to be established the feasibility of removing topsoil from the site, before site establishment, shall be investigated. Removed topsoil should then be stockpiled for use in rehabilitation of the site camp

The site camp should not be located within the Coastal Conservation Area, ie within 1,0 km of the coast or high water mark of any estuary, or within 100 m of any drainage line.

The site camp should not be located at the coastal development nodes, unless prior permission has been obtained in writing from the DEDEAT.

All water requiring discharge, including wastewater from kitchen and ablution facilities, should be led to soak pits, treated or discharged in a manner approved by the Employer's Agent. No wastewater shall be discharged into rivers or streams.

Site camps and surrounds shall be maintained in a clean, tidy and orderly condition at all times.

The Contractor shall restore the site camp to its former condition upon completion of the works. This will include removal of all rubble and foundations, loosening of compacted soils and re-establishing groundcover. Where a homestead has been used as a site camp, the Contractor may be required to renovate the buildings once the works are complete.

**(i) Lights**

The Contractor shall ensure that any lighting installed on the Site for his activities does not interfere with road traffic or cause a reasonably avoidable disturbance to the surrounding community or other users of the area. Lighting installed shall be down lighting.

**(j) Workshop, equipment maintenance and storage**

Where practical, all maintenance of equipment and vehicles on Site shall be performed in the workshop. If it is necessary to do maintenance outside of the workshop area, the Contractor shall obtain the approval of the Employer's Agent prior to commencing activities.

The Contractor shall ensure that in his workshop and other plant maintenance facilities, including those areas where, after obtaining the Employer's Agent's approval, the Contractor carries out emergency plant maintenance, there is no contamination of the soil or vegetation.

The workshop shall have a smooth impermeable concrete floor. The floor shall be bunded and sloped towards an oil trap or sump to contain any spillages of substances (e.g. oil).

When servicing equipment, drip trays shall be used to collect the waste oil and other lubricants. Drip trays shall also be provided in construction areas for stationary plant (such as compressors) and for "parked" plant (such as scrapers, loaders, vehicles).

All vehicles and equipment shall be kept in good working order and serviced regularly. Leaking equipment shall be repaired immediately or removed from the Site.

The washing of equipment shall be restricted to urgent or preventative maintenance requirements only. All washing shall be undertaken in a wash bay area which must be equipped with a suitable impermeable floor and sump/oil trap. The use of detergents for washing shall be restricted to low phosphate and nitrate containing, low sudsing-type detergents.

**(k) Drinking and construction water**

Water for drinking and construction purposes should be obtained from local reticulation works, or an approved source. Unless approved by DWS, water should not be extracted from nearby dams and rivers, and construction activities should not be conducted in or directly adjacent to rivers and dams.

Water is a scarce resource throughout South Africa and certain parts of the Eastern Cape Province are prone to water shortages during periods of drought. Water, whether drinking or for operational purposes must be used responsibly.

**F1008 CONSTRUCTION ACTIVITIES**

**(a) Working Areas**

The road construction and associated activities may be conducted only in designated working areas. Limitation of these activities to specific working areas minimises the impact on the surrounding environment and facilitates control of the works. Sites should be divided into working areas and "no-go" areas:

- (i) Working areas are those areas required by the Contractor to undertake the works and as approved by the Employer's Agent. These areas include the area of works, borrow areas and haul roads between the working site and borrow areas. If necessary, the working areas may be demarcated during the period. The Contractor and his staff are not permitted to move around outside the designated working areas. The Contractor shall ensure that, insofar as he has the authority, no person, machinery, equipment or material enters the "no go" areas at any time.

Within the overall working area, the Contractor requires the Employer's Agent's approval for the following specific areas:

- (1) Site Camp.
  - (2) Stockpiling and storage of construction materials.
  - (3) Stockpiling of topsoil for rehabilitation purposes.
  - (4) Spoiling of cleared vegetation (alien/invasive species).
  - (5) Sites for spoil materials.
- (ii) "No-go" areas are those areas outside of working areas. The Contractor shall erect and maintain permanent and/or temporary fences of the type and in the locations directed by the Employer's Agent. Such fences shall, if so specified, be erected before undertaking designated activities. Venturing outside of the working area into a defined "no-go" area may attract a fine as indicated in Clause F1014.

**(b) Protection of Flora and Fauna**

Natural features, indigenous flora and fauna in the vicinity of the project works should be protected and damage or disturbance prevented or minimised; specifically:

- (i) The removal of any indigenous vegetation must be in strict accordance to the conditions as set out by the DAFF permit.
- (ii) No plant species may be removed unless agreed by the EEA or unless they are listed as alien invasive species.
- (iii) The minimum amount of vegetation must be removed. Excessive clearing of a site must be avoided. Disturbance outside of the immediate construction area must be avoided.
- (iv) No construction staff may have access to indigenous vegetation outside of the working corridor.
- (v) The use of indigenous plants as firewood is prohibited.
- (vi) Where protected or Red Data Species are encountered and require removal, the EEA should be consulted and the plant(s) then replanted in a nearby 'safe' area of similar habitat. Permission should be obtained from DEDEAT, Eastern Cape.
- (vii) All fauna (including domestic livestock) within and surrounding the site shall be protected; they shall not be caught, poisoned, trapped, snared or killed.
- (viii) No domestic animals shall be brought onto the site.

**(c) Sites of Archaeological and or Cultural Interest**

The Contractor shall take responsible precautions to prevent any person from removing or damaging any fossils, coins, articles of value or antiquity and structures and other remains of archaeological interest discovered on the Site, immediately upon discovery thereof and before removal.

Should an archaeological or cultural site be located during the upgrading of the route or any associated infrastructure, it should immediately be reported to the National Monuments Council. Failure to report a site of archaeological and/or cultural significance is a contravention of the National Heritage Act (Act No 25 of 1999).

All construction site staff must be briefed to immediately report any potential sites which are encountered during the construction of the road. In the event of finding what appears to be an archaeological site or a cultural and/or historic site or object, work should be terminated until a qualified archaeologist or historian can examine the item or find.

The contractors must check the area carefully for any graves. The relocation of graves must be undertaken in consultation with the affected families and through the Project Steering Committee. The correct procedures for the exhumation and reburial of the remains must be strictly adhered to.

**(d) Protection of Natural Features**

The Contractor shall not deface, paint, damage or mark any natural features (e.g. rock formations) situated in or around the Site for survey or other purposes unless agreed beforehand with the Employer's Agent.

Any features affected by the Contractor in contravention of this clause shall be restored/rehabilitated to the satisfaction of the Employer's Agent.

The Contractor shall not permit his employees to make use of any natural water sources (e.g. springs, streams, and open water bodies) for the purposes of swimming, personal washing and the washing of machinery or clothes.

**(e) Aesthetics**

The Contractor shall take reasonable measures to ensure that construction activities do not have an unreasonable impact on the aesthetics of the area.

**(f) Conservation and Stockpiling Of Topsoil**

Topsoil shall be removed from the following areas no longer than 10 days before construction begins:

- (i) All areas to be excavated;
- (ii) Areas to be occupied by roads, including the temporary haulage road;
- (iii) Areas for the storage of fuels;
- (iv) Areas to be used for batching/mixing of concrete;
- (v) Areas for stockpiling of construction materials;
- (vi) Areas for stockpiling of crushed rock; and
- (vii) Areas for spoiling material.

Topsoil shall be excavated to a minimum depth of 150 mm or to a maximum depth of 300 mm. Compaction of these topsoil stockpiles is not permitted. Where topsoil has been stored for longer than 12 months the Contractor shall turn the soils to maintain viability of the seeds and the soil properties.

The topsoil stockpiles shall be clearly demarcated and vehicle access restricted. The topsoil shall not be contaminated with any fuels, oils or other construction waste or materials.

Topsoil shall not be mixed with any other material (construction rubble, subsoil etc) and erosion of the topsoil stockpiles must be prevented.

**(g) Erosion Control**

Soil erosion shall not be tolerated on the Site. Uncontrolled erosion will cause siltation and pollution of the stream and result in loss of valuable topsoil. The Contractor should take all reasonable measures to prevent soil erosion and protect areas susceptible to erosion. Erosion prevention measures must be implemented to the satisfaction of the Employer's Agent.

Areas affected by construction related activities must be monitored regularly for evidence of erosion. Areas particularly susceptible to erosion include: areas stripped of topsoil, soil stockpiles and steep slopes (gradients>8%).

Soil erosion may result from a diversion, a restriction, or an increase in the flow of stormwater or river flow caused by the presence of temporary/permanent works, operations and activities. Where evidence of erosion appears, the construction of contour berms, cut-off drains or planting of grass sods / ground cover may be necessary.

The Contractor shall take reasonable measures to control the erosive effects of stormwater runoff. A cut-off drain(s) or low berm will be constructed where necessary to lead run-off rain water away from steep, exposed slopes, ensuring that the water does not flow over the slopes and cause erosion. Water from these drain(s) will be disposed of in such a way that the erosive force of the water in the drain(s) is dissipated and erosion does not occur at the drain discharge point(s).

Where erosion does occur the Contractor shall reinstate such areas and areas damaged by the erosion, at his own cost and to the satisfaction of the Employer's Agent and EEA. Topsoil that has been washed away shall be replaced.

The access/haul roads, after ripping, must be topsoiled and hydroseeded with an appropriate hydroseed mix and the same specifications apply as in the other areas that require hydroseeding.

The order for the seeds must be placed timeously to ensure availability at the time required.

**(h) Prevention of Pollution**

The Contractor should ensure that pollution of the soil or water (i.e. surface and ground) does not occur as a result of any activities on Site. Pollution could result from the release, accidental or otherwise, of chemicals, oils, fuels, sewage, wastewater containing kitchen waste, detergents, solid waste and litter, etc. Specific measures to be taken to prevent the pollution of the environment include:

- (i) Immediately report and manage any leakage or spillage with appropriate spill contingency equipment and measures.
- (ii) All fuels, oils, lubricants and other petrochemical products must not be stored within 100 m of any estuary, wetlands and rivers.
- (iii) Fuel lubricants, solvents, paints, and other chemicals must be stored within the contractors campsite in a facility secured with lock and key. Storage should be on a bunded, impervious site (secondary containment).
- (iv) Maintenance of vehicles must only take place in a designated workshop with a concrete base and drip trays for the collection of waste lubricants. Emergency maintenance vehicles must be equipped with drip trays and absorbent material, such as spillsorb, to collect and contain waste oils.
- (v) No rock, silt, cement, grout, asphalt, petroleum product, timber, vegetation, domestic waste, or any deleterious substance should be placed or allowed to disperse into any stream, river, pond, storm or sanitary sewer, or other watercourse.
- (vi) Ensure all construction equipment is free of leaks from oil, fuel or hydraulic fluids and is cleaned in an area with a suitable controlled runoff.
- (vii) Refueling activities should not be conducted where runoff could carry contaminants into drainage pathways (including stormwater drains/trenches and sewers).
- (viii) Washing of vehicles must be kept to a minimum and must only take place in a designated area on an impervious surface which drains into an oil sump.
- (ix) Cleaning out of concrete mixers and trucks must take place on a properly designated site where there is no opportunity for the pollution of water bodies.

**(i) Stockpiling/Spoiling of Materials**

The Employer's Agent and EEA shall approve all stockpiling and spoiling sites and confirm the end-use or rehabilitation plans for these sites.

The stockpiles should be located within demarcated construction sites. Material stockpiled should be done so in such a way as to minimise the spread of materials and the impact on the natural vegetation. The Contractor should ensure that no materials 'creep' into "no-go" areas.

No spoiling of material should take place below the 1:100 year floodline of any river, stream, and wetland or water course.

The Contractor, upon completion of the project shall reinstate areas used for stockpiling to their former states.

**(j) Asphalt, Bitumen and Paving**

Over spray of bitumen products outside of the road surface and onto roadside vegetation shall be prevented using a method approved by the Employer's Agent.

The area used for the storage of bitumen drums/products shall comply with the following:

- (i) The floor shall be smooth and impermeable (concrete or thick plastic covered in sand).
- (ii) The floor shall be bunded and sloped towards a sump to contain any spillages of substances.
- (iii) The bund shall be inspected and emptied daily, and serviced when necessary.
- (iv) The bund shall be closely monitored during rain events to ensure that they do not overflow.

When heating bitumen products, the Contractor shall take cognisance of appropriate fire risk controls. Heating of bitumen products shall only be undertaken using LPG or similar zero emission fuels and appropriate fire fighting equipment shall be readily available.

Water quality from runoff from newly/fresh bitumen surfaces will be monitored by the Employer's Agent and remedial actions taken where necessary.

Stone chip/gravel excess shall not be left on road/paved area verges. This shall be swept/raked into piles and removed to an area approved by the Employer's Agent.

**(k) Cement and Concrete Batching (if necessary)**

The permitted location of the batching plant (including the location of cement stores, sand and aggregate stockpiles) will be indicated by the Employer's Agent. The concrete/cement batching plant shall be kept neat and clean at all times.

The batch plant should not be located closer than 100 m from any water course or wetland and not below the 1:100 year floodline of any water course or wetland.

The batching plant shall be located on a smooth impermeable surface (plastic or concrete). The area shall be bunded and sloped towards a sump to contain any spillages of substances.

No batching activities shall occur directly on the ground. All wastewater resulting from batching of concrete shall be disposed of via the wastewater management system and shall not be discharged into the environment.

Used bags shall be stored in weatherproof containers to prevent windblown cement dust and water contamination. Used bags shall be disposed of on a regular basis via the solid waste management system, and shall not be used for any other purpose.

Unused cement bags shall be stored so as not to be affected by rain or runoff events. In this regard, closed steel containers should be used for the storage of cement powder and any additives.

The Contractor shall ensure that sand, aggregate, cement or additives used during the mixing process are contained and covered to prevent contamination of watercourses, the surrounding vegetation and natural rock through wind or water dispersion.

All runoff from the batching plant shall be strictly controlled, and cement- contaminated water shall be collected, stored and disposed of off-site, at a location approved by the Employer's Agent.

Contaminated water storage areas shall not be allowed to overflow and appropriate protection from rain and flooding shall be implemented.

All visible remains of excess concrete shall be physically removed on completion of the plaster or concrete pour section and disposed of. Washing the remains into the ground is not acceptable. All excess aggregate shall also be removed and disposed of in an approved landfill site.

**(l) Dust Control**

Dust is regarded as a nuisance when it reduces visibility, soils private property, reduces the palatability of grazing grasses and may retard plant growth. It is also aesthetically displeasing.

The Contractor shall be responsible for the control of dust arising from his operations and activities. Control measures could include regular spraying of working/bare areas with water, at an application rate that will not result in soil erosion or runoff.

**(m) Vehicles and Access Roads**

Site vehicles should be permitted access only within the demarcated construction sites or on existing roads, as would be required to complete their specific tasks. Vehicles are not permitted on re-vegetated areas.

Site vehicle traffic should be limited to specific access roads to prevent unnecessary damage to the natural environment.

On the Site the Contractor shall control the movement of all vehicles and plant including that of his suppliers so that they remain on designated routes, are distributed so as not to cause an undue concentration of traffic and that all relevant laws are complied with. In addition such vehicles and plant shall be so routed and operated as to minimise disruption to regular users of the routes not on the Site.



On gravel or earth roads on Site and within 500 m of the Site, the vehicles of the Contractor and his suppliers shall not exceed a speed of 40 km/hr.

**(n) Traffic Control and Temporary Deviations**

Increased traffic, especially heavy vehicle traffic, has the potential to draw complaints from nearby residents. The Contractor is expected to address any complaints received.

Temporary vehicular deviations should be located so as to cause minimal disruption to surrounding communities, minimal disturbance to flora, fauna and the surrounding landscape and minimal risk of erosion. The deviations shall not impede normal pedestrian or vehicular access to adjoining villages and community lands.

Each deviation route should be rehabilitated as soon as practically possible, and preferably immediately once the construction on the adjoining section of road has been completed.

**(o) Bridges, Culverts and Watercourse crossings**

The Contractor shall not pollute the river systems a result of construction activities. No construction materials shall be stockpiled within 100m of any watercourses.

The Contractor shall not divert, dam or modify any watercourse or stream without the approval of the Employer's Agent and DWS.

**(p) Water Abstraction**

Water for construction purpose may be abstracted from rivers or other small streams crossing the road only in receipt of the required permits from the Department of Water and Sanitation. A method statement must be prepared and approved for the abstraction of water.

During water abstraction the Contractor shall take all reasonable measures to limit sedimentation of downstream watercourses due to his activities and shall ensure that the flow in the river is never reduced below 50% of ambient. The temporary sump shall be removed from the river as soon as practically possible.

**(q) Earthworks**

All earthworks shall be undertaken in such a manner so as to minimise the extent of any impacts caused by such activities. No equipment associated with earthworks shall be allowed outside of the Site and defined access routes unless expressly permitted by the Employer's Agent.

**(r) Site Rehabilitation**

The Contractor shall be responsible for complete rehabilitation of the site, including spoil sites, access roads, haul routes, site camp, stockpile, crusher area, ablution facilities and storage areas.

The Contractor shall undertake full rehabilitation under no extra cost to the Employer.

The Contractor should implement progressive rehabilitation: once works are complete in a particular area, rehabilitation/re-vegetation could begin. This would provide the opportunity to assess whether or not the methods employed are suitable and successful and would help prevent erosion in impacted areas.

Where re-vegetation of an area is not successful the Contractor will replant these areas, at no additional cost to the Employer.

The Contractor shall provide the EEA and Employer's Agent with a comprehensive plan for rehabilitation of the entire site. This plan must meet the approval of the EEA and Employer's Agent. The following points must be taken into account when drawing up the Rehabilitation Plan:

- (i) The Plan should be flexible – where measures are found to be inefficient, the plan shall be modified, at no additional cost to the Employer.
- (ii) The Contractor shall be responsible for successful rehabilitation and re-vegetation of the site, for a minimum period of 12 months after construction is complete.

- (iii) The Plan shall include the eradication of young alien invasive plant species that may have become established during the construction period, in impacted areas and in rehabilitated areas.
- (iv) The growth of alien invasive plant species shall be monitored during the 12 month period following construction.
- (v) The Plan shall include grass seed mixes applicable to summer and winter.
- (vi) The Plan shall include suitable fertilisers and application rates.
- (vii) Successful re-vegetation means  $\geq 80\%$  of the seeded area is covered with grass/groundcover.
- (viii) Where there is insufficient topsoil to cover an area to specified depth, the Contractor shall import suitable topsoil at no cost to the Employer.
- (ix) Consideration should be given to using established seedlings of indigenous grasses such as *Digitaria eriantha* and *Cenchrus ciliaris* to at least augment the use of aliens in re-vegetation of bare areas. On eroded soil chopped bush should be spread over bare surfaces, the soil should be re-seeded and the veld rested.

**(s) Exotic Vegetation**

Exotic invasive vegetation shall be removed from any working areas and the site camp(s). These vegetation species shall also be eradicated when they begin to establish themselves in disturbed areas (disturbance of the natural vegetation will encourage the establishment of invasive species). In order to discourage the spread of exotic species, soil should not be moved from one part of the site to another without the consent of the EEA.

The EEA shall assist in the identification and eradication of exotic plant species. Methods of removal/eradication may involve hoeing by hand or the controlled application of herbicides.

**(t) Community Relations**

The Contractor shall erect and maintain information boards in the position, quantity, design and dimensions specified. Such boards shall include contact details for complaints by members of the public in accordance with details provided by the Employer's Agent.

The Contractor shall keep a "Complaints Register" on Site. The Register shall contain all contact details of the person who made the complaint, information regarding the complaint itself and measures taken to address the complaint.

**(u) Social Disruption**

Where construction activities require the removal of fences from around private land, the occupants shall be warned at least three days in advance. These fences/boundary markers shall be reinstated as soon as construction is complete.

Care should be taken not to damage private property. No access to homesteads/farms or other such areas is permitted without permission of the resident and on agreement with the Employer's Agent.

The Contractor shall take measures to reduce disruption to users of the area abutting the Site.

**(v) Existing Services and Infrastructure**

The Contractor shall ensure that existing services (road, rail, pipelines, power lines and telephone services) are not disrupted or damaged, unless required by the contract and with the permission of the Employer's Agent.

**(w) Protection of the Public**

The Contractor shall be responsible for the protection of the public, and public property, from any dangers associated with the road construction and associated activities, and for the safe and easy passage of pedestrians and traffic in areas affected by project activities.

Any excavation material, spoil sites and other obstructions or excavations shall be suitably barricaded and/or demarcated with hazard tape.

**(x) Staff Safety and Education**

All staff shall be given an environmental induction course before beginning work on the site.

Telephone numbers of HAZMAT shall be posted conspicuously in the Contractor's office near the telephone.

#### **F1009 EMERGENCY PROCEDURES**

The following Emergency Procedures shall be submitted by the Contractor 14 days prior to the commencement:

##### **(a) Fire**

The Contractor shall advise the relevant authority of a fire as soon as one starts and shall not wait until he can no longer control it. The Contractor shall ensure that his employees are aware of the procedure to be followed in the event of a fire.

##### **(b) Accidental Leaks and Spillages**

The Contractor shall ensure that his employees are aware of the procedure to be followed for dealing with spills and leaks, which shall include notifying the Employer's Agent and the relevant authorities.

The Contractor shall ensure that the necessary materials and equipment for dealing with spills and leaks is available on Site at all times.

Treatment and remediation of the spill areas shall be undertaken to the reasonable satisfaction of the Employer's Agent.

In the event of a hydrocarbon spill, the source of the spillage shall be isolated, and the spillage contained. The area shall be cordoned off and secured. The Contractor shall ensure that there is always a supply of absorbent material readily available to absorb/breakdown and where possible be designed to encapsulate minor hydrocarbon spillage.

The quantity of such materials shall be able to handle a minimum of 200 litres of hydrocarbon liquid spill.

In the event of a fire or accidental leak/spillage, the Contractor shall notify the Employer's Agent as soon as possible, but at least within 48 hours of the incident being noticed.

The telephone numbers for the closest Hazmat offices should be prominently displayed as bitumen and diesel spillage on construction and road building sites are fairly common. The cleanup procedure is critical to prevent contamination.

#### **F1010 ENVIRONMENTAL AWARENESS TRAINING**

Before any work is commenced on the Site, the Contractor's site management staff including foremen shall attend an environmental awareness training course of approximately one-hour duration presented by the EEA. The Contractor shall liaise with the Employer's Agent prior to the Commencement Date to fix a date and venue for the course. The EEA will provide the course content. The Contractor shall provide a suitable venue and ensure that the specified employees attend the course.

The environmental awareness training course shall be held during normal working hours. The information presented at the course shall be communicated to the Contractors employees on the site, to any new employees coming onto site after the initial training course and to his suppliers as required by the Project Specification.

The Contractor shall ensure that all attendees sign an attendance register, and shall provide the Employer's Agent with a copy of the attendance register the day after each course.

The Contractor shall erect and maintain information posters for the information of his employees depicting actions to be taken to ensure compliance with aspects of the Specifications. These information boards shall be erected at the locations, agreed by the Employer's Agent and should contain the following symbols:

- (a) At working areas: Use drip trays, use toilets, no eating, no littering, no swimming, no picking of flowers, no dogs, no veld fires.

- (b) At eating areas: Use toilets, no littering, no veld fires.

#### **F1011 EXTERNAL AUDITING AND EVALUATION**

In order to ensure that the Environmental Management Programme is effectively implemented, it is important that regular external audits of the Environmental Management Programme are conducted. An Employers' (EEA) will be appointed by the Employer to undertake these audits on a monthly basis. The Employer's Agent shall arrange that these external audits do take place and that a system for addressing any problems identified during these audits, is formulated. The relevant documentation shall be kept and shall be available to the public.

#### **F1012 ENVIRONMENTAL MANAGEMENT DURING DECOMMISSIONING**

Environmental Management associated with the decommissioning of this project will ensure that the following items are addressed before issuing of the Completion Certificate and during the defects liability period:

- (a) All cleared sites are rehabilitated with indigenous grass material with a cover of at least 80%.
- (b) All visible alien plants are removed from disturbed sites.
- (c) All recyclable rubble and waste, for example, scrap metal, bottles, cans and plastics are collected and disposed of through a registered recycling company.
- (d) All non-recyclable rubble and solid waste be collected and disposed of at a registered waste disposal facility.
- (e) Provision has been made for stormwater control to prevent erosion from taking place post construction.

#### **F1013 MEASUREMENT AND PAYMENT**

Payment items to cover the Contractor's cost related to compliance with the Environmental Management Plan Implementation are included in the bill of quantities. These items are described under SCHEDULE A – GENERAL in SECTION F: ENVIRONMENTAL MANAGEMENT PLAN IMPLEMENTATION.

#### **F1014 WORK STOPPAGE, NON-COMPLIANCE AND PENALTIES**

The Employer's Agent shall have the right to order work to be stopped in the event of significant infringements of the Environmental Specifications, until the situation is rectified in compliance with the specifications. In this event, the Contractor shall not be entitled to claim for delays or incurred expenses.

Any failure on the part of the Contractor to comply with the EMPr will entitle the Employer's Agent to certify work stoppage subject to the details set out.

The Employer's Agent shall be the judge as to what constitutes a transgression subject to the provisions of the Conditions of Contract. In the event that transgressions continue, the Contractor's attention is drawn to the provisions of the Conditions of Contract, under which the Contract Supervisor and/or Employer may cancel the Contract.

In addition to work stoppage, penalties may be issues where there is damage to the natural or human environment as a consequence of the transgression(s) and/or non-compliance(s). In such an event, the Contractor may be liable to pay a penalty at the instruction of the Employer's Agent.

A list of incidents that may lead to work stoppage are indicated below – this list is not exhaustive:

- (a) Failure to submit Method Statements timeously.
- (b) Failure to stockpile topsoil properly or materials in designated areas.
- (c) Inappropriate use of adjacent watercourses and water bodies.
- (d) Pollution of water bodies – including increased sediment loads.
- (e) Failure to maintain basic safety measures on site.
- (f) Animal poaching (wildlife or domestic).
- (g) Failure to provide waste disposal facilities or services.
- (h) Excess dust or excess noise levels emanating from the Contractor's Camp and construction areas.
- (i) Any person, vehicle, plant or item related to the Contractor's activities causing a public nuisance.

- (j) Failure to carry out liaison with adjacent landowners; causing damage to property without prior negotiation and/or compensation and/or causing other social infringements.
- (k) Failure to control the pollution risks from dispensing fuel or the storage of vehicles and plant (drip trays).

The Contractor shall be responsible for the costs associated with repairing any damage to the natural or human environment that may result from the transgression and/or the result of the work stoppage.

In the event of non-compliance with the requirement of these Environmental specifications, penalties will be imposed at the discretion of the Employer.

The value of any penalty imposed shall be determined in light of the consequential damage caused and the costs required to rehabilitate the damaged area. Values are given for basic non-compliances below and these shall be use to determine the penalty for an identified or notified occurrence.

Payment of any penalty in terms of the contract shall not absolve the Contractor from being liable for prosecution in terms of the any appropriate law.

The contractor shall act immediately when such 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 a verbal report given at the monthly site meetings.

Any avoidable non-compliance with the above-mentioned measures shall be considered sufficient ground for the imposition of a penalty.

The following penalties shall apply for environmental violations:

**F10.01 Penalty for Unnecessary removal or damage to trees for the following girth sizes:**

- (a) 2600 mm girth or less ..... R5 000 per tree
- (b) Greater than 2600 mm, but less than 6180 mm ..... R10 000 per tree
- (c) Greater than 6180 mm girth ..... R30 000 per tree

**(b) Serious violations:**

- (a) Hazardous chemical/oil spill and/or dumping in non-approved sites ..... R10 000 per incident
- (b) General damage to sensitive environments ..... R5 000 per incident
- (c) Damage to cultural and historical sites ..... R5 000 per incident
- (d) Uncontrolled/unmanaged erosion
- (e) (plus rehabilitation at contractor's cost) ..... R1 000 to R5 000 per incident
- (f) Unauthorised blasting activities ..... R5 000 per incident
- (g) Pollution of water sources ..... R10 000 per incident

**(c) Less serious violations:**

- (a) Littering on site ..... R1 000 per incident
- (b) Lighting of illegal fires on site ..... R1 000 per incident
- (c) Persistent or un-repaired fuel and oil leaks ..... R1 000 per incident
- (d) Any person related to the contractor's operations found within the designated "no-go" areas ..... R500 per incident
- (e) Any vehicles or equipment related to the contractor's operations found within the designated "no-go" areas ..... R3 000 per incident
- (f) Excess dust or excess noise emanating from site ..... R1 000 per incident
- (g) Dumping of milled material in side drains or on grassed areas ..... R1 000 per incident
- (h) Possession or use of intoxicating substances on site ..... R500 per incident
- (i) Any vehicles being driven in excess of designated speed limits ..... R500 per incident
- (j) Removal and/or damage to flora or cultural or heritage objects on site, and/or killing of wildlife ..... R2 000 per incident
- (k) Illegal hunting ..... R2 000 per incident
- (l) Urination and defecation anywhere except in designated areas ..... R500 per incident

The Employer's Agent's decision with regard to what is considered a violation, its seriousness and the penalty imposed shall be final. The imposition of such a penalty shall not preclude the relevant provincial or national authority from applying an additional penalty in accordance with its statutory powers. Any non-compliance with the agreed procedures of the EMPr is a transgression of the various statutes and laws that define the manner by which the environment is managed.

Failure to redress the cause shall be reported to the relevant authority for them to deal with the transgression, as it deems fit.

#### **ANNEXURE A: LIST OF PRE-CONSTRUCTION REQUIREMENTS**

<b>NUMBER</b>	<b>DESCRIPTION</b>
<b>1</b>	<b>METHOD STATEMENTS</b>
1a	Layout and preparation of the construction camp.
1b	Location, layout and preparation of cement/concrete batching facilities including the methods employed for the mixing of concrete including the management of runoff water from such areas.
1c	Contaminated water management plan, including the containment of runoff and contaminated water.
1d	Dust control.
1e	Source of water for compaction and dust suppression.
1f	Method for the control of erosion during bulk earthwork operations, including erosion of spoil material.
1g	Methods for abstracting water from rivers or other water sources including measures to prevent pollution and sedimentation.
1h	Emergency spillage procedures, including hydrocarbons, and compounds to be used.
1i	Method of diverting stormwater during construction.
1j	Solid waste control and removal of waste from Site.
1k	Method for the construction of the bridge and the removal of the existing structure. This must include detailed procedures for working within the streambed and the prevention of sedimentation through the construction of temporary coffer dams.
<b>2</b>	<b>CONTRACTOR'S ENVIRONMENTAL REPRESENTATIVE</b>
2a	The Contractor must appoint in writing of their Environmental Representative and provide proof thereof to the Engineer and Employers' Environmental Agent.
<b>3</b>	<b>ENVIRONMENTAL INDUCTION/EDUCATION</b>
3a	Contractor's management staff to have attended environmental awareness session from the Employers' Environmental Agent.
<b>4</b>	<b>SITE OFFICE LOCATION</b>
4a	Localities for the site office and storage yard areas to be approved by the Engineer and Employers' Environmental Representative.
<b>5</b>	<b>ENVIRONMENTAL POLICY</b>
5a	Contractor to submit Environmental Policy to the Employers' Environmental Representative.

**ANNEXURE B: LIST OF DURING CONSTRUCTION REQUIREMENTS**

NUMBER	DESCRIPTION
1	<b>TO BE SUBMITTED TO EMPLOYERS' ENVIRONMENTAL AGENT ONCE CONSTRUCTION HAS COMMENCED</b>
1a	The Contractor shall erect and maintain information boards in the position, quantity, design and dimensions specified. Such boards shall include contact details for complaints by members of the public in accordance with details provided by the Engineer.
1b	The Contractor shall keep a "Complaints Register" on Site. The Register shall contain all contact details of the person who made the complaint, information regarding the complaint itself and measures taken to address the complaint.
1c	Localities for site office, storage yards, stockpile and spoil areas approved by the EEA.
1d	All Contractor staff made aware of the environmental sensitivities of the site and should be reminded regularly through toolbox talks that they must not litter, must use toilets etc. The EEA can provide a booklet to assist the Contractor with this compliance activity.
1e	The Contractor must ensure that a hard copy of the project EMPr (and all other environmental approvals) is kept on site at all times. Hard copies of all monthly EEA reports must also be kept on site.
1f	Letter of agreement from site office landowner to be submitted to the EEA.
1g	Letters of agreement from stockpile and/or spoil area landowners to be submitted to the EEA.
1h	A hydrocarbon spill kit must be purchased and kept at the site office/workshop.
1i	Identify and engage the local registered landfill site that will accept the construction waste generated on site.
1j	Identify and engage the appropriately registered landfill site or service provider that will accept the hazardous waste generated on site.
1k	Appropriate bunded areas must be constructed for storage of fuel and other hazardous substances.
1l	Workshop and vehicle washbay area constructed to EMPr specifications.
1m	Department of Water and Sanitation (DWS) permit obtained for water abstraction from surface water sources (eg. dams, rivers, streams) if these are to be used for construction water on site.
1n	Department of Water and Sanitation (DWS) permit obtained for release of treated effluent water from water treatment plant on site (if required or necessary).

## ANNEXURE C: LIST OF REHABILITATION PHASE REQUIREMENTS

NUMBER	DESCRIPTION
1	<p><b>REHABILITATION PLAN</b></p> <p>The Contractor shall provide the Employers' Environmental Agent and Engineer with a comprehensive plan for rehabilitation of the entire site. This plan must meet the approval of the Employers' Environmental Representative and Engineer. The Rehabilitation Plan must be submitted (at the latest) once 50% of the project works have been completed.</p>
1a	The Plan should be flexible – where measures are found to be inefficient, the plan shall be modified, at no additional cost to the Employer.
1b	The Contractor shall be responsible for successful rehabilitation and re-vegetation of the site, for a minimum period of 12 months after construction is complete.
1c	The Plan shall include the eradication of young alien invasive plant species that may have become established during the construction period, in impacted areas and in rehabilitated areas.
1d	The growth of alien invasive plant species shall be monitored during the 12 months period following construction.
1e	The Plan shall include grass seed mixes applicable to summer and winter.
1f	The Plan shall include suitable fertilisers and application rates.
1g	Successful re-vegetation means $\geq 80\%$ of the seeded area is covered with grass/groundcover.
1h	Where there is insufficient topsoil to cover an area to specified depth, the Contractor shall import suitable topsoil at no cost to the Employer.
1i	Consideration should be given to using established seedlings of indigenous grasses such as <i>Digitaria eriantha</i> and <i>Cenchrus ciliaris</i> to at least augment the use of aliens in re-vegetation of bare areas. On eroded soil chopped bush should be spread over bare surfaces, the soil should be re-seeded and the veld rested.



**ANNEXURE D: LIST OF TYPICAL ENVIRONMENTAL IMPACTS ASSOCIATED WITH ROAD CONSTRUCTION PROJECTS**

Contents	Environmental Impacts			
	Pollution Type	Deformation of Landscape	Soil erosion	Alien Vegetation
Camp Establishment	Waste treatment Hazardous waste Water supply Spillage Storage	Selection of site Preserve indigenous vegetation Preserve topsoil	Selection of site Preserve indigenous vegetation Preserve topsoil	Preserve indigenous vegetation Preserve topsoil Management of weeds
Housing, Offices and laboratories	Waste treatment Hazardous waste Water supply Spillage Storage Noise/lights	Selection of site Preserve indigenous vegetation Preserve topsoil Demarcate sensitive areas	Selection of site Preserve indigenous vegetation Preserve topsoil	Preserve indigenous vegetation Preserve topsoil Management of weeds
Accommodation of Traffic	Waste treatment Hazardous waste Water supply Spillage Storage Noise/lights Dust control	Selection of site Preserve indigenous vegetation Preserve topsoil Demarcate sensitive areas Maintenance of windrows	Selection of site Preserve indigenous vegetation Preserve topsoil	Preserve indigenous vegetation Preserve topsoil Management of weeds
Overhaul	Spillage Storage Noise/lights Dust control Exhaust fumes Washing waste	Turning circles Parking areas	Restrict access to sensitive areas	Protection of indigenous vegetation Preserve topsoil
Clearing and grubbing	Waste treatment Hazardous waste Water supply Noise /lights Dust control	Selection of site Preserve indigenous vegetation Preserve topsoil	Selection of site Preserve indigenous vegetation Preserve topsoil	Protection of indigenous vegetation Preserve topsoil
Drainage	Waste treatment Hazardous waste Water supply Spillage Storage	Selection of site Preserve indigenous vegetation Preserve topsoil	Selection of site Preserve indigenous vegetation Preserve topsoil	Preserve indigenous vegetation Preserve topsoil Management of weeds
Stockpiling	Waste treatment Hazardous waste Water supply Spillage Storage	Selection of site Preserve indigenous vegetation Preserve topsoil	Selection of site Preserve indigenous vegetation Preserve topsoil	Preserve indigenous vegetation Preserve topsoil Management of weeds
Pavement layers	Waste treatment	Selection of site Preserve indigenous	Selection of site Preserve indigenous	Preserve indigenous vegetation

Contents	Environmental Impacts			
	Pollution Type	Deformation of Landscape	Soil erosion	Alien Vegetation
	Hazardous waste Water supply Spillage Storage Noise / lights Dust control	vegetation Preserve topsoil Demarcate sensitive areas Maintenance of windrows	vegetation Preserve topsoil	Preserve topsoil Management of weeds
Asphalt works / sealing operations	Waste treatment Hazardous waste Water supply Spillage Storage Noise / lights Dust control Smoke control Storage of materials	Selection of site Preserve indigenous vegetation Preserve topsoil Turning circles Parking areas	Selection of site Preserve indigenous vegetation Preserve topsoil	Preserve indigenous vegetation Preserve topsoil
Ancillary roadworks	Waste treatment Hazardous waste Water supply Spillage Storage	Selection of site Preserve indigenous vegetation Preserve topsoil	Selection of site Preserve indigenous vegetation Preserve topsoil	Preserve indigenous vegetation Preserve topsoil Management of weeds
Structures	Waste treatment Hazardous waste Water supply Spillage Storage	Selection of site Preserve indigenous vegetation Preserve topsoil	Selection of site Preserve indigenous vegetation Preserve topsoil	Preserve indigenous vegetation Preserve topsoil Management of weeds
Concrete pavements etc	Waste treatment Hazardous waste Water supply Spillage Storage	Selection of site Preserve indigenous vegetation Preserve topsoil	Selection of site Preserve indigenous vegetation Preserve topsoil	Preserve indigenous vegetation Preserve topsoil Management of weeds

SCMU10-24/25-0021

PROVINCE OF THE EASTERN CAPE

DEPARTMENT OF TRANSPORT

TENDER NO. SCMU10-24/25-0021

BRIDGE CONSTRUCTION FOR HAMBURG CONSTRUCTION PROJECT FOR A PERIOD OF 12 MONTHS

**C3.7 SECTION G1: ENGAGEMENT AND DEVELOPMENT OF SMME  
CONTRACTORS SPECIFICATIONS**

<b>SECTION G1: ENGAGEMENT AND DEVELOPMENT OF SMME CONTRACTORS SPECIFICATIONS</b>
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## G1.1 SCOPE

This specification contains all requirements applicable to the Contractor for the engagement and development of SMME contractors during the construction stage.

## G1.2 THE DEFINITIONS AND INTERPRETATIONS

For the purposes of this section of the Project Specification, the definitions given in the General Conditions of Contract for Construction Works 2015, the Standard Specifications and the Project Specifications, together with the following definitions shall apply:

- (a) **"Main Contract"**: Any contract for the execution of civil engineering or similar construction works, in which the liabilities and responsibilities of the two parties thereto are assigned essentially in a manner which is consistent with that set out in the General Conditions of Contract for Construction Works 2015.
- (b) **"Project Management Team (PMT)"**: A team that is set up after award of the contract, consisting of the Contractor, the Engineer and a delegated person from the Employer. The function of the PMT will be to consult regarding the management of the subcontracts involving SMMEs. The Employer's representative will decide which party is to chair and lead the team. Minutes of these meetings will be taken by the Engineer.
- (c) **SMME Construction Manager**: Person appointed to guide, assist and mentor all eligible potential SMMEs.
- (d) **Small, Medium and Micro Enterprises**: An Affirmable Business Enterprise which adheres to statutory labour practices, is a legal entity, registered with SARS and continues to operate as an independent enterprise for profit, providing a Commercially Useful Function as per Employer Procurement Procedures policy.
- (e) **SMME Sub-Contractor**: An Emerging Contractor referred to as SMME, who has been appointed to tender and provide works as part of the total service required by the Employer for the Contract.
- (f) **Sub-contractor**: A contractor who contracts with the Main (Prime) Contractor to provide works as part of the total services required by the Employer for that Contract.
- (g) **SMME Package**: Specified work package identified for execution by SMME's. The identifiers are Employer, Main Contractor and Management Team.
- (h) **Joint Venture**: An association of firms, companies or businesses for which purpose they combine their expertise, efforts, skills and knowledge to execute the Contract.

## ACRONYMS

CETA	-	CONSTRUCTION EDUCATION AND TRAINING AUTHORITY
CIDB	-	CONSTRUCTION INDUSTRY DEVELOPMENT BOARD
DoL	-	DEPARTMENT OF LABOUR
EC DT	-	EASTERN CAPE DEPARTMENT OF TRANSPORT
GCC	-	GENERAL CONDITIONS OF CONTRACT FOR CONSTRUCTION WORKS
PMT	-	PROJECT MANAGEMENT TEAM
SARS	-	SOUTH AFRICAN RECEIVER OF REVENUE
SEDA	-	SMALL ENTERPRISE DEVELOPMENT AGENCY
SMME	-	SMALL MEDIUM & MICRO ENTERPRISE
SANS	-	SOUTH AFRICAN NATIONAL STANDARDS

### **G1.3 WORK PACKAGES**

The list of work packages summarised below has been identified as possible work packages for the sub-contractors. These packages are not all inclusive and contractors are encouraged to exceed the minimum requirements.

The work packages that are ultimately put out to SMME tender will be discussed and agreed on between the Main Contractor and the Engineer taking into consideration amongst other factors the Contractors accepted Programme and the responsibility to meet the time frame requirements of the Programme.

#### **(a) IWO on Construction Stage (IWO Identification of Work Opportunities)**

During the construction stage, the Contractor or Employer through relevant structures (PMT or Project Review Meeting) may identify additional work to be performed by SMMEs. This additional work will also follow the specification in terms of scheduling and procuring SMMEs for such work.

The Contractor will note that all work measured in the Bills of Quantities is the Contractor's sole responsibility. This also applies where SMMEs have been identified for a particular portion of works in its entirety.

The SMME's will be responsible for procuring all required materials, labour, equipment and any other incidentals to undertake the works subcontracted to them unless otherwise specified by Employer before tender or approved by the Project Management Team during construction.

The Contractor will supervise and manage the SMME work at all times to ensure compliance with the specifications and drawings.

### **G1.4 CONSTRUCTION PHASE**

According to the agreed SMME Works Packages Schedule the Contractor will start with the procurement of SMMEs at construction phase. The Contractor will advertise for competent SMMEs who meet the functionality requirements. Responsive SMME will be shortlisted for tender. The Contractor will only invite responsive SMMEs. Any problems encountered should be reported back to the engineer at the PMT meeting before the monthly Site Meeting.

#### **(a) Tender process for SMMEs**

SMMEs sourced through a tender process shall not be considered as Nominated Subcontractors.

#### **(b) Tender invitation**

A minimum of 6 (Six) tenders are to be obtained for each subcontract package to be performed by SMMEs. The Contractor will request the SMME from the list of responsive SMME's.

#### **(c) Compilation and issue of tender documents**

The Engineer shall compile the tender documents in such a manner that it will facilitate the achievement of all objectives and principles pertaining to procurement and development of SMMEs as stated in or as may reasonably be inferred from the conditions of this contract.

All tender documentation shall be reviewed, approved and issued by the Contractor with all cost associated with preparing copies of tender documents deemed to be included in the mark-up provision allowed for the various SMME work packages. The tender or quotation document will be issued to invited SMMEs at NO COST and the contractor is to make due allowance for cost in his tender price.

The Sub-Contract Agreement will be in accordance with SAFCEC and will be compiled by the Main Contractor with the assistance of the Engineer. The Main Contractor shall be responsible for the compilation of each subcontract agreement and ensuring that the terms and conditions are consistent with all requirements as specified in or reasonably to be inferred from the provisions of this Contract. All costs associated with the tender process including the conclusion of the agreement are for the Contractor's account.

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In addition to the provisions of clause 4.4 of the General Conditions of Contract for Construction Works 2015, the final terms and conditions of each subcontract agreement shall be subject to the approval of the PMT. The Contractor may not enter into any subcontract agreement that contains terms more onerous or disproportionate to the risks inherent in the main contract for either the SMME or the Contractor.

### **(d) Facilitate of a Site Briefing Session**

The Contractor shall facilitate a Site Briefing Session for the invited SMMEs. The Main Contractor will also make sure that all relevant parties (PMT) are present and given an opportunity to present specific aspects of the requirements pertaining to their tender sections.

### **(e) Pre-Tender Assistance to the SMMEs**

At the briefing session, the Main Contractor assisted by the PMT members will ensure the prospective SMME Tenderers fully comprehend the:

- (i) Implications, liabilities and responsibilities inherent in the particular basic level of subcontract applicable;
- (ii) scope and extent of the portion of the works included in the subcontract;
- (iii) the requirements for quality control of works
- (iv) the requirements for occupational health and safety
- (v) proper procedures for the submission of the tenders;
- (vi) procedures and basis on which tenders will be adjudicated and the subcontracts awarded.

### **(f) Tender Adjudication**

- (i) The Contractor shall receive all tenders at a location identified by him. All sealed tender submissions will be placed in a proper tender box provided by the Contractor for this purpose. A submission register will be maintained by the Contractor for all tenders received.
- (ii) All tenders received shall be evaluated by the Contractor. The draft tender evaluation report shall be distributed to the PMT members 5 working days prior to the PMT meeting for comments and perusal in order to finalize the evaluation before the meeting. The format of the tender evaluation report must be agreed upon at the first PMT meeting. The evaluation of the Occupational Health and Safety plans will be done by the Contractor's SHE Officer. A copy will be forwarded to the client's OHS representative.
- (iii) The PMT shall have the right to interview any tenderer for the purpose of:
  - clarifying any aspect of the tender;
  - querying abnormally high or low rates and prices, and
  - clarifying rates and prices which are not in balance with other tendered rates and prices.
- (iv) The Contractor shall provide all reasonable opportunity to such tenderers who have been interviewed, to correct obvious and patent errors, provided always that this can be achieved without altering the total tendered sum.

### **(g) Award of Tender**

The Contractor shall explain his evaluation process to the PMT for endorsement.

### **(h) Sub-Contract Agreement**

In accordance with the provisions of Clause 4.4 of General Conditions of Contract for Construction Works 2015, and subject always to the further provisions of this specification, the terms and conditions of each subcontract agreement shall be as mutually agreed in writing between the PMT, Contractor and the SMME. Each subcontract agreement, which is entered into by the Contractor in accordance with the requirements of this specification, shall contain terms and conditions, which assign the responsibilities and liabilities of the two parties to the subcontract.

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The terms and conditions of the subcontract agreement shall specifically ensure that the provisions of this contract pertaining to:

- (i) the allowable sources from which workers may be drawn in terms of the contract;
- (ii) the terms and conditions relating to the recruitment, employment and remuneration of workers engaged on the contract works; and
- (iii) any training to be provided to the temporary workforce;
- (iv) Occupational health and safety.
- (v) Use of labour intensive methods

shall apply as is in respect of all workers engaged and employed by any SMME.

### **(i) Appointment of full time SMME Construction Manager**

A full time SMME construction manager will be appointed depending on the number and sizes of SMME Packages. The SMME Construction Manager(s) will manage the SMMEs and report monthly on progress of each SMME to the Project Management Team (PMT).

The Construction Managers must be adequately experienced with SMME work(s) and the development thereof and will be subject to the approval of the Employer. The SMME Construction Manager will render fulltime assistance to and mentor the SMMEs and shall:

- (i) assist, guide and mentor at a level and to the extent which is commensurate with the particular basic level of subcontract applicable, due cognizance being taken of the capability which could reasonably be expected of potential SMMEs eligible to execute works for the particular level of subcontract applicable;
- (ii) assist, guide and mentor in a manner which does not unfairly prejudice or favour any particular eligible party working on the same site,
- (iii) possess a minimum of ten years site based experience in the civil engineering construction industry and have a sound knowledge of the minimum requirements to carry out construction work effectively and efficiently.
- (iv) possess 5 years civil engineering administrative experience and SACPCMP as a construction manager.
- (v) be registered with ECSA as at least a professional technician and SACPCMP as a construction manager.
- (vi) maintain the program of the subcontract; ensure continuous monitoring and implementation of necessary interventions.

The SMME Construction Manager(s) will guide, assist and mentor the SMME Subcontractors throughout the Contract and keep a detail monthly record of their performance in a format to be submitted by the client.

### **(j) Dispute Resolution Procedures**

The Contractor shall at all times:

- (i) apply the terms and conditions of the subcontract fairly and justly, taking due cognizance of the level of sophistication and experience of the particular SMME concerned, as well as the level of subcontract applicable;
- (ii) closely manage and supervise all SMMEs and wherever feasible, shall give reasonable warning to SMMEs when any contravention of the terms of the subcontract has occurred or appears likely to occur. The Contractor shall, whenever feasible, give the SMMEs reasonable opportunity to rectify any such contravention or to avoid such contravention and shall render all reasonable assistance to the SMME in this regard.



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- (iii) If no agreement can be reached between the contractor and the sub-contractor, the matter shall be referred to a PMT

When taking any actions or imposing any penalties as are provided for in the subcontract, the Contractor shall explain fully to the SMMEs that such actions are provided for in the subcontract. If any dispute should arise between the Contractor and a SMME such dispute shall be resolved by PMT.

### **(k) Quality of Work and Performance of the Sub-Contractor**

If the Subcontractor, in the opinion of the Contractor, fails to comply with the criteria as listed below, the Contractor shall issue a written warning to the Sub-Contractor, stating all the areas of non-compliance. A copy of the letter of warning shall be forwarded to the Engineer. These criteria include:

- (i) Acceptable standard of works as set out in the specifications in the subcontract tender document
- (ii) Progress in accordance with the time constraints in the Subcontractor's tender document
- (iii) Punctual and full payment of the workforce and suppliers
- (iv) Site health and safety
- (v) Environmental impacts.

The Subcontractor shall have 14 days from the date of receipt of the warning letter from the Contractor to satisfactorily rectify the issues raised by the Contractor, with the exception of point (iv) and (v), for which the response time shall be 24 hours. If a satisfactory solution cannot be reached this will be sufficient grounds for the Main Contractor to terminate the contract provided the Project Management Team is satisfied that the Main Contractor has made every effort to correct the performance by the Subcontractor.

### **(l) Payment of SMMEs**

- (i) SMME subcontractors are to be invited to submit their payment certification or claim monthly and are to be paid by the Contractor within 14 (fourteen) days of receipt of invoice.
- (ii) Payment to SMMEs may not be delayed pending payment of the Contractor by the Employer.
- (iii) Payment to SMMEs may not be subjected to set off costs unless provided for in law, and may not exceed 5% of the payment, unless approved by the Employer.
- (iv) Payment to SMMEs may not be discounted for early payment.
- (v) No interim payment of the SMME invoice may be unfairly withheld or delayed for whatever reason.
- (vi) The Contractor must acknowledge and honour cessions in favour of recognised financiers or suppliers of the SMME unless otherwise presented to PMT and approved.

### **(m) Contractor's Liability**

No provision or requirement set out in this specification shall be deemed to relieve the Contractor of any liability or obligation under the contract, and in accordance with the provisions of Clause 4.4 of the General Conditions of Contract for Construction Works 2015, the Contractor shall be fully liable for the acts, defaults and neglects of any SMMEs, his agents or employees, as fully as if they were the acts, defaults and neglects of the Contractor, his agents or employees.

Any failure or neglect by the Contractor to comply with the provision of the specifications, or any omission or neglect by the Contractor in adhering to or applying the principles as are described and inherent in the specifications, shall be deemed to constitute a warrant for the Engineer to act in terms of Clause 9.2 of the General Conditions of Contract for Construction Works 2015.

### **(n) Performance Guarantee:**

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The following Performance Guarantees will be applied on the SMME Sub-Contracts;

(i)	up to R1 000 000	shall be zero percent	(0%);
(ii)	R1, 000, 001 to R4, 000, 000	shall be five percent	(3%);
(iii)	Exceeding R4, 000, 000	shall be ten percent	(6%)

All the above will be of the accepted SMME Sub-Contract Value and will be required from SMMEs as per Sub-Contract Agreement. Where such guarantees are provided by SMME, the return of same will be related to the time when the work carried out by the SMME is complete to the satisfaction of the Contractor and the Engineer.

### (o) Retention

A five percent (5%) of the Sub-Contract Value will be deducted as retention on SMME, (excluding VAT) with half to be released on issue of the Completion Certificate for the specific SMME Sub-Contract with the remaining retention released on issuing of the Final Approval Certificate after the 12 months Defects Liability Period. This deduction will be made on each payment certificate till it reaches the maximum of 5% of the Sub-Contract Value.

### (p) Measurements & Payments for managing and supervising SMME's

An item has been measured in the Bill of Quantities allowing the Contractor to price for the cost to manage and supervise the SMMEs during the execution of their works. The price tendered will be deemed to include all incidentals by the Contractor to comply with the conditions of this specification. No other claims will be entertained should SMMEs affect the contract works in any way, and the Contractor shall be deemed to include such effects in the handling cost percentage for the different SMME work packages above.

### (q) Sub-Contracting by SMME

The Contractor shall not permit SMME subcontractors to further subcontract on any other conditions than those applying in the project specification to subcontractors or SMME subcontractors.

### (u) Joint Venturing & Consortium

The Contractor shall not permit the invited SMME Sub-contractor to enter into Joint Ventures or form a consortium with an external SMME(s) unless PMT approves so before the tender submission. The Invited SMME may only be allowed to enter into Joint Venture or form a consortium with the other invited SMME(s) on the package concerned.

## G1.5 SANCTIONS

In the event that the Contractor fails to substantiate that any failure to achieve the SMME Subcontractor Goal was due to quantitative under runs, the elimination of items, or any other reason beyond the Contractor's control which may be acceptable to the Employer, the Contractor shall be liable to pay to the Employer a financial penalty (P) calculated in accordance with the following formula:

$$P = 1,05 \times (L_M - L_A) \times V_A$$

Where:

P = Rand value of penalty payable.

V<sub>A</sub> = Award value (Contract Price exclusive of VAT, and allowances for contingencies and escalation)

L<sub>M</sub> = SMME Goal % stated in the Project Document

L<sub>A</sub> = The SMME component % which the Employer's Representative certifies as being achieved upon completion of the contract.

## G1.6 MEASUREMENT AND PAYMENT

Payment items to cover the Contractor's cost related to the Engagement and Development of SMME Contractors are included in the Bill of Quantities. These items are described under SCHEDULE A – GENERAL in SECTION G1: ENGAGEMENT AND DEVELOPMENT OF SMME CONTRACTORS.

**Item** **Unit**

**G10.01 Appointment of full time SMME Construction Manager and Mentor  
(As approved by Engineer's Agent):**

- (a) Cost arising from employment of a full time SMME Construction Manager and Mentor ..... provisional sum
- (b) Handling cost and profit in respect of subitems G10.01(a) .....percentage (%)

**Item** **Unit**

**G10.02 Contractor's management and supervision of SMME Contractors ..... month**

**Item** **Unit**

**G10.03 Training of SMME Contractors:**

- (a) Provision of structured accredited skills training ..... provisional sum
- (b) Provision of training venue ..... provisional sum
- (c) Handling cost and profit in respect of subitems G10.03(a) and (b) .....percentage (%)

**Item** **Unit**

**G10.04 Additional costs related to SMMES work packages  
(as approved by Employer's Agent), for:**

- (a) SMME Contractors General Obligations and OHS requirements .....prime cost (PC) sum
- (b) Rate variations .....prime cost (PC) sum
- (c) Handling cost and profit in respect of subitems G10.04(a) and (b) .....percentage (%)

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PROVINCE OF THE EASTERN CAPE

DEPARTMENT OF TRANSPORT

TENDER NO. SCMU10-24/25-0021

BRIDGE CONSTRUCTION FOR HAMBURG CONSTRUCTION PROJECT FOR A PERIOD OF 12 MONTHS

**C3.8 SECTION G2: ENGAGEMENT OF LOCAL RESOURCES / SUPPLIERS  
SPECIFICATIONS**

<b>SECTION G2: ENGAGEMENT OF LOCAL RESOURCES / SUPPLIERS SPECIFICATIONS</b>
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## 1 SCOPE

The specification sets out the requirements relating to the employment of local resources and enterprises by involving the community through the established structures. The specification relates to the engagement of targeted enterprises on a contract for the provision of goods, services or engineering and construction works.

A Contract Participation Goal (CPG) is used to measure the outcomes of a contract in relation to the engagement of targeted enterprises or to establish a target level of performance for the contractor to achieve or exceed in the performance of a contract.

The Standard is aligned to SANS 10845 Construction Procurement, Part 5: Participation of targeted enterprises in contracts.

## 2 TERMS AND DEFINITIONS

For the purposes of this document, the following terms and definitions apply.

### **allowance**

amount provided for in the contract by the employer relating to one or more of the following:

- a) the performance by the contractor of work or services that are foreseen but cannot be accurately specified at the time that the contract was entered into;
- b) work or services to be performed, or goods provided, by a subcontractor who is either nominated by the employer or is selected by the employer in consultation with the contractor after the award of the contract;
- c) provision for price adjustment for inflation; or
- d) other budgetary provisions intended to cover employer risks.

### **commercially useful function**

performance of real and actual work, or the provision of services, in the discharge of any contractual obligation which includes, but is not limited to, the performance of a distinct element of work which the enterprise has the skills and expertise to undertake and the responsibility for management and supervision

### **contract amount**

financial value of the contract

- a) at the time of the award of the contract, exclusive of all allowances and any value added tax or sales tax which the law requires the employer to pay to the contractor (targeting strategy A); or
- b) upon completion of all contractual obligations, exclusive of any value added tax or sales tax which the law requires the employer to pay to the contractor (targeting strategy B)

### **contract participation goal**

#### **CPG**

value of goods, services and works for which the contractor contracts targeted enterprises exclusive of any value added tax or sales tax which the law requires the employer to pay to the contractor, expressed as a percentage of the contract amount associated with the targeting strategy that is identified in the targeting data

### **contractor**

person or organization that contracts to provide the goods, services or engineering and construction works covered by the contract

### **control**

possession and exercise of legal authority and power to manage the assets, goodwill and daily operations of an enterprise, and the active and continuous exercise of appropriate managerial and financial authority and power in determining the policies and directing the operations of the said enterprise

### **employer**

person or organization entering into the contract with the contractor for the provision of goods, services, or engineering and construction works

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### **employer's representative**

person authorized to represent the employer and named as such in the contract data or targeting data

### **joint venture**

grouping of two or more contractors acting as one legal entity, where each is liable for the actions of the other [ISO 6707-2:1993, definition 3.4.22]

### **manufacturer**

sole trader, partnership or legal entity that operates or maintains a factory or establishment that produces on its premises, goods required in terms of the contract

### **main contractor**

contractor who subcontracts part of his contract [ISO 6707-2:1993, definition 3.8.13]

### **ownership**

legal right of possession, including the right of disposition, and sharing in all the risks and profits commensurate with the degree of ownership interest or shareholding, as demonstrated by an examination of the substance, rather than the form, of ownership arrangements

### **participation parameter**

fraction of the contract or subcontract which may be used to represent the value of the contribution and value of the commercially useful function performed by targeted partners in a joint venture

### **supplier**

sole trader, partnership or legal entity that owns, operates or maintains a store, warehouse or other establishment in which goods are bought, kept in stock and regularly sold to wholesalers, retailers or the public (or all three) in the usual course of business

### **targeted enterprise**

sole trader, partnership or legal entity which is engaged in the performance of the contract and defined as the target group in the targeting data

### **targeted enterprise declaration affidavit**

affidavit, of the format provided for in the procurement documents, which confirms the bona fides of a targeted enterprise

### **targeted partner**

targeted enterprise functioning as a partner in a joint venture

### **targeting data**

data, provisions and variations that make this part of ISO 10845 applicable to a particular contract

### **targeting strategy**

an approach which is pursued to make a contract participation goal an obligation of contract

### **targeting strategy A**

targeting strategy which

- a) involves the granting of tender evaluation points by the employer in the evaluation of tender offers in return for the tendering of a contract participation goal or an undertaking to attain a specified contract participation goal at the time that tenders are evaluated, or
- b) requires a contractor to achieve a minimum specified goal in the performance of a contract, or
- c) involves both (a) and (b)

### **targeting strategy B**

targeting strategy which

- a) involves the payment of a financial incentive to a contractor for the attainment of a specified contract participation goal, or
- b) requires the contractor to record and report on the quantum of work generated for targeted labour

*NOTE Targeting strategy A bases the contract participation goal on the tendered amount minus allowances, i.e. on the expenditure which the contractor can commit to at tender stage. This strategy allows the employer to adjust the contract participation goal to take account of any failure to achieve such goal in the performance of the contract due to factors which are beyond the contractor's control or are unforeseen at tender stage. Targeting strategy B measures the contract participation goal based on the final contract value.*

### **3 REQUIREMENTS**

#### **3.1 Contract participation goal**

The contractor shall engage targeted enterprises directly or indirectly in the performance of the contract to the extent that the total monetary value of such engagements, exclusive of any value added tax or sales tax required by law, is sufficient to achieve the contract participation goal for the targeting strategy specified in the targeting data.

The contractor shall, in the case of targeting strategy A, submit to the employer's representative details of his plan to achieve the contract participation goal, within five working days of being instructed to do so. If no such instructions are given, these plans shall be submitted before the submission of the first claim for payment.

*NOTE* The information contained in the contract participation goal implementation plan facilitates, in the first instance, the monitoring of the performance of the contractor in terms of his contract participation goal obligations and, in the second instance, the making of any adjustments to compensate for quantitative underruns, the elimination of items, etc. (see Clause 6).

#### **3.2 Achieving the contract participation goal**

##### **3.2.1 General**

A contractor shall achieve the contract participation goal by any of the following means, unless otherwise specified in the targeting data

- a) Method 1: by virtue of his targeted enterprise status,
- b) Method 2: by entering into a joint venture agreement with one or more targeted partners as set out in 3.2.3,
- c) Method 3: by engaging one or more targeted enterprises to perform commercially useful functions in the performance of the contract,
- d) Method 4: by engaging non-targeted enterprises who, in turn, engage one or more targeted enterprises to perform commercially useful functions in the performance of the contract,
- e) Method 5: by engaging non-targeted enterprises who, in turn, enter into joint venture agreements with one or more targeted partners as set out in 3.2.3 to perform commercially useful functions in the performance of the contract, or by any combination of Methods 1 to 5.

##### **3.2.2 Verification of the status of targeted enterprises**

Contractors shall submit completed targeted enterprise declaration affidavits and, where targeting strategy A applies, letters of undertaking to act as subconsultants, subcontractors, suppliers, manufacturers or service providers, with respect to each and every targeted enterprise and targeted partner whose contribution shall be counted towards the contract participation goal. These documents shall, unless otherwise specified in the targeting data, be submitted to the employer's representative before the submission of the first claim for payment.

##### **3.2.3 Joint ventures**

###### **3.2.3.1 General**

Contractors shall develop joint venture agreements with targeted partners in order to fulfil contract participation goal obligations.

Credits towards the achievement of the contract participation goal shall only be granted subject to compliance with the following requirements:



- a) the targeted partner shares in the following aspects of the joint venture in an appropriate and meaningful manner, consistent with reasonable business practices:
- 1) ownership,
  - 2) control,
  - 3) management responsibilities,
  - 4) risks, and
  - 5) profits,
- b) the targeted partner is responsible for a clearly defined portion of the contract, and
- c) the targeted partner performs part of the defined portion of the contract for which he is responsible, using his own resources or resources hired by him independently of his non-targeted partners.

#### 3.2.3.2 Participation parameter

The participation parameter shall be equated to the lesser of

- a) the financial value of the contract for which the targeted partner is responsible, and
- b) twice the financial value of the contract which the targeted partner performs using his own resources or resources hired by him independently of his non-targeted partners,

expressed as a fraction of the contract amount or value of the work performed by the joint venture.

EXAMPLE If targeted partners within a joint venture have, in total, a participation parameter of 0,15 in a contract with a contract amount of R 10 million, the targeted partners are responsible for work to the certified value of at least R 1,5 million ( $0,15 \times R 10$  million). Work to the value of at least R 750 000 (50 % of R 1,5 million) is carried out using their own resources or resources hired by them independently of their non-targeted partners.

#### G2.3.2.3.3 Joint venture disclosure forms

Details of any joint ventures developed with targeted partners shall be disclosed on the joint venture disclosure form and shall be submitted before the submission of the first payment certificate or as otherwise agreed, in writing, with the employer.

### 3.3 Contract participation goal credits

#### 3.3.1 Granting of credits

Credits towards the contract participation goal shall be granted by converting the value of the following (exclusive of any value added tax or sales tax required by law) to a percentage of the contract amount, as relevant:

- a) the total monetary value of the contributions made by targeted enterprises, other than targeted enterprises who are suppliers, in fulfilling contractual obligations, subject to such targeted enterprises not subcontracting more than 15 % of the value of their contribution to non-targeted enterprises;
- b) 50 % of the expenditure on goods required for the contract, which are obtained from suppliers who are targeted enterprises, subject to such enterprises not subcontracting more than 15 % of the value of their contribution to non-targeted enterprises;
- c) the total monetary value of expenditures made to manufacturers who are targeted enterprises;
- d) the total monetary value with respect to fees or commissions charged by targeted enterprises, which in the opinion of the employer are reasonable, justifiable, and not excessive when compared with fees or commissions normally allowed for similar services, with respect to:

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- 1) the provision of professional, technical or managerial services, including those required for the acquisition of essential personnel, facilities, equipment and goods necessary for the performance of the contract,
  - 2) the delivery of goods required in the performance of the contract (but not the cost of the goods themselves) when the transporter or delivery service is not also the manufacturer or supplier (or both), and
  - 3) the provision of any bonds or insurance policies specifically required for the performance of the contract;
- e) the total monetary value of the contributions made by joint ventures with targeted partners multiplied by the associated participation parameter with respect to each targeted partner, subject to compliance with the requirements of 3.2.3, and the total monetary value of such contributions being halved where such joint venture is a supplier who is not a main contractor; and
- f) in the case of a contractor who is a targeted enterprise, the monetary value of the work performed using his own employees and resources and 10 percent of the value of the subcontracts to non-targeted enterprises.

*NOTE 1 The credits calculated in terms of (a) to (e) apply also with respect to non-targeted enterprises engaged by the contractor in the performance of the contract, should such enterprises comply with the relevant requirements provides illustrative examples as to how a contractor can fulfil his contract participation goal obligations.*

*NOTE 2 Where targeted enterprises subcontract more than 15 % of the value of the contribution to non-targeted enterprises, the credits are limited to the actual value of the contributions made by targeted enterprises.*

### 3.3.2 Denial of credits

#### 3.3.2.1 Case 1

No credits shall be granted should the contractor make a direct payment to a supplier, manufacturer or plant hire or lease company on behalf of a targeted enterprise when such payment is recovered by making deductions from payments to the targeted enterprise in connection with the contract; or should the contractor fail to enter into written contractual agreements with the relevant targeted enterprises.

#### 3.3.2.2 Case 2

Credits claimed towards the contract participation goal shall be denied where written contractual agreements contain any of the following:

- a) a right to set off in favour of the employing contractor not provided for by law;
- b) authoritarian rights given to the employing contractor or his agent, with no recourse to independent adjudication in the event of a dispute arising;
- c) payment procedures based on a pay-when-paid system;
- d) a dispute resolution process which does not include inexpensive alternative dispute resolution procedures, such as mediation or adjudication, but which only makes use of formal proceedings such as arbitration or litigation; or
- e) conditions which are more onerous than those which exist in the main contract.

Credits shall be denied should targeted enterprises not adhere to statutory labour practices or fail to perform commercially useful functions.

## 4 COMPLIANCE WITH REQUIREMENTS

### 4.1 General

The contractor shall enter into written contractual agreements with all the targeted enterprises and targeted partners cited in the contract participation goal implementation plan and shall, as soon as is practicable, furnish the employer's representative with copies of such agreements and the written acceptances thereof. The contract to be performed by the targeted enterprises and targeted partners shall, in the case of targeting strategy A, thereafter neither be reduced in scope, nor terminated without the prior written approval of the employer's representative, which shall not be unreasonably withheld or delayed.

#### **4.2 Substitutions**

Where targeting strategy A applies and in the event that, through no fault of the contractor, a contracted targeted enterprise is found to be

- a) unable to perform,
- b) unable to perform on time,
- c) unable to produce acceptable work,
- d) unwilling to perform work required, or
- e) not fit to perform the service;

the contractor shall notify the employer's representative of the apparent necessity to reduce or terminate such a targeted enterprise's contract, citing the reasons therefor.

In the event that the employer approves the contractor's request to be relieved of his obligation to make use of a contracted targeted enterprise, the contractor shall either provide a substitute targeted enterprise to take over the contract, or engage a targeted enterprise on another aspect of the contract so as to secure the required credits to achieve the contract participation goal. The contractor shall, in such circumstances, submit to the employer a targeted enterprise declaration affidavit with respect to the proposed substitute targeted enterprise, and supply details of the nature and value of the contract which shall be performed by such an enterprise.

Contracts with contracted targeted enterprises may only be terminated, and new contracts entered into with substitute targeted enterprises for the purpose of securing credits towards the contract participation goal, with the employer's approval, which shall not be unreasonably withheld. Where the employer approves such substitutions, the contractor shall comply with all the requirements of this part of ISO 10845.

The employer may, at his sole discretion and upon the basis of evidence submitted by the contractor in support of fruitless efforts in good faith to secure substitute targeted enterprise participation, grant a waiver with respect to contract participation goal obligations.

NOTE Subclause 4.2 is only applicable where targeting strategy A applies.

#### **4.3 Bona fides of targeted enterprises**

Where, in the case of targeting strategy A, an enterprise under contract was initially considered to be a targeted enterprise but is later discovered not to be so, or is found not to be creditable towards contract participation goals, the employer may consider a partial waiver of the contractor's obligations towards the achievement of the contract participation goal with respect to such a targeted enterprise, should the contractor satisfactorily demonstrate that he was justified in believing the enterprise to be a targeted enterprise and that eligibility standards were not violated.

### **5 RECORDS**

#### **5.1 Submission of documentation**

The contractor shall submit all the documentation required in terms of 3.1, 3.2.2, 3.2.3, 4.1 and 4.2 in a timely manner and, together with his programme of activities, a schedule which clearly indicates the expected delivery dates of goods provided by targeted enterprises or the commencement and completion dates of work and services to be performed by all the targeted enterprises engaged on the contract for the purpose of securing credits towards the contract participation goal. This schedule shall be updated by the contractor whenever a change in programme occurs.

#### **5.2 Monthly submission of supporting documentation**

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The contractor shall prepare and submit on a monthly basis to the employer's representative, on or before the date specified in the targeting data and, in a form approved by the employer's representative, the following:

- a) a brief report which describes the commercially useful functions performed by the targeted enterprises and targeted partners in the performance of the contract, both during the interim period and on a cumulative basis; and
- b) a schedule reflecting the estimated total value of the contracts, the cumulative value of the contracts and the value of goods provided or work and services performed (or both) over the period for which payment is claimed with respect to each and every targeted enterprise and targeted partner.

Should random inspections conducted by the employer's representative on targeted enterprise activities indicate that such enterprises are not performing in accordance with the requirements of this part of ISO 10845, the contractor shall provide, in addition to the monthly reporting requirements, separate weekly resource returns and any other relevant information with respect to such targeted enterprises in a format approved by the employer's representative.

### 5.3 Certification of credits

The employer's representative shall certify the value of the credits counted towards the contract participation goal whenever a claim for payment is issued to the employer, and shall notify the contractor of this amount.

### 5.4 Actions required upon completion of a targeted enterprise's contract with the contractor

The contractor shall, upon completion of each individual targeted enterprise's contract, issue a completion certificate and certify the amount paid to such targeted enterprises. He shall submit the certificates, counter-certified by the relevant targeted enterprises, to the employer's representative for record-keeping purposes. The contractor shall furnish justification to the employer whenever it is not possible to obtain such counter-certification.

## 6 SANCTIONS

In the event that, and where targeting strategy A applies, the contractor fails to substantiate that any failure to achieve the contract participation goal was due to

- a) quantitative underruns,
- b) the elimination by the employer of items included in the contract participation goal, or
- c) any other reason beyond the contractor's control which may be acceptable to the employer,

the sanctions provided for in the contract shall apply.

*NOTE 1 The contract establishes the sanctions that apply. These are set out in a tender evaluation schedule, the scope of work or contract data. Sanctions where tender evaluation points are granted with respect to a tendered CPG or where a minimum CPG is specified (i.e. targeting strategy A) are usually applied in the form of*

- a) *financial penalties, typically formulated on the difference between the contracted contract participation goal and the contract participation goal achieved in the performance of the contract;*
- b) *the rejection of claims for payments as being incomplete should the appropriate supporting documentation not be provided; and*
- c) *the issuing of completion certificates only after the certificates described in 5.4 are received.*

*NOTE 2 No sanctions in the form of financial penalties are applied where the CPGs are used only to measure and report on the quantum of economic activity generated by a contract for targeted enterprises (i.e. targeting strategy B). The sanction where financial incentives are applied is simply that the incentive is not paid if the target is not attained.*

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PROVINCE OF THE EASTERN CAPE

DEPARTMENT OF TRANSPORT

TENDER NO. SCMU10-24/25-0021

BRIDGE CONSTRUCTION FOR HAMBURG CONSTRUCTION PROJECT FOR A PERIOD OF 12 MONTHS

**C3.9 SECTION H: QUALITY ASSURANCE FRAMEWORK FOR ROAD WORKS**

## SECTION H: QUALITY ASSURANCE FRAMEWORK FOR ROAD WORKS SECTION

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## QUALITY ASSURANCE FRAMEWORK FOR ROAD WORKS

The Contractor shall implement a quality assurance system that replicates an ISO 9002 and appoint a quality manager who shall ensure that members of the Contractor's staff comply with the requirements of the quality system. The quality system and the methods used to implement it shall be described in a quality plan produced by the Contractor. The quality manager shall be resident on site full time. No construction activities shall take place on site before the Employer's Agent approves the method statement for that activity.

The Contractor shall submit the quality assurance system he proposes using to the Employer's Agent, for his approval, within two weeks of the site handover. The system shall record the lines and levels of responsibility and indicate the method by which testing procedures will be conducted. Once accepted by the Employer's Agent the Contractor shall not deviate from it unless written notification of proposed changes has similarly been submitted and approved.

The system shall provide for a method statement for each construction activity. Each method statement shall be submitted to the Employer's Agent for his approval two weeks prior to commencement of the activity. Where appropriate the Contractor shall make use of the Employer's manuals in preparing his method statements. No construction activity shall commence before the Employer's Agent has approved the Contractor's quality assurance system.

It should be noted that elements 1 to 19 are mandatory to a quality system, while Elements 20 to 22 are not, but are likely to enhance the contractor's efficiency and profitability.

## ELEMENT 1 – MANAGEMENT

### RESPONSIBILITY

### QUALITY POLICY

The contractor shall define and document his policy and objectives for and commitment to quality. The contractor shall ensure that the policy is understood, implemented and maintained at all levels of his organization.

*Note:* In drawing up this document, top management must give close consideration of their Quality Policy and their commitment thereto and put this into writing in a manner that can be clearly understood by all members of their organization.

### ORGANISATION

The contractor shall produce organization charts and job descriptions showing the responsibility, authority and interrelation of key staff, at company and contract level, involved in the management, performance and verification of work affecting quality, who need the organizational freedom and authority to: -

- a. Initiate action to prevent the occurrence of non-conformities.
- b. Identify and record problems relating the product, process and quality system.
- c. Recommend solutions through designated channels.
- d. Verify the implementation of solutions.
- e. Control further processing and delivery of non-conforming products until the problem has been corrected.

The contractor shall provide adequate staff, including trained personnel for management, performance of the work and verification activities including internal quality audit.

The contractor shall appoint a member of his management team as the Quality Manager who, irrespective of his other responsibilities, shall have defined authority for:-

- a. Ensuring that a quality system is implemented and maintained in accordance with this framework.
- b. Reporting on the performance of the quality system to top management for review.
- c. Liaising with external parties on matters relating to quality system.

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*Note:* Successful management relies on good communication within the management team and on a clear definition of the responsibilities and authority of each member of the team. This is best documented by means of an organogram and a list of job descriptions. Job descriptions should preferably be defined by "position" rather than by name and should briefly but clearly state the responsibilities of the position and the reporting lines.

### MANAGEMENT REVIEW

The contractor's senior management shall review the quality system at regular intervals to ensure its suitability and effectiveness in satisfying the requirements of this framework and the contractor's quality policy and objectives.

The review intervals shall not be more than 12 months and shall be 6 months or less during period of development or when significant numbers of non-conformities are occurring.

The Quality Manager shall present a report to the review meeting. This report shall include details of internal audit and non-conformance report and resultant actions taken to eliminate the recurrence of non-conformities. Employer feedback relating to quality shall be included in the report.

Deficiencies in the Quality System shall be identified and a plan for improvements agreed. The proceeding of the review, together with action requirements, shall be recorded.

*Note:* A quality system requires regular maintenance if it is to remain effective. Top management must maintain its interest, involvement and commitment to the system. Management Reviews are an important, visible expression of this interest and commitment.

### ELEMENT 2 – THE QUALITY SYSTEM

The contractor shall establish, document and maintain a quality system, which shall contain as a minimum the following components: -

- a. Quality policy.
- b. Works Instruction, Standard Methods and Manuals describing how individual activities shall be planned, carried out, controlled and inspected for compliance with specification.
- c. Inspection Check lists. Inspection checklists shall contain details of the work, which require checking or testing to ensure compliance with the specification. They will, where applicable, contain details of specification tolerances and test results. Inspection checklists shall be signed off by the responsible person and stored as part of the Quality Records.
- d. Check lists. Checklists shall contain details of tasks necessary for the smooth running of the checklist shall be signed off by the person responsible for the task and passed to higher authority for reviewing and storage.
- e. Contract Quality Plans. A contract Quality plan will be required for each individual contract. They will describe those aspects of the Quality System, which will be adopted for that contract. The Contract Plan is dealt with in greater detail in Element 19.

### ELEMENT 3 – CONTRACT REVIEW

The contractor shall establish procedures to provide for the following:

- a. A thorough reading of the full document so as to determine the extent that other items of the work will affect the work to be carried out by the contractor.
- b. A review of the document for consistency, clarity and sufficiency of information.
- c. Bringing to the notice of the Employer, either in writing or at the Site Inspection, of any unclear or inconsistent requirement or lack of sufficient information in the tender document.
- d. That the contractor has or can obtain sufficient skills and resources to carry out the proposed work.

Unless a compulsory Site Inspection forms part of the tendering procedure, the contractor and the employer shall formally meet prior to the award of the contract to review the contract and the contractor's tender proposal to:-



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- a. Ensure that both parties have the same understand of their respective contract obligations.
- b. To resolve any inconsistencies, lack of clarity or shortage of information in the contract document.
- c. To review the contractor's resources and capacity to undertake the work.
- d. To review the contractor's Contract Quality Plan.

The minutes of such meeting/s shall form a part of the contract documents.

The contractor shall identify how an amendment to the contract is made and lay down procedures for the efficient transfer of such amendments to his staff.

*Note:* This element is vital to the smooth running of a contract and is intended to minimize misunderstanding and delays during the course of the contract.

### **ELEMENT 4 – DESIGN CONTROL**

The contractor shall establish and maintain documented procedures to control and verify and design of the product in order to ensure that the specified requirements are met.

The design inputs shall be identified, documented and selection reviewing by the contractor for adequacy. Incomplete, ambiguous or confliction requirements shall be resolved with the Employer.

The design output shall be documented.

The design output shall

- a. Meet the design input requirements.
- b. Contain acceptance criteria.

Design output documents shall be reviewed before release.

The contractor shall liaise with the employer's control laboratory while carrying out the design.

The contractor's laboratory mix designs shall be verified and where necessary modified by producing, laying and testing the material using the mixing and paving plant that will be used during the contract. During these trials the settings for the plant to produce the specified end results shall be recorded and incorporated in the design output documentation. Test result showing the physical properties of the material shall be incorporated in the design output documentation.

*Note:* A well thought out, documented and applied design procedure will prevent delays at the start of a contract and provide essential output for the control of the work. The design output should include details of materials to be used, the job grading of aggregates and the accepted tolerance on each sieve fraction (which will normally be tighter than the tolerances in the contract document), setting of mixing and paving plant to produce the required specification, mixing and laying temperatures, holding times for modified binders and modified mixes, etc. These outputs will form essential inputs for the compilation of Work Instruction and Inspection Check Lists. On PPGS contracts where contractor is required to design and overlay having a specific life it may be necessary to call on outside help to carry out a full pavement design.

### **ELEMENT 5 – DOCUMENT AND RECORD CONTROL**

The contractor shall control all documents and records as follows:-

- a. Drawings. A register showing the current revision of all drawings shall be maintained, updated and displayed at the work site. The register shall indicate the holders of copies of each drawing. Changes not involving the reissue of drawings shall be clearly noted on ALL copies of the relevant drawing and cross referenced to the instruction document. Superseded drawing required for record purposes shall stored separately from the current revisions.
- b. Correspondence which relates to the contract such as letters, memos, instructions, orders and the minutes of meeting shall filled in a manner which will allow easy access. The distribution of correspondence shall be clearly marked on the file copy.
- c. Quality Control Records. The contractor shall determine the distribution of each quality control document. The distribution shall be clearly marked on each record and shall be signed off prior

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to passing along the chain. Fully signed off quality Control Records shall be filled in a manner which will allow easy access.

- d. The distribution of Quality System documentation shall be controlled by the Quality Manager. Distribution lists shall be maintained to ensure that holder of original documents receive any revisions. Superseded issues shall be marked as such withdrawn from use.

All drawing and records shall be stored in a manner that will prevent loss and minimize deterioration.

Copies of contractual Quality Records, specified as such, shall be supplied to the Employer. Other Quality Records shall be available to the Employer for inspection and audit.

On completion of the contract all records and documents shall be archived in a manner which will prevent loss, minimize deterioration and allow retrieval for the period specified on the contract document or as required by legislation, whichever is the longer.

*Note:* For the smooth running of a contract it is essential that staff responsible for the ordering of supplies and the execution of the work have available all the information relevant to their responsibilities and that the information is up to date. This can be achieved by having a systematic procedure for the receiving, copying distribution and filling of documents together with a procedure for the withdrawal of out of date copies.

## ELEMENT 6 – PURCHASING AND SUBCONTRACTING

### GENERAL

The contractor shall have documented procedures which he shall follow to ensure that materials purchased from suppliers and services provided by subcontractors meet the specified requirements.

*Note:* The performance of suppliers and subcontractors is critical for achieving the quality requirements of the contract. They must therefore form an integral part of the Quality System. This justifies having a documented policy to formally and consistently control their activities.

### ASSESSMENT

The contractor shall evaluate and select suppliers and subcontractors on the basis of their ability to meet the requirements of the Quality System, specification and the program. Subcontractors and suppliers should be encouraged to develop their own quality assurance systems.

Before making a purchase from a supplier or employing a subcontractor whom the contractor has not dealt with during the previous two years in relating to products or services similar to those being sought a prior, documented assessment shall be made to verify their ability to meet the quality and program requirements.

*Note:* Where prospective suppliers and subcontractors do not have an established track record the contractor should satisfy himself that they have the necessary skills and resources to carry out the proposed work. This should be done formally by a senior member of management and the outcome recorded.

### PURCHASING DATA

Each Contract Quality Plan shall specify the person responsible for the purchase of materials and services which relate to achieving the specified requirements.

All purchase orders and subcontract agreements which are significant for the achievement of quality requirement shall be in writing and shall contain:

- a. Precise identification of the type and specification.
- b. The title or other positive identification and applicable issue for specifications, process requirements, inspection instructions and other technical data.
- c. The quantities, rate of delivery, delivery details and completion dates.

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The contractor shall review and approve purchasing documents for adequacy of the specified requirement prior to issue.

*Note:* Unless purchasing instructions are precise there is a significant risk of the wrong materials or service being delivered.

### INCOMING MATERIALS

All materials purchased or produced by the contractor or supplied by the Employer for incorporation in the works shall be checked for compliance with the specification prior to incorporation in the works and verification recorded on the relevant Inspection Check List. Delivery dockets and verification test result sheet shall either be attached to the Inspection Check List or referred to, in an identifiable manner, on the Inspection Check List.

All materials shall be handled, stockpiled and stored in a manner that will prevent deterioration; segregation, contamination or damage and verification shall be recorded on the relevant Inspection Check List.

*Note:* The contents of stockpiles and storage tanks should be checked for compliance prior to their being released for use. The habit of recovering material from a stockpile while it is being constructed should be avoided. Care must be taken to ensure the incoming binder are placed in storage tanks allocated for that type of material. Material not meeting the specified requirements should be dealt with as non-confirming work.

### MATERIALS AND PRODUCT IDENTIFICATION AND TRACEABILITY

The contractor shall establish and maintain procedures for the identification and traceability of materials incorporated in the works from their origin (quarry, borrow pit, refinery etc.) to their final position in the completed work.

Records of such identification and traceability shall be incorporated in the Quality Records.

*Note:* The traceability of materials through the process can be achieved by cross-referencing stockpiles/storage tanks with delivery notes and daily process records. Agreements should be made with suppliers of modified binder for full records of the modification process to be supplied with every delivery of modified binder.

## ELEMENT 7 – PROCESS CONTROL

The contract shall identify and document the production and placing processes which affect quality and shall ensure that these processes are carried out under controlled conditions. Controlled conditions shall include the following:

- a. Documented procedures for the operation of equipment for the production and placing of the product and for building of material stockpiles and the recovery of material from stockpiles.
- b. Documented procedures for the maintenance and servicing of equipment.
- c. Documented procedures for the calibration and adjustment of equipment.
- d. Documented procedures for modification of binders.
- e. Monitoring, control and recording of suitable process parameters (i.e. temperatures, rates of delivery of raw materials, storage times, etc).
- f. Compliance with documented procedures.
- g. Approval of processes and equipment.
- h. Criteria for workmanship, which shall be stipulated in the clearest possible manner (e.g. paving manuals, works instruction, illustrations or representative samples).

The processes shall be carried out by qualified operators and records shall be kept of all process parameters which cannot be verified by subsequent inspection (i.e. storage temperatures and times for binders and modified binders, mixing times, mixing and placing temperature, etc.) These records shall form part of the Quality Records.

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*Note:* The quality of the end product in asphalt paving and bitumen seal work is highly dependent on good process control. Trial mixes and pavements will, if properly carried out, provide the control parameters for process control.

### ELEMENT 8 – CONTROL AND INSPECTION OF THE WORK

#### GENERAL

The contractor shall undertake the work in a planned and controlled manner to ensure that the specified requirements are achieved. To this end the contractor shall develop procedures and documentation that:

- a. Identify the Employer's quality requirements.
- b. Plan how these will be met.
- c. Control the work in accordance with the plan.
- d. Inspect the work to verify that it complies with the specified requirements.
- e. Record the result of the verification.

*Note:* This element required that all work on the site is properly managed. Identifying and planning

The contractor shall examine the contract document and produce a Specification Review Schedule (SRS) tabulating the specified quality requirements for the work. This information shall be used as a basis for developing the Contract Quality Plan. Method Statements and/or Work Instructions shall be issued to that those person actually carrying out the work fully understand what is required. These shall describe how the task is to be performed, the person responsible for ensuring its completion, the sequence of operations and the resources to be used.

*Note:* Each and every quality requirement in the contract specification and the contractor's design must be identified, the task necessary to achieve and check the required quality laid down and a person appointed to ensure that task are carried out and quality records are completed and filled. The SRS will form the input for the drawing up of work Instructions.

#### INSPECTION AND RECORDING

The contractor shall inspect and/or test all the specified quality requirements (see "Identifying and Planning" above) to verify their compliance. The results shall be documented and retained as part of the Quality Records. Prior to covering up work carried out by other parties the contractor shall satisfy himself that such work conforms to the required specification.

*Note:* The documentation required for inspection and recording can normally be covered by inspection Check Lists, which when completed will be filled as part of the Quality Records.

### ELEMENT 9 – CONTROL OF INSPECTION, MEASUREMENT AND TEST EQUIPMENT

The contractor shall maintain a register of all inspection, measurement and test equipment used to check the quality of the work. Every item of equipment shall be clearly marked with its identification number or code appearing in the register.

All inspection, measurement and test equipment shall be calibrated and/or checked at appropriate intervals.

The register shall record the required frequency of calibration of checking, together with name of the person or body responsible for the calibration or check.

Work Instructions and Inspection Check Sheet shall be issued, setting out the methods to be used for checking of equipment by the contractor's employees.

The contractor shall safeguard inspection, measurement and test equipment, including computer software, from adjustment which would invalidate the calibration settings.

Calibration certificates and check sheet shall be retained and form part of the Quality Records.

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*Note 1:* Calibration certificates are required for load measuring devices such as weigh bridges, load cells, proving rings and scales. Calibration of these devices should be in accordance with the manufacturers' recommendations, legal requirements or the requirements of the specification.

*Note 2:* The mass and drop of compaction hammers, the mass and straightness of penetration needles, the accuracy of the thermometers, etc. should be checked at least once a month and the results of the checks recorded and filed.

*Note 3:* The condition of such items as moulds, rifflers, sieves, centrifuge cups, measuring tapes, ovens, centrifuges, etc. should be checked at least once every six months, or more frequently if the work load is heavy. These checks must be made by a responsible person appointed by the Quality Manager and the results of the checks recorded and filed.

### **ELEMENT 10 – CONTROL OF NON-CONFORMING WORK**

The contractor shall draw up and maintain procedures to ensure that non-conforming materials work are either:

- a. Reworked to meet the specified requirements;
- b. Accepted with or without concession by the Employer; or
- c. Rejected and replaced.

Non Conformance Report (NCR) shall be issued. An NCR shall contain the following:

- a. Details of the precise location;
- b. Details of the symptoms;
- c. The probable cause;
- d. Proposals for the correction; and
- e. Proposals for the future avoidance of the non-conformity.

NCRs shall be approved by the person granted such authority in the Contract Quality Plan and by the Employer in case where a concession is being sought prior to implementing rectification work or the covering up of the non-conforming work.

Where non-conforming work will affect or delay other parties, the presence of the non-conformity shall be brought that party's notice as a matter of urgency.

The cause of non-conformities shall be investigated by the Quality Manager who shall take action, including if necessary the modification of the Quality System and/or the Contract Quality Plan, so as to eliminate or reduce the recurrence of such non-conformities. All NCRs and quality improvement action taken by the Quality Manager shall be reported at the Management Review meetings.

*Note:* Even with excellent practice and control some defects in material or workmanship will occur. This element formalises how these non-conformities should be handled to ensure that:

- a. other parties are aware of the problem;
- b. the defective work is correct; and
- c. corrective measures are taken to eliminate or reduce the future occurrence of the defect.

### **ELEMENT 11 – HANDLING, STORAGE AND DELIVERY**

The contract shall draw up and maintain procedures, issue Work Instructions and make agreements with suppliers for the correct handling, stockpiling, storage and delivery of raw and processed materials to prevent deterioration and damage. These procedures shall include methods for the building of stockpiles and the recovery of materials from stockpiles, temperature control and duration for the storage and/or curbing of modified binders and the protection of processed materials while being transported from the mixing plant to the laying site.

*Note:* Poor stockpiling, storage, handling and delivery may have a deleterious effect on the quality of materials and in some cases may render them unfit for use. On the other hand, good practices in the building of stockpiles and the recovery of material could enhance the quality of marginal materials. The

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formalising and strict control of work under this element can therefore have a market effect on the quality of the end product.

### ELEMENT 12 – CONTROL OF QUALITY RECORDS.

The contractor shall produce and maintain documented procedures for the identification, collection, indexing, filling, storage and safe keeping of Quality Records to demonstrate conformance with the specified requirements and the effective operation of the Quality System. Pertinent quality records from suppliers and subcontractors shall form part of these records.

*Note:* Quality records are evidence that the contract has implemented his Quality System. To be of use they must be kept in an orderly fashion and be easily retrievable for examination by the Employer and, if necessary, to be used in the settlement of disputes.

### ELEMENT 13 – POLLUTION CONTROL

The contractor shall issue Work Instructions, Method Statements or manuals covering the control of pollution. These should include (but are not restricted) to the following:

- a. Emission control at mixers.
- b. Avoidance of spills.
- c. Action to control spills.
- d. Disposal or reject material.
- e. Disposal of surplus material at laying sites.
- f. Disposal of oils, fitters and discarded parts during servicing of plant.
- g. Testing of sprays bars.
- h. Clearing of stockpile sites.
- i. Cleaning up of mixing sites.

*Note:* The production and laying of bituminous materials is potentially a dirty process and strict control is required if the contractor is not to fall foul of the law. Lack of good pollution control can result in disputes and possibly in stoppage of work.

### ELEMENT 14 – SAFETY AND WELFARE

The contractor shall document and operate a formal health and safety programme which complies with the Occupational Health and Safety Act No 85 of 1993 and any subsequent amendments and associated Regulations. Work Instructions shall be issued pertaining to health and safety measures specific to the work to be carried out. The minutes of Health and Safety Committee Meetings shall be included in the Quality Records.

The contractor shall formalise his policy regarding the welfare of his staff and labour and issue Works Instructions setting out the methods of implementing this policy.

*Note:* A safe site with contented staff will greatly enhance both the quality and quantity of the work produced. The formalisation of safety and welfare measures will ensure that all members of the organisation are aware of both their rights and responsibilities in these matters. Close attention to these matters will help to prevent accidents and minimize labour disputes.

### ELEMENT 15 – TRAINING

The contractor shall establish and maintain documented procedures for identifying training needs and provide appropriate training for all personnel. Personnel specific assigned task shall be qualified on the basis of appropriate education, training or experience to carry out such tasks. Training and qualification records shall be maintained for all personnel and review on a regular basis. These reviews, together with the information contained in non-conformance reports, shall form the basis for future training programmes.

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The contractor shall establish and maintain documented procedures for checking that prospective employees have sufficient skills to perform the intended tasks to the quality standards required and shall institute necessary training where such skills are lacking.

*Note:* Inadequate training is one of the most common cause of foul-up and inefficiencies. Carefully planned training programs, on the site, at head office and through attendance at outside courses and seminars will go a long way to ensuring that all members of the organization are fully trained to carry out their expected tasks. Internal Audits, Management Reviews and NCRs are sources from which to identify training needs and the content of training courses. The Reconstruction and Development Programme (RDP) places great emphasis on the training of disadvantaged people, and future contracts are likely to contain requirements for the training of emerging contractors. To be effective this training must cover the whole gambit of contracting and not only concentrate on on-site skills.

### **ELEMENT 16 – CONTROL AND RECTIFICATION DURING THE GUARANTEE PERIOD**

The contractor shall draw up, document and agree with the Employer procedures for the inspection of the work during the guarantee period and for the rectification of non-conforming work.

*Note:* All contracts contain some form of guarantee period. For existing standard contracts this is the maintenance period, normally twelve months. For PPGS contracts this guarantee period is likely to be between three and five years and for Build-Operate-Transfer (BOT) contracts the guarantee period may possibly extend to as much as thirty years. It is therefore essential that, at an early stage of the work, preferably before the submission of tenders, both the contractor and the Employer are aware of their responsibilities and authority during the guarantee period and of how such responsibilities and authority during the guarantee period and of how such responsibilities and authority are to be carried out.

### **ELEMENT 17 – STATISTICAL CONTROL**

The contractor shall identify the need for statistical control methods to give warning of any tendency for the quality of raw or processed materials to depart from the specified requirements.

The contractor shall establish and maintain documented procedures to implement statistical warning systems and to pass the results of such system to the relevant supplier or process personnel.

*Note:* Statistical control charts can give early warning of the tendency of attributes, such as gradings, sand equivalents, void contents, binder contents, etc. to depart from the specification. This early warning can allow preventative action to be taken before non-conformities start to occur.

### **ELEMENT 18 – INTERNAL QUALITY AUDITS**

The contract shall produce and maintain documented procedures for planning and carrying out Internal Quality Audits to verify whether quality activities and result comply with the Quality System and to determine the effectiveness of the Quality System and Contract Quality Plans.

Internal audits shall be recorded and brought to the attention of the personnel having responsibility for the activity being audited.

Corrective action shall be taken on deficiencies found in the audit.

Internal audits shall be carried out on all quality activities at least once a year but more frequently during development stages of the Quality System, during the early stages of the implementation of Contract Quality Plans and when the occurrence of non-conformities is excessive.

Result of audits and follow up action shall be reported by the Quality Manager at the Management Review Meeting.

*Note:* Internal Quality Audits, carried out by staff who are independent of those responsible for up front quality control will provide a check that the Quality System is operating as planned and is being effective in producing the objectives set out in the contractor's Quality Policy and provide information for the improvement of the Quality System and Contract Quality Plans.

## ELEMENT 19 – CONTRACT QUALITY PLANS

The contractor shall draw up Contract Quality plan for each contract. The plan will detail how the Quality System will be adapted to ensure the control of quality on that contract.

The contract Quality Plan shall include (but not be restricted) to the following:

- a. The title, brief description, and key dates of the contract.
- b. A list of the drawings and specification applicable to the contract.
- c. The names, titles and responsibilities of the contract management team.
- d. A list of subcontractors and suppliers
- e. The construction programme.
- f. Specification review schedules.
- g. A list of Work Instructions, Inspection Check lists, check lists, Standard Methods and Manuals applicable to the contract.
- h. Documents setting out purchasing and subcontracting procedures.
- i. Procedures for Document and Record Control.
- j. Procedures for the control and rectification of Non-conforming work.
- k. Procedures for carrying out Internal Audits and the frequency of carrying out such audits.
- l. Procedures for ensuring compliance with the Occupational Health and Safety Act No 85 of 1993.
- m. A list of and procedures for the Control and safe keeping of Quality Records.
- n. A list of training courses to be attended by the contract staff and Works Instructions pertaining to the on site training of staff, labour and SMMEs.
- o. Details of any Statistical Control methods to be used on the contract.
- p. The signatures of the persons who prepared and authorised the plan.

*Note:* A Contract Quality Plan is the on-site working document setting out how the contractor's Quality System will be applied to that contract to ensure that the Quality Policy and the quality requirements of the contract are met. The Work Instructions, Inspection Check Lists, Standards Methods Check Lists and Manuals required in plan can be assembled:

- ✓ By adopting and/or adapting standard company documents
- ✓ By adopting or adapting documents developed for similar work previous job, or
- ✓ By preparing new documents for new activities

These will provide details of how all the identified quality requirements will be planned, controlled, inspected for compliance, corrected where compliance is not met, and the results record.

## ELEMENT 20 – PROCUREMENT OF WORK

The contractor shall develop, document and maintain procedures and allocate personnel for the regular scanning of the media for tender advertisements pertaining to bituminous work and for projects where bituminous alternatives could be offered.

The procedures should lay down the publications to be scanned and the action to be taken if the publications do not come to hand when expected.

The result of the scanning must be channelled to top management for further action.

Contractors interested in innovation work should lay down procedures for obtaining early access to planning proposal, Road Authority preliminary programs and local and overseas research data.

*Note:* these procedures should ensure that potential work is not overlooked and keep the contractor up to date with the latest thinking.

## ELEMENT 21 – PAYMENT

The contractor shall establish, document and maintain procedures for:

- a. Obtaining progress information from site.



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- b. Agreeing this information with other parties concerned.
- c. The preparation and issuing of payment certificates or invoices.
- d. Ensuring prompt payment.

The contractor shall also establish, document and maintain procedures for obtaining agreement with subcontractor and supplier for:

- a. The issue of invoices.
- b. Agreeing invoiced quantities.
- c. The settlement of dispute regarding no-conforming work and suppliers.
- d. Agreeing the terms and conditions of payment for services and suppliers received.
- e. Ensuring prompt payment.

*Note:* These procedures will go a long way to ensuring good relation with subcontractors and supplied and a smooth cash flow for the contractor.

<b>ELEMENT 22 – QUALITY MANUAL</b>
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The contract shall compile and maintain a Quality Manual which shall contain:

- a. The contractor's Quality Policy.
- b. An organogram showing key management position and reporting lines.
- c. A description of how the Quality System is structured.
- d. A statement of the contractor's objectives and implementation policy in relation to each element of the system.
- e. A list of the contractor's Standard Methods, Manuals, Work Instruction and Check Lists.

*Note:* This document provides an overview of the whole system and can be useful as a reference document for external auditors, as a marketing document, as a tender submission document and as an introduction for new employees. Because of the wide distribution of this document, its content should be restricted to non-confidential information.

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PROVINCE OF THE EASTERN CAPE

DEPARTMENT OF TRANSPORT

TENDER NO. SCMU10-24/25-0021

BRIDGE CONSTRUCTION FOR HAMBURG CONSTRUCTION PROJECT FOR A PERIOD OF 12 MONTHS

<p style="text-align: center;"><b>CONTRACT</b> <b>PART 4 (OF 4) : SITE INFORMATION</b></p>
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<b>C4 : SITE INFORMATION</b>
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## **C4.1 MISCELLANEOUS**

The works specifications form an integral part of the contract documents and shall be deemed to supplement, the Standard Specifications

In the event of any discrepancy or conflict with any part or parts of the Standard Specifications, the Bill of Quantities or the Drawings, the Works Specifications shall take precedence.

The Standard Specifications which form part of this Contract have been written to cover all phases of work normally required for bridge contracts and they may therefore cover items not applicable to this particular contract.

## **C4.2 EMPLOYER'S OBJECTIVES**

The Employer's objectives are to deliver public infrastructure using labour-intensive construction methods (Where possible) and using local SMME sub-contractors wherever practical in the execution of certain items of the Works. In this specific instance the Employer's objectives are to undertake the construction of one (1) road over River Bridge across Nyulutsi River in Hamburg as well as the demolition of the existing structure.

Requirements are introduced that certain construction activities must be carried out by hand in terms of the Expanded Public Works Programme (EPWP) and by SMME sub-contractors.

### **Labour-Intensive Construction**

The aim is to provide temporary employment opportunities for the communities in close proximity of the road by introducing labour-intensive construction methods on those items of the work that are suitable to be executed in this manner.

The upgrading and surfacing of the section of road on which the bridge is located, is being undertaken by the Department of Transport's In-house Construction Unit (IHCU). The site of the works will have to be shared with the IHCU and liaison will be required to avoid conflict.

The description of the project contained in the Scope of Work is merely an outline of the Contract Works and shall not limit the work to be carried out by the Contractor under this Contract. Details of some of the major items are given in this section and approximately detailed quantities for each type of work to be carried out in accordance with the Contract Documents are included in the Bill of Quantities, Part C2 of this procurement document.

### **Potential Variations**

It is a condition of this contract that the employer reserves the right to limit the expenditure on the works due to possible budget restraints. Should the tender sum exceed the budgeted amount, the scope of the works may be reduced at any time, before or during the contract period, to ensure that the final contract amount does not exceed the budgeted amount.

Should these conditions be applied, such adjustments or limitations shall be deemed to be a variation of the form or quantity of the works or any part thereof in terms of clause 6.3 of the General Conditions of Contract. The validity of the tender, the individual rates or sums tendered shall not be influenced by any such adjustments or limitations and no claim will be considered on the basis of such adjustments or limitations in terms of clause 6.11 of the General Conditions of Contract.

## **C4.3 OVERVIEW**

### **C4.3.1 PROJECT LOCATION**

The works to be carried out under this contract involve the construction of a reinforced concrete bridge across Nyulutsi River in Hamburg. Demolition work of the existing structure being replaced will be required.

Specific attention has been paid in the design to the safety of road users and pedestrians. Adequate control measures must be provided to protect pedestrians and prevent them from accessing the works.

The main aspects of the work are as follows:

- a) Establishment on site
- b) The accommodation of traffic during construction
- c) Clearing and grubbing and cleaning in the road reserve around the bridge site.
- d) Access and dewatering works at the bridge site.
- e) Community and stake holder liaison
- f) Site specific occupational health and safety precautions.

#### **4.4 EXTENT OF THE WORKS**

##### **4.4.1 Nyulutsi River Bridge**

This major bridge structure is located approximately 3km from Hamburg along MR00522 towards the national road, R72.

The existing structure is to be demolished and removed. It will not serve any local community purpose or interest. Its removal will also restore the river flow to its original unimpeded watercourse.

The new structure will be a two span crossing with each span being 12,5 metres with a pedestrian walkway on one side. The total deck width of the bridge would be 11,12 metres. The two span bridge will provide an opening large enough to prevent a build-up of debris which could restrict the river flow. The new structure will have pile foundation.

Construction of the new bridge will not affect traffic flow over the existing bridge. However, care is required to prevent access to the site by public vehicles and pedestrians alike. Construction traffic will also use the existing road and general traffic needs to be warned and controlled to avoid conflict.

##### **C4.3.2.6 Existing Services**

Existing utility services that run parallel to and across the road, will have to be protected during construction. Electricity lines are overhead and are thus easily identified. Telephone lines are generally overhead, but underground cables may exist. It is not anticipated that any services will need to be relocated. Nevertheless, the contractor shall liaise with Eskom and Telkom and plan his work accordingly if necessary.

Water and sewerage mains are expected to exist at various locations along the alignment particularly near Hamburg. The local municipality may generally have a good record of where services are located. Nevertheless, close liaison with the municipality will be required.

#### **C4.5 ACCOMMODATION OF TRAFFIC**

The accommodation of traffic during the construction period will be implemented to ensure the safe and unhindered passage of public traffic at all times.

Traffic will be accommodated as follows:

- (a) Through populated areas, traffic will be accommodated on other streets only when construction is in operation on the existing road/street. The contractor shall ensure that residents along the existing road/street in these areas have access to their properties at all times.
- (b) On deviations that will be constructed to accommodate two-way traffic where practically possible. Some of the temporary deviations will remain in place after the completion of the contract to be utilized as local distributor roads for the rural villages/developments along the road.

- (c) On deviations as well as parts of existing road as one-way traffic with STOP and RY/GO control during daytime and temporary traffic signals during the night, where the road is constructed in full width or in half widths.

Temporary closures of up to a maximum of four hours during daytime will be allowed for blasting and cleaning of the road where the construction of temporary deviations will not be possible. The travelling public and local residents shall be notified of these closures well in advance.

The contractor shall also provide a full time traffic safety officer for the duration of the contract.

The contractor will be allowed to use prefabricated pipes for the stormwater drainage in temporary deviations.

#### **C4.6 MAINTENANCE OF THE EXISTING ROADS**

The Contractor shall be responsible for all routine maintenance operations along the road reserve on the sections which fall within the limit of the working area, from the date of handing over of the site until the date of issue of the certificate of completion of the works. The maintenance of the existing gravel road is to be carried out using labour intensive methods for as many required activities as practical and as agreed by the Engineer.

Once the certificate of completion of the works has been issued the responsibility for normal maintenance of the road (e.g. collection of litter, clearing of drains, repair of road signs damaged by the public, etc.) shall revert back to the District Roads Engineer.

#### **C4.7 SERVICES**

No services are expected to be relocated. The list of known services (Part C3) indicated in the schedule are indicative only and must be confirmed by the Contractor.

#### **C4.8 DRAWINGS**

The reduced drawings that form part of the tender document shall be used for tender purposes only.

The Contractor will be supplied with three (3) paper copies of each of the drawings for construction. These paper copies are issued free of charge and the contractor shall only be provided additional copies on request and for his account.

Any information in the possession of the contractor, which the Engineer's Representative requires for completing his as-built drawings, shall be supplied to the Engineer's Representative before a certificate of completion 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.

The levels given on drainage/structural drawings are subject to confirmation on site, and the Contractor shall submit all levels to the Engineer for confirmation before he commences any structural construction work. The Contractor shall also check all clearances given on the drawings and shall inform the Engineer of any discrepancies.

#### **C4.9 POWER SUPPLY AND OTHER SERVICES**

The Contractor shall make his 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.

The Contractor must liaise with the regional office of both Telkom and Eskom to confirm the position of all above and underground services, before commencing with the works.

Note should be taken of any Eskom restrictions on the supply of electricity as no claims in respect of power outages will apply.

#### **C4.10 CONSTRUCTION IN RESTRICTED AREAS**

It may be necessary for the Contractor to work within restricted areas. Except where provided for in the Specifications, no additional payment will be made for work done in restricted areas. The method of construction in these confined areas largely depends on the contractor's constructional plant.

However, the Contractor must note that measurement and payment will be in accordance with the specified cross-sections and dimensions only, irrespective of the method used for achieving these cross-sections and 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.

#### **C4.11 CONTRACTOR'S CAMP SITE**

The Contractor shall make his own arrangements regarding the establishment of a camp site and housing for his construction personnel. Liaison with the local community, councillors, traditional leaders and municipality will be required to find a suitable site and due regard must be given to the impact of the camp on the daily lives of local residents. Approval for the use of the site shall be obtained from local authorities, or from residents associations, as well as the written approval of the Engineer.

The Contractor may utilize base camps for construction plant from where they can operate to ensure that a minimum of time is expended in travelling to the various work sites. The use of base camps will be at the Contractor's option. The same approvals are required for the base camps as for the main camp.

The site camp will require the submission and approval of an Environmental Scoping Report and Management Plan by the Department of Economic Development and Environmental Affairs (DEDEA). The Contractor shall take note of the requirements of Part C3 C of the Project Specifications, which deals with the necessary environmental management programme, with particular reference to batching plants, bitumen and fuel storage, and plant maintenance areas.

The Contractor shall also note the requirements in respect of the Occupational Health and Safety Act and its construction regulations.

The Contractor shall provide and maintain a continuous means of on-site communication between his site supervision staff (i.e. the people responsible for the day to day running of the Contract) and the staff of the Engineer's Representative. The Contractor must provide the Engineer with one mobile two-way radio on the Contractor's frequency (item B15.03) and also allow for the rental and use of cellular phones by the Engineer's staff under Item B14.03. The provision and use of cellular phones for the Contractor's personnel will be for his own cost. Cellphone reception is not guaranteed and may be a factor in choosing a camp site.

#### **C4.12 SECURITY**

The Contractor shall be responsible for the security of his personnel and constructional plant on and around the site of the works and for the security of his camp, and no claims in this regard will be considered by the Employer. The Contractor will also be responsible for the security of the areas around the Engineer's offices and the laboratories. The cost of security is deemed to be included in the rates for accommodation and offices.

#### **C4.13 PROCESS AND ACCEPTANCE CONTROL**

It is preferred that an independent laboratory will be established on site and will perform the acceptance control testing by the Engineer on this Contract. The procedure for requests for testing,

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frequency of tests, testing and reporting of results will be finalised by the Engineer on site in collaboration with the Contractor.

The Contractor shall erect the necessary buildings required for the laboratory – refer to Section 1400 in the schedule of quantities.

Notwithstanding, the Contractor is responsible for process control and for ensuring that the work conforms to the requirements of the specifications and drawings, and shall implement an adequate testing regime to prove compliance. This is as per Clause 1205 of the Standard Specification.

Where a joint or combined laboratory is established, the cost shall be shared as described in the project specification. Testing in the combined laboratory will be effected as promptly as is reasonable but it is in the Contractor's own interest to submit material samples, concrete cubes or other components for testing in good time so as to assist in avoiding or restricting delays. The Employer will not pay claims for delays to the works resulting from waiting for test results.

The procedure for requests for testing etc. applies equally to a combined laboratory.

### **C4.14 ENVIRONMENTAL MANAGEMENT**

The Contractor will be responsible for managing a non-specific Environmental Management Plan (EMP) in terms of Volume 5 of the Tender Documents. The Environmental Management Programme Report (EMPR) is legally binding and shall be adhered to at all times.

The Contractor's authorized agent shall report to the Engineer regarding compliance with the conditions as stipulated in the Environmental Management Plan. The Engineer will indicate an Environmental Control Officer who, in addition to their normal duties, will have direct responsibility for the liaison with the Contractor and the Engineer to ensure the implementation and monitoring of the Environmental Management Plan. Monthly audits and detailed quarterly reports will be conducted by the environmental control officer.

The Contractor shall take the utmost care to minimise the impact of his establishment and other construction activities on the environment and shall adhere to the requirements as set out in Volume 5 of the Tender Documents. The Contractor will be required to submit a Method Statement to the Environmental Control Officer (ECO) detailing his construction activities and what measures will be implemented to prevent the pollution of streams, rivers and countryside through the spilling of fuels, bituminous binders, sewage from the temporary toilets and other deleterious materials. Where in the opinion of the Engineer, the Contractor has not adhered to these requirements; the Contractor shall rectify the damage at his cost and to the satisfaction of the Engineer.

### **C4.15 PROJECT STEERING COMMITTEE (PSC)**

A Project Steering Committee (PSC) will be established to manage community issues relating to this project in accordance with the provisions of Part C3 Section F : Labour Specifications. The Contractor will have one senior member of his staff as representative on the PSC without any voting powers.

### **C4.16 COMMUNITY LIAISON OFFICER (CLO)**

It will be required from the Contractor to employ a Community Liaison Officer (CLO) during the execution of the Works as specified in Part C3 Section F: Labour Specification of this Works Specification.

### **C4.18 LABOUR INTENSIVE CONSTRUCTION METHODS**

#### **C4.18.1 General**

It is a requirement of this contract that certain activities shall be constructed by means of labour-intensive construction methods in terms of the Expanded Public Works Programme (EPWP).



It is therefore required that as much of the construction works as practically possible and feasible be undertaken by labour-intensive construction methods in accordance with the provisions of Part C Section F Labour Specification of the Works Specification.

#### **C4.1.8.2 Targeted Labour**

The targeted labour for the purpose of this project will be South African citizens who permanently reside within a direct distance of approximately 5 km from the road centre line.

The contractor shall therefore employ labourers, artisans and subcontractors for the execution and completion of the Works from the local communities within the above target area in accordance with the provisions of Part C Section F : Labour Specifications

#### **C.4.1.8.3 Local Labour Goal**

The minimum local labour goal for this contract, as defined in Section F shall be **10%** of the tender value excluding allowances for contingencies, Provisional sums, Contract Price Adjustment (CPA) and VAT.

Failure to comply to this minimum local labour goal will result in the payment of a penalty in accordance with subsubclause F1.5 in Section F of the Scope of Work.

If required, after consultation with the community, rotation of labour may be necessary. This will take place on a four to six month basis and will be confined to general labourers. This must be allowed for in the tender rates and no additional payments will be made.

The contractor and his Sub-contractors shall ensure that they enter into a Contract of Employment with each employee engaged on this Contract. A copy of the Contract of Employment completed for each employee engaged shall be given to the Engineer prior to their commencing work on this Contract.

Skilled workers and competent Sub-contractors may only be recruited elsewhere if not available locally. SMME's should also be prepared to carry out work by labour-intensive construction.

The portions of the Works listed below and those marked by LI in the Bill of Quantities shall, unless otherwise instructed by the Engineer, be constructed under this Contract using labour-intensive construction methods only.

In respect of those portions of the Works which are not listed below the construction methods adopted and plant used shall be at the discretion of the Contractor, provided that the construction methods adopted and plant used by the Contractor are appropriate in respect of the nature of the Works to be executed and the standards to be achieved in terms of the Contract.

#### **C4.1.8.4 Activities to be executed by means of Labour-intensive Construction methods**

At least the activities in the table below shall be executed by hand (labour-intensive construction methods).

ITEM NO	DESCRIPTION	ACTIVITY
<b>ROADWORKS</b>		
1500	Accommodation of Traffic	(i) Erection and relocation / moving of traffic control facilities. (ii) Operating of STOP/GO-RY facilities. (iii) Operation of traffic signals. (iv) Excavation, laying and backfilling of temporary culverts.
1700	Clearing and grubbing	(i) Felling of trees. (ii) Clearing of road verges
2100	Drains	(i) Excavation for open drains up to 1,5m deep.
2300	Concrete kerbing, concrete channeling, chutes and downpipes and concrete linings for open drains.	(i) Laying of concrete kerbs / kerbs and channel combination including excavation and backfilling complete. (ii) Excavation and backfilling for chutes / downpipes. (iii) Concrete chutes including inlet and outlet structures (formwork and placing of concrete). (iv) Installation of chutes / downpipes including inlet and outlet structures. (v) Trimming of excavations for concrete-lined open drains. (vi) Concrete lining for open drains including placing of concrete, formwork etc. (vii)
3300	Earthworks	(i) Excavate and remove unsuitable material from the shoulders. (ii) Trimming and shaping cut and fill batters. (iii) Trimming the base of excavations prior to compaction. (iv) Tipping and spreading in confined areas.
3400	Layerworks	(i) Spreading and leveling. (ii) Tipping and spreading in confined areas.
5100	Pitching, stonework and protection against erosion.	(i) Excavation, trimming and packing of stones for all types of stone pitching.
5200	Gabions	(i) Foundation trench excavation and backfilling in soft material. (ii) Surface preparation for bedding the gabions in soft material. (iii) Packing stones in gabion boxes and mattresses. (iv) Placing of filter fabric for gabions.
5600	Road Signs	(i) Excavation and backfilling for road sign supports. (ii) Erection of supports and road signs. (iii) Excavation, erection and backfilling of danger plates at culvert structures.
5900	Finishing the roadway	(i) General tidying up and removal of debris, litter, etc.
6000 Series	Formwork, Reinforcing and Concrete Work.	(i) All work associated with formwork and fixing of reinforcement. (ii) Manual concrete batching plant on site. (iii) Transport and place concrete by hand where practical and distances allow.

The activities listed in the above table and those marked LI in the Bill of Quantities are compulsory activities and shall be done by hand. The engineer/contractor may identify further activities to increase the labour component of the contract.

#### **C4.19 RESTRICTIONS ON THE USE OF PERSONNEL IN THE PERMANENT EMPLOYMENT OF THE CONTRACTOR**

- (a) The Contractor shall limit the use of his permanently employed personnel to that of key personnel only (as defined in Section F of the Scope of Work) and shall, subject to the further provisions of Section E of the Scope of Work execute and complete the works using a temporary workforce working directly for the Contractor and/or for Subcontractors.

- (b) The Engineer may at his discretion, upon receipt of a written and fully motivated application from the Contractor and where he deems the circumstances to warrant authorize in writing that the Contractor may use workers not being his key personnel but who are in his permanent employ in the execution of the Works. Without limiting the generality of application of this sub-clause, circumstances which may be considered by the Engineer to warrant the authorization of the use of the Contractor's permanent employees not being key personnel, include:
- (i) The unavailability of sufficient numbers of temporary workers and/or Sub-contractors to execute the Works, provided always that the Contractor has proved that he has exercised his best endeavours and taken all reasonable actions to recruit sufficient numbers of temporary workers and Subcontractors and has exhausted all reasonable recruitment options;
  - (ii) The unavailability within the temporary worker pool and/or Subcontractor sources available to the Contractor in terms of the Contract, or sufficient of the required knowledge and skills necessary for the execution of the Works or specific portions thereof, in cases where the time of completion allowed in the Contract is insufficient to facilitate the creation of the necessary skills through the provision of training as contemplated in this Contract; and
  - (iii) Any other circumstances which the Engineer may deem as constituting a warrant.

#### **C4.20 TRAINING**

Training of labourers employed locally shall be done strictly in accordance with the provisions of Section E of the Scope of Work.

#### **C4.21 SAFETY**

Refer to Section B sub-clause B1230 in the Scope of Work in respect of Safety requirements for this Contract.

#### **C4.22 AREAS AVAILABLE FOR TEMPORARY STOCKPILES**

The areas within the road reserve but outside the road prism, interchanges link roads, and intersection surfaces are available as temporary stockpile sites. The Contractor may under his own initiative, identify additional sites, but no additional sites will be permitted unless approved under the Environmental Management Plan and by the Engineer.

#### **C4.23 WASTE DISPOSAL SITES**

The Contractor shall arrange his own waste disposal and shall ensure that he conforms to all relevant legislation and regulations which terms of compliance should be for the Contractor's cost. The site must be approved under the Environmental Management Plan and by the Engineer. All disposal costs will be borne by the Contractor.

The Environmental Management Plan may designate areas of erosion and old quarries in the proximity of the works as waste disposal sites.

#### **C4.25 FAUNA AND FLORA**

Indigenous fauna is limited to invertebrates (insects) and avifauna (birds). Domestic livestock that dominate the current fauna of the region includes pigs, donkeys, goats, cattle, sheep, dogs, ducks, geese and chickens.

The Contractor shall cause no damage to fauna and flora. If, in the opinion of the Engineer, this happens, the Engineer is entitled to initiate prosecution by the relevant authorities.

## C4.26 CLIMATE

Details of the climatic conditions were obtained from the South African Weather Service. The area traversed by the road is in the summer rainfall area, although on average significant rainfall occurs from January to June. There is less rain on average from July to December.

The mean annual rainfall at Hamburg, is 806,3 mm. The maximum rainfall events for a single day were recorded in January and February. It is noted, however, that even in the relatively dry months of June and July, high intensity storms have occurred which produced 24 hour rainfall figures in excess of 100 mm.

The area traversed by the road from Hamburg to R72 may therefore be classified, according to TRH 4: 1996, as having a "wet" macro climate, with mild relatively dry winters and hot to moderate summers. The Weinert N-value for this region is between 0 and 2, which indicates that the weathering of materials is usually by decomposition. The weathering of crystalline rocks such as dolerite can be fairly deep.

Summer temperatures can be very hot and humid, while cold fronts affect the area in winter. The closest relevant weather station for which temperature data is available is at East London.

The average summer daily temperature is about 27 °C, but daytime highs above 35 °C frequently occur. The average daily temperature during winter is around 4.5 °C, while light frosts have been recorded on rare occasions. The variation between the average maximum and minimum temperatures in a month is between 18 and 27 °C and is more or less constant throughout the year.

The Contractor shall take note of the average rainfall per month in preparing his programme. Work on the new structure should be programmed in the drier months to minimize the risk of flooding while working on the foundations and sub-structure. The bridge being constructed will require work in the river beds as piles are envisaged.

**Table 2 Maximum and Minimum Temperatures (East London)**

Month	EAST LONDON			
	Maximum ° C		Minimum ° C	
	Aver.	Extreme	Aver.	Extreme
January	29.2	45.1	16.6	6.9
February	29.3	45.5	16.6	6.5
March	28.1	43.3	15.4	4.5
April	26.2	41.1	12.1	2.6
May	24.0	37.6	8.7	0.1
June	21.9	33.0	6.0	-2.0
July	21.9	35.8	5.2	-2.2
August	22.6	35.0	6.4	-1.5
September	23.6	39.9	8.8	-1.5
October	24.6	42.0	11.0	0.5
November	26.3	44.6	12.9	3.9
December	28.1	44.1	14.7	6.2

Of particular concern is the combination of high temperatures and high humidity in summer. The contractor should be prepared for the possibility of closing the site in the event of the Discomfort / Humiture index rising above 105 in the interest of health and safety. At all time during the summer months, workers shall have access to a plentiful water supply to prevent dehydration.

#### **C4.27 MONTHLY CERTIFICATES**

The statement to be submitted by the contractor in terms of Clause 6.10 of the General Conditions of Contract shall consist of the original certificate plus two paper copies. The certificate shall be prepared in a form acceptable to the Employer and shall be on A4-size paper. The certificate shall be accompanied by an updated schedule of quantities showing the previous, current month and total quantities to date being claimed.

Payment will be made in terms of the relevant items in the Contract Data, Part C1, with specific reference to the items which qualify Clause 6.10 of the GCC.

#### **C4.28 MONTHLY SITE MEETINGS**

The contractor shall attend site meetings with representatives of the Employer and the Engineer at dates and times to be determined by the Employer. Such meetings will be held to evaluate the progress of the contract and to discuss matters pertaining to the contract which any of the parties represented may wish to raise, but not matters concerning the day-to-day running of the contract.

The Engineer shall prepare an agenda for the meetings and formal minutes which follow the agenda will be kept. The format will be subject to the approval of both the Employer and the Contractor. The Contractor shall prepare a monthly report prior to each meeting and present the report to the meeting. Information to be included in the report is given in Clause C4.29 below, with specific reporting sheets in Part C1-3 of this procurement document.

#### **C4.29 REPORTING REQUIREMENTS**

The Contractor shall submit to the Engineer a Monthly Progress Report. The Report shall be prepared prior to and be tabled at the monthly site meetings, and together with the monthly payment certificate. The information required shall include the following :

- Progress in comparison to approved programme of work as required in terms of Clause 5.6 of the General Conditions of Contract.
- Value of work done and estimated cash flow over the remainder of the contract period.
- Labour returns for the month as per Clause 4.10.2 of the General Conditions of Contract and the specific forms which are included in Part C1-3 of the project document.
- Plant schedule indicating the constructional plant on site as per Clause 7.1 of the General Conditions of Contract.
- Accident Reports in terms of Clause 8.5 of the General Conditions of Contract.
- Statement of all claims that are pending, all in terms of Sub-clause 10.1 of the General Conditions of Contract.
- Approved dayworks for the month.
- Approved rain days and any other delays during the month.
- A report from the Community Liaison Officer on any issues which have arisen and what is being done to resolve them.

**APPENDIX A**  
**LOCALITY PLAN**



**APPENDIX B**  
**EPWP FORMS**



**BENEFICIARY LIST**

Name of Contractor  
 Project Name  
 Project Number  
 Month:

Youth = 35yrs and less

Number of workers	Surname	Initials	Name	ID Number	Date of Birth	Male/Female	Has Disability (Y?N)	Is Youth (Y/N)	Education Level*	Date Start	Contact Number
1											
2											
3											
4											
5											
6											
7											
8											
9											
10											
11											
12											
13											
14											
15											
16											
17											
18											
19											

\_\_\_\_\_  
 Signature of CLO





**LABOUR MONTHLY SUMMARY SHEET**

Name of Contractor  
 Project Name  
 Project Number  
 Applicable Month

No of Working Days: Maximum including training = 23 days per month

Number of workers	Surname	Initials	First Name	ID Number	Birth Date	(M)ale / (F)emale	(D)isabled	Rate per day	Number of days worked this month	Number of training days this month	Total amount paid to beneficiary	Course name	Course Code
1											0		
2											0		
3											0		
4											0		
5											0		
6											0		
7											0		
8											0		
9											0		
10											0		
11											0		
12											0		
13											0		
14											0		
15											0		
16											0		
17											0		
18											0		
19											0		
20											0		
											0		
<b>20</b>	<b>Totals for month</b>								<b>0</b>	<b>0</b>	<b>0</b>		

Signature Consultant \_\_\_\_\_

## **APPENDIX C**

**MONTHLY REPORT FORMS TO BE COMPLETED BY THE CONTRACTOR**

PROVINCE OF THE EASTERN CAPE

DEPARTMENT OF TRANSPORT

**TENDER NO. SCMU10-24/25-0021**

**BRIDGE CONSTRUCTION FOR HAMBURG CONSTRUCTION PROJECT  
FOR A PERIOD OF 12 MONTHS**

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**MONTHLY REPORT FORMS TO BE COMPLETED BY CONTRACTOR**

**MATERIALS ON SITE – TRANSFER OF RIGHTS**

**TENDER NO. SCMU10-24/25-0021**

**BRIDGE CONSTRUCTION FOR HAMBURG CONSTRUCTION PROJECT FOR A PERIOD OF 12 MONTHS**

CONTRACTOR: .....

CLAIM FOR PAYMENT NO: ..... DATE: .....

I, the undersigned, .....  
in my capacity as .....  
of .....

(hereinafter referred to as “the TRANSFEROR”) (I having been duly authorised hereto by virtue of Resolution of the Board of Directors of the Transferor passed on the .....day of . . . . . 20. . . . .) hereby warrant that the materials and goods listed are the Transferor’s bona-fide property, ownership of which vests in the Transferor, and I hereby transfer, cede and assign all the Transferor’s rights, title and interest in and to the said materials and goods unto and in favour

of .....

(hereinafter referred to as “the TRANSFEREE”). Insofar as the Transferor retains actual control of the materials and goods, the right of ownership thereof passes to the Transferee by constitutum possessorium.

This transfer shall become effective upon conclusion of the Transferor receiving payment from the Transferee or from any other person on behalf of the Transferee for the materials and goods as Materials on Site (payment of retention money thereon excluded).

I further confirm that I am fully responsible for all materials and goods listed under this transfer of rights and that they have been insured adequately against all risks and will remain insured until they are built into or used in the permanent works and taken over by the Employer.

TOTAL VALUE OF CLAIM FOR MATERIALS ON SITE IN ACCORDANCE WITH THE ATTACHED LIST :

.....  
.....  
.....( R.....)

SIGNED: .....

DATE: .....

**MONTHLY PROGRESS REPORT**

<u>xxx District</u>		PROGRESS REPORT		<u>xxx 2020</u>								
SCMU10-20/21-00xx												
							PERIOD					
MUNICIPAL AREA	IN HOUSE OR OUTSOURCED PROJECT	ROAD NO.	SURFACED or GRAVEL	ACTIVITY CODE	ACTIVITY DESCRIPTION	UNIT	FROM	TO	PLANNED	ACTUAL	MMS NO.	COMMENTS
WEEK 1												
WEEK 2												
WEEK 3												
WEEK 4												
WEEK 5												
REPORT COMPILED BY:			DESIGNATION			SIGNATURE			DATE			
(PRINT NAME)												



THIS FORM IS TO BE COMPLETED QUARTERLY AND ON COMPLETION OF THE PROJECT

**APPENDIX D**  
**CONTRACTOR PERFORMANCE REPORT TEMPLATE**

\_\_\_\_\_  
M. Goxa  
Project Leader  
Date\_\_\_\_\_

Recommended / Not Recommend

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

\_\_\_\_\_  
H.Z Ngovela  
Programme Manager  
Date\_\_\_\_\_

Recommended / Not Recommended

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

\_\_\_\_\_  
Chairperson: Bid Specification Committee  
Date: \_\_\_\_\_