TENDER 20/2025		
Approved by Supply Chain Manager	**Version: 00**	**(309 - incl. BOQ Pages)**

CONTRACT DOCUMENT

FOR THE: REFURBISHMENT OF VARIOUS ROADS AND STORMWATER IN LANGEBERG MUNICIPALITY; FOR A PERIOD OF THREE (3) YEARS,

CLOSING DATE: 31 OCTOBER 2025

VOLUME 1: RETURNABLE DOCUMENT

NOTE:

- The Form of Offer and Acceptance (C1.1) is on **page 79** of this document
- Table 1: Preference Schedule (B-BBEE contribution) is on **page 69** of this document

Name of Tenderer	
Address (Physical)	
Contact Person	
Contact Number	
Email Address	
Amount (15% VAT Included)	
B-BBEE Status	

ISSUED BY:

THE MUNICIPAL MANAGER
LANGEBERG MUNICIPALITY
28 MAIN ROAD
ASHTON
6715
Tel: (023) 615 8000

LANGEBERG
MUNISIPALITEIT MUNICIPALITY MASIPALA

TENDER 20/2025

Tenders are hereby requested **REFURBISHMENT OF VARIOUS ROADS AND STORMWATER IN LANGEBERG MUNICIPALITY; FOR A PERIOD OF THREE (3) YEARS,** as specified in the bid document. Completed Bids, in sealed envelopes, clearly marked "**TENDER 20/2025 REFURBISHMENT OF VARIOUS ROADS AND STORMWATER IN LANGEBERG MUNICIPALITY; FOR A PERIOD OF THREE (3) YEARS",** should be placed in the tender box, at the Langeberg Municipal Office, 28 Main Road, Ashton, not later than **12:00 on 31 OCTOBER 2025** when the Bids will be opened in public. Late, faxed or e-mailed tenders will not be considered.

Tenderers must be registered with the CIDB in a class of construction works and have a grading designation equal to or higher than that determined in accordance with the sum tendered or a value determined in accordance with regulation 25 (7A) of the Construction Industry Development Regulations, 2004. It is estimated that tenderers will need a grading designation of 5CE OR HIGHER,

COMPULSORY CLARIFICATION MEETING:

A COMPULSORY CLARIFICATION MEETING WILL BE HELD ON THE 7 OCTOBER 2025 AT 11H00, AT THE ASHTON LIBRARY, 23 FAURE ST, ASHTON. NO LATE COMERS WILL BE ADMITTED AFTER 11H05.

PLEASE NOTE:

The official Bid document must be fully completed in black ink, all pages must be returned and the document should preferably be stapled or bound. Supporting documents must be submitted separately and must be stapled or bound.

The Langeberg Municipality may appoint "reserve bidders" and award the bid to the second- or third-ranked bidder during the adjudication stage if the highest-scoring bidder fails to perform during contract execution.

The lowest, or any tender, will not necessarily be accepted and council reserves the right to accept any tender. Tenders will be evaluated according to the Council's Supply Chain Management Policy and the 80/20 Preference Point system. The Supply Chain Management Policy can be viewed at Municipal Offices or www.langeberg.gov.za

A minimum functional assessment score of 70 points will apply to this contract

Bid documents are available from **26 SEPTEMBER 2025**, on the Langeberg Municipal website: www.langeberg.gov.za

Please refer written enquiries to Mr Carel Posthumus cposthumus@langeberg.gov.za

DP LUBBE
MUNICIPAL MANAGER
Private Bag X2,
Ashton, 6715

LANGEBERG MUNICIPALITY

TENDER 20/2025

REFURBISHMENT OF VARIOUS ROADS AND STORMWATER IN LANGEBERG MUNICIPALITY; FOR A PERIOD OF THREE (3) YEARS

General Tender Information

TENDER ADVERTISED	:	26 SEPTEMBER 2025
ESTIMATED CIDB CONTRACTOR GRADING DESIGNATION	:	5CE or higher
SITE VISIT/CLARIFICATION MEETING	:	7 OCTOBER 2025 at 11h00
VENUE FOR SITE VISIT/ COMPULSORY CLARIFICATION MEETING	:	ASHTON LIBRARY, 23 FAURE ST, ASHTON
CLOSING DATE	:	31 OCTOBER 2025
CLOSING TIME	:	12h00
TENDER BOX & ADDRESS	:	The Bid Box, at the Entrance of Municipal Office, 28 Main Road, Ashton, LANGEBERG Municipality.
	:	The Tender Document (which includes the Form of Offer and Acceptance) completed in all respects, plus any additional supporting documents required, must be submitted in a sealed envelope with the name and address of the tenderer, the tender No. and title and the closing date indicated on the envelope. The sealed envelope must be inserted into the appropriate official tender box before closing time at 12h00. If the tender offer is too large to fit into the abovementioned box or the box is full, please enquire at the reception for alternative instructions. The onus remains with the tenderer to ensure that the tender is placed in either the original box or as alternatively instructed.

TENDERERS MUST NOTE THAT WHEREVER THIS DOCUMENT REFERS TO ANY PARTICULAR TRADEMARK, NAME, PATENT, DESIGN, TYPE, SPECIFIC ORIGIN OR PRODUCER, SHALL BE DEEMED TO BE ACCOMPANIED BY THE WORDS "OR EQUIVALENT"

PART A (MBD1)
INVITATION TO BID

THE FOLLOWING PARTICULARS MUST BE FURNISHED (FAILURE TO DO SO WILL RESULT IN YOUR OFFER BEING DISQUALIFIED)

YOU ARE HEREBY INVITED TO BID FOR REQUIREMENTS OF THE LANGEBERG MUNICIPALITY					
BID NUMBER:	**20/2025**	**CLOSING DATE:**	**31 OCTOBER 2025**	**CLOSING TIME:**	**12H00**
DESCRIPTION:	**REFURBISHMENT OF VARIOUS ROADS AND STORMWATER IN LANGEBERG MUNICIPALITY; FOR A PERIOD OF THREE (3) YEARS**				
THE SUCCESSFUL BIDDER WILL BE REQUIRED TO FILL IN AND SIGN A WRITTEN CONTRACT FORM.					

BID RESPONSE DOCUMENTS MAY BE DEPOSITED IN THE BID BOX SITUATED AT:
ENTRANCE OF THE MUNICIPAL OFFICES 28 Main Road Ashton 6715

SUPPLIER INFORMATION			
NAME OF BIDDER			
POSTAL ADDRESS			
STREET ADDRESS			
TELEPHONE CODE & NUMBER			
CELL PHONE NUMBER			
FACSIMILE CODE & NUMBER			
E-MAIL ADDRESS			
VAT REGISTRATION NUMBER			
TAX PIN		TAX REFERENCE NUMBER	
CSD No			
ORIGINAL AND VALID TAX CLEARANCE CERTIFICATE / TSC PIN SUBMITTED? YES ☐ NO ☐			
A B-BBEE STATUS LEVEL VERIFICATION CERTIFICATE MUST BE SUBMITTED IN ORDER TO QUALIFY FOR PREFERENCE POINTS FOR B-BEE. NOTE A CERTIFIED COPY OR ORIGINAL IS COMPULSORY			
B-BBEE STATUS LEVEL VERIFICATION CERTIFICATE SUBMITTED? (MBD 6.1) YES ☐ NO ☐ IF YES, WHO WAS THE CERTIFICATE ISSUED BY? (Tick applicable box) A VERIFICATION AGENCY ACCREDITED BY SOUTH AFRICAN NATIONAL ACCREDITATION SYSTEM (SANAS) ☐ or A SWORN AFFIDAVIT FOR EME'S AND QSE'S ☐			
RECENT MUNICIPAL ACCOUNT OF COMPANY (NOT OLDER THAN 90 DAYS) **MUST** BE ATTACHED			
RECENT MUNICIPAL ACCOUNTS OF ALL THE DIRECTORS/ SHAREHOLDERS **MUST** BE ATTACHED			
IF LEASING/RENTING/LODGING – ATTACHED LATEST VALID COPY OF AGREEMENT **IF NO PROPERTY REGISTERED IN YOUR NAME SUBMIT AN AFFIDAVIT CONFIRMING THIS.**			

BID PRICE OFFERED **NB: NO BIDS WILL BE CONSIDERED FROM PERSONS IN THE SERVICE OF THE STATE** **(see definition on MBD 4 attached)**	
TOTAL BID PRICE (INCL 15% VAT)	

ANY ENQUIRIES REGARDING THE BIDDING PROCEDURE MAY BE DIRECTED TO:

LANGEBERG MUNICIPALITY
Contact Person: Mr M Norman
Tel: 023 626 8200
Fax: 023 615 1563
E-mail: mnorman@langeberg.gov.za

SIGNED ON BEHALF OF TENDERER:	
NAME, SURNAME & POSITION	
DATE	

YOURS FAITHFULLY,

DP LUBBE
MUNICIPAL MANAGER
MUNICIPAL OFFICES
PRIVATE BAG X2
ASHTON
6715

TEL: 023 615 8000

PART B (MBD 1)
TERMS AND CONDITIONS FOR BIDDING

1. BID SUBMISSION:

1.1 BIDS MUST BE DELIVERED BY THE STIPULATED TIME TO THE CORRECT ADDRESS. LATE BIDS WILL NOT BE ACCEPTED FOR CONSIDERATION.
1.2 **ALL BIDS MUST BE SUBMITTED ON THE OFFICIAL FORMS PROVIDED – (NOT TO BE TYPED) OR ONLINE**
1.3 THIS BID IS SUBJECT TO THE PREFERENTIAL PROCUREMENT POLICY FRAMEWORK ACT AND THE PREFERENTIAL PROCUREMENT REGULATIONS, 2022, THE GENERAL CONDITIONS OF CONTRACT (GCC) AND, IF APPLICABLE, ANY OTHER SPECIAL CONDITIONS OF CONTRACT.

2. TAX COMPLIANCE REQUIREMENTS

2.1 BIDDERS MUST ENSURE COMPLIANCE WITH THEIR TAX OBLIGATIONS.
2.2 BIDDERS ARE REQUIRED TO SUBMIT THEIR UNIQUE PERSONAL IDENTIFICATION NUMBER (PIN) ISSUED BY SARS TO ENABLE THE ORGAN OF STATE TO VIEW THE TAXPAYERS PROFILE AND TAX STATUS.
2.3 APPLICATION FOR THE TAX COMPLIANCE STATUS (TCS) CERTIFICATE OR PIN MAY ALSO BE MADE VIA E-FILING. IN ORDER TO USE THIS PROVISION, TAXPAYERS WILL NEED TO REGISTER WITH SARS AS E-FILERS THROUGH THE WEBSITE WWW.SARS.GOV.ZA
2.4 FOREIGN SUPPLIERS MUST COMPLETE THE PRE-AWARD QUESTIONNAIRE IN PARAGRAPH 3 BELOW
2.5 BIDDERS MAY ALSO SUBMIT A PRINTED TCS CERTIFICATE TOGETHER WITH THE BID.
2.6 IN BIDS WHERE CONSORTIA / JOINT VENTURES / SUB-CONTRACTORS ARE INVOLVED; EACH PARTY MUST SUBMIT A SEPARATE TCS CERTIFICATE / PIN / CSD NUMBER.
2.7 WHERE NO TCS IS AVAILABLE BUT THE BIDDER IS REGISTERED ON THE CENTRAL SUPPLIER DATABASE (CSD), A CSD NUMBER MUST BE PROVIDED.

3. QUESTIONNAIRE TO BIDDING FOREIGN SUPPLIERS

3.1 IS THE ENTITY A RESIDENT OF THE REPUBLIC OF SOUTH AFRICA (RSA)? ☐ YES ☐ NO
3.2 DOES THE ENTITY HAVE A BRANCH IN THE RSA? ☐ YES ☐ NO
3.3 DOES THE ENTITY HAVE A PERMANENT ESTABLISHMENT IN THE RSA? ☐ YES ☐ NO
3.4 DOES THE ENTITY HAVE ANY SOURCE OF INCOME IN THE RSA? ☐ YES ☐ NO
3.5 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 ABOVE.

NB: FAILURE TO PROVIDE ANY OF THE ABOVE PARTICULARS MAY RENDER THE BID INVALID.
NO BIDS WILL BE CONSIDERED FROM PERSONS IN THE SERVICE OF THE STATE

SIGNED ON BEHALF OF TENDERER:	
NAME, SURNAME & POSITION	
DATE	

SM 1

CHECK LIST

This list is to assist all bidders to submit complete proposals. Bidders are to check the following points before the submission of their proposals:		
1	All pages of the document have been read by the contractor and initialled.	☐
2	Any discrepancy and/or misunderstanding is cleared with the relevant officials.	☐
3	All pages requiring information have been **completed in black ink.**	☐
4	The Schedule of Quantities has been checked for arithmetic correctness.	☐
5	Totals from each sub section of the Schedule of Quantities have been carried forward to the summary page and done so correctly.	☐
6	The total from the summary page has been carried forward to the Form of Offer.	☐
7	Surety details where applicable have been included in the proposal.	☐
8	All sections requiring information have been completed.	☐
9	Bidder ensured that all documents is properly completed and signed	☐
10	The contractor has complied with the proposal prerequisites.	☐
11	The document is submitted before 12h00 on the due date at the designated bid box of Langeberg Municipality.	☐

SIGNED ON BEHALF OF TENDERER:	
NAME, SURNAME & POSITION	
DATE	

LANGEBERG MUNICIPALITY

TENDER 20/2025

REFURBISHMENT OF VARIOUS ROADS AND STORMWATER IN LANGEBERG MUNICIPALITY; FOR A PERIOD OF THREE (3) YEARS

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LANGEBERG MUNICIPALITY
TENDER 20/2025

REFURBISHMENT OF VARIOUS ROADS AND STORMWATER IN LANGEBERG MUNICIPALITY; FOR A PERIOD OF THREE (3) YEARS

T1.1	Tender Notice and Invitation to Tender

LANGEBERG MUNICIPALITY | UMASIPALA | MUNISIPALITEIT
Private Bag X2, Ashton, 6715
☎ (023) 615 8000 🖷 (023) 615 1563 @ cposthumus@langeberg.gov.za
🖳 www.langeberg.gov.za

TENDER NOTICE AND INVITATION TO BID			
DEPARTMENT INFRASTRUCTURE			
ADVERTISED IN	MUNICIPAL WEBSITE, CAPE ARGUS		
BID NO:	20/2025	**PUBLISHED DATE:**	26 SEPTEMBER 2025
Bids are hereby invited for (Tender Description)	REFURBISHMENT OF VARIOUS ROADS AND STORMWATER IN LANGEBERG MUNICIPALITY; FOR A PERIOD OF THREE (3) YEARS		
Closing Time and Date	No later than 12H00	On the Date	24 OCTOBER 2025
Compulsory Site Meeting	7 October 2025 @ 11:00 in Ashton Library , 23 Faure St, Ashton.	**CIDB GRADING**: 5CE or higher	
Bids will be opened immediately thereafter, in public at the Council Chambers of LANGEBERG Municipality, 28 Main Road, Ashton.			
AVAILABILITY OF BID DOCUMENTS			
Tender Documents will be downloadable only form www.langeberg.gov.za			
Date Available	26 SEPTEMBER 2025		

BID RULES

a. Bids are to be completed in accordance with the conditions and bid rules contained in the bid document and supporting documents must be placed in a sealed envelope and externally endorsed WITH THE NAME AND ADDRESS OF THE TENDERER, THE TENDER NO. AND TITLE AND THE CLOSING DATE, and be deposited in the Bid Box, at the Supply Chain Management Unit, Langeberg Municipality, 28 Main Street, Ashton.

b. Bids may only be submitted on the bid documentation issued by the Municipality.

c. The Langeberg Municipality does not bind itself to accept the lowest or any tender and reserves the right to accept any tender, as it may deem expedient. Tenders will be evaluated according to the Council's Supply Chain Management Policy and the 80/20 Preference Point system. The Supply Chain Management Policy can be viewed at Municipal Offices or www.langeberg.gov.za

d. Tenderers who are not yet registered are required to register on the Municipality's Accredited Supplier Database (CSD). Online registration to be completed on the CSD registration platform, website https://secure.csd.gov.za.

e. Pre-qualification criteria for preferential procurement is applicable to the tender.

Tenders shall be evaluated in terms of the latest Langeberg Municipality Supply Chain Management Policy and the Preferential Procurement Regulations.		**Bidders may claim preference points in terms of their B-BBEE status level of contribution.**	
Preferential Procurement Point System Applicable	80/20	**Local Content Requirement**	N/A
Compulsory site Meeting/ Information Session	Yes	**Validity Period**	90 days
TECHNICAL ENQUIRIES:		**BIDDING PROCEDURE REQUIREMENTS & ENQUIRIES:**	

Section	Municipal Civil Department	**Section**	Supply Chain Management
Contact Person	Mr M Norman	**Contact Person**	Mr S Ngcongolo
Tel:	E-mail Enquiries Only	**Tel:**	E-mail Enquiries Only
E-mail	mnorman@langeberg.gov.za	**E-mail**	SNgcongolo@langeberg.gov.za

Authorised by:
DP LUBBE
MUNICIPAL MANAGER
NOTICE NR: T44/2023

Private Bag X2
ASHTON, 6715
TEL: 023 626 8000

LANGEBERG MUNICIPALITY

TENDER 20/2025

REFURBISHMENT OF VARIOUS ROADS AND STORMWATER IN LANGEBERG MUNICIPALITY; FOR A PERIOD OF THREE (3) YEARS

T1.2 Tender Data

The conditions of tender are the Standard Conditions of Tender as contained in Annex C of Government Gazette No. 42622 of 8 August 2019, Construction Industry Development Board (CIDB) Standard for Uniformity in Construction Procurement. (see www.cidb.org.za) which are reproduced without amendment or alteration for the convenience of tenderers as an Annex to this Tender Data.

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 in the Standard Conditions of Tender to which it mainly applies.

The following variations, amendments and additions to the Standard Conditions of Tender as set out in the Tender Data below shall apply to this tender:

Clause number	**Tender Data**
C.1	**General**
C.1.1	Actions
C.1.1.1	*Add the following:* **The parties agree that this tender, its evaluation and acceptance and any resulting contract shall also be subject to the Employer's Supply Chain Management Policy ('SCM Policy') that was applicable on the date the tender was advertised, save that if the Employer adopts a new SCM Policy which contemplates that any clause therein would apply to the contract emanating from this tender, such clause shall also be applicable to that contract. Please refer to this document contained on the Employer's website.** **Abuse of the supply chain management system is not permitted and may result in the tender being rejected, cancellation of the contract, restriction of the supplier, and/or the exercise by the Employer of any other rights and remedies available to it as described in the SCM Policy.** The Employer is the LANGEBERG MUNICIPALITY, represented Mr F. Harris as the Employer's Agent.
C.1.2	Tender Documents *Add the following:* **The following documents form part of this contract:** **VOLUME 1:** The Tender Document issued by the employer (this document), in which is bound: **THE TENDER** **Part T1: Tendering Procedure** T1.1 Tender notice and invitation to tender T1.2 Tender data **Part T2: Returnable Documents** T2.1 List of returnable documents T2.2 Returnable schedules

THE CONTRACT

Part C1: Agreement and contract data

C1.1 Form of Offer and Acceptance
C1.2 Contract Data (data provided by the Contractor) – Part 1
C1.2 Contract Data (data provided by the Employer) – Part 2
C1.3 Form of Performance Guarantee
C1.4 Form of Advance Payment Guarantee
C1.5 Occupational Health and Safety Agreement
C1.6 Protection of the Environment Declaration
C1.7 Insurance Broker's Warranty

Part C2: Pricing Data

C2.1 Pricing Assumptions
C2.2 Bills of Quantities

Part C3: Scope of Work

C3.1 Description of the Works
C3.2 Engineering/Design
C3.3 Procurement
C3.4 Construction

Part C4: Site information

C4 Site information

Part C5: LANGEBERG Municipality Supply Chain Policy

C5 Supply Chain Policy

Part C6: Health and Safety Specifications

C6 Health and Safety Tender Specifications

Part C7: Drawings

C7 Drawings

Volume 1 is deemed the "Returnable Document" which must be returned to the Employer in terms of submitting a tender offer.

In addition to the above, the following further documents are part of the tender:

VOLUME 2: The General Conditions of Contract for Construction Works, Third Edition, 2015, prepared by the South African Institution of Civil Engineering (SAICE). 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, e-mail: civilinfo@saice.org.za.

VOLUME 3: The SANS Standardised Specifications for Civil Engineering Construction prepared by Standards South Africa. These publications are available, and tenderers must obtain copies at their own cost from Standards South Africa, Private Bag X191, PRETORIA, 0001.

VOLUME 4: *Model Preambles for Trades (2008 Edition). This document is published by and is available from the Association of South African Quantity Surveyors, P.O. Box 3527, Halfway House, 1685. Telephone (011) 315 4140. E-mail: administration@asaqs.co.za*

Volumes 2, 3 & 4 may also be inspected, by appointment, at the offices of the Employer's agent during normal office hours.

C.1.4 Communication and employer's agent

Delete the first sentence of the clause and replace with the following:

Verbal or any other form of communication, from the Employer, its employees, agents or advisors during site visits/clarification meetings or at any other time prior to the award of the Contract, will not be regarded as binding on the Employer, unless communicated by the Employer in writing to suppliers by its Municipal Supply Chain Manager or his nominee.

The Employer's agent is:

Company:	Langeberg Municipality
Name:	Mr. M Norman
Address:	Ashton Office, Faure Street, Ashton
Tel:	(023) 615 8000
E-mail:	mnorman@langeberg.gov.za

C.1.5 Cancellation and Re-Invitation of Tenders

Remove C.1.5.1, C.1.5.2 & C.1.5.3 and replace with the following:

C.1.5.4.1 In the event that, in the application of the 80/20 preference point system as stipulated in the tender documents, all tenders received exceed the estimated Rand value of R50 000 000, the tender invitation must be cancelled.

C.1.5.4.2 In the event that, in the application of the 90/10 preference point system as stipulated in the tender documents, all tenders received are equal to, or below R50 000 000 the tender must be cancelled.

C.1.5.4.3 An organ of state which has cancelled a tender invitation as contemplated in sub-regulations (1) and (2) must re-invite tenders and must, in the tender documents stipulate the preference point system to be applied.

C.1.5.4.4 An organ of state may, prior to the award of a tender, cancel a tender if -

a) due to changed circumstances, there is no longer need for the goods or services tendered for; or

b) funds are no longer available to cover the total envisaged expenditure; or

c) no acceptable tenders are received.

C.1.6.2 Competitive negotiation procedure

Add the following between C.1.6.2 and C.1.6.2.1:

A competitive negotiation procedure will **not** be followed.

C.1.6.3 Proposal procedure using the two-stage system

Add the following between C.1.6.3 and C.1.6.3.1:

A two-stage system will **not** be followed.

Add the following Clauses (C.1.6.4, C1.7) after Clause C.1.6.3 and before clause C.2.

C.1.6.4 Objections, complaints, queries and disputes/ Appeals in terms of Section 62 of the Systems Act/ Access to court

C.1.6.4.1 Disputes, objections, complaints, and queries

In terms of Regulations 49 and 50 of the Local Government: Municipal Finance Management Act, 56 of 2003 – Municipal Supply Chain Management Regulations (Board Notice 868 of 2005):

a) Persons aggrieved by decisions or actions taken by the ***Langeberg Municipality*** in the implementation of its supply chain management system, may lodge within 14 days of the decision or action, a written objection or complaint or query or dispute against the decision or action.

C.1.6.4.2 Appeals

a) In terms of Section 62 of the Local Government: Municipal Systems Act, 32 of 2000 a person whose rights are affected by a decision taken by the ***Langeberg Municipality***, may appeal against that decision by giving written notice of the appeal and reasons to the Municipal Manager within 21 days of the date of the notification of the decision.

b) An appeal must contain the following:
   i) Must be in writing
   ii) It must set out the reasons for the appeal
   iii) It must state in which way the Appellant's rights were affected by the decision;
   iv) It must state the remedy sought; and
   v) It must be accompanied with a copy of the notification advising the person of the decision

c) The relevant ***Langeberg Municipality*** appeal authority must consider the appeal and **may confirm, vary or revoke** the decision that has been appealed, but no such revocation of a decision may detract from any rights that may have accrued as a result of the decision.

C.1.6.4.3 Right to approach the courts and rights in terms of Promotion of Administrative Justice Act, 3 of 2000 and Promotion of Access to Information Act, 2 of 2000
The sub-clauses above do not influence any affected person's rights to approach the High Court at any time or its rights in terms of the Promotion of Administrative Justice Act and Promotion of Access to Information Act.

C.1.6.4.4 All requests referring to sub clauses C.1.6.4.1; C.1.6.4.2 and C.1.6.4.3 must be submitted in writing to:
The Municipal Manager - Langeberg Municipal Offices
Via hand delivery at: Langeberg Municipality, 28 Main Street, Ashton
Via post at: Private Bag X2, Ashton, 6715
Via fax at: (023) 615 1563
Via email at: mm@langeberg.gov.za

C.1.7 National Treasury Web Based Central Supplier Database (CSD) Registration
Tenderers are required to be registered on the National Treasury Web Based Central Supplier Database (CSD) as a service provider. Tenderers must register as such upon being requested to do so in writing and within the period contained in such a request, failing which no orders can be raised or payments processed from the resulting contract. In the case of Joint Venture partnerships this requirement will apply individually to each party of the Joint Venture.

Tenderers who wish to register on the National Treasury Web Based Central Supplier Database (CSD) may do so via the web address **https://secure.csd.gov.za**.

It is each tenderer's responsibility to keep all the information on the National Treasury Web Based Central Supplier Database (CSD) updated.

C.2 Tenderer's obligations

C.2.1.1 *Delete the content of this clause and replace with the following:*
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.

Add the following clauses after C.2.1.2 and before C2.2:

C.2.1.3 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.

C.2.1.4 Only those tenders that satisfy the following criteria will be declared responsive:

C.2.1.4.1 Construction Industry Development Board (CIDB) Registration
Only those tenderers who are registered with the CIDB, or capable of being so prior to the evaluation of submissions, 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 or GB class of construction work, are eligible to have their tenders evaluated. Tenderers must obtain such active status upon being requested to do so in writing and within the period contained in such a request, failing which their tenders will be declared non-responsive.

Joint Ventures are eligible to submit tenders provided that:

a) every member of the joint venture is registered with an active status with the CIDB;
b) the lead partner has a contractor grading designation of not lower than one level below the required grading designation in the 5CE or higher class of construction work; and
c) the combined contractor grading designation calculated in accordance with the Construction Industry Development Regulations is equal to or higher than a contractor grading designation determined in accordance with the sum tendered for a CE class of construction work or a value determined in accordance with Regulation 25 (1B) or 25 (7A) of the Construction Industry Development Regulations.

Contractor grading designations and associated parameters as follows:

Contractor Grading Designation	Tender Value Range designation	Maximum value of contract that a contractor is considered capable of performing (R)
1 (class of construction works)	1	500 000
2 (class of construction works)	2	1 000 000
3 (class of construction works)	3	3 000 000
4 (class of construction works)	4	6 000 000
5 (class of construction works)	5	10 000 000
6 (class of construction works)	6	20 000 000
7 (class of construction works)	7	60 000 000
8 (class of construction works)	8	200 000 000
9 (class of construction works)	9	No Limit

For more details on classes of construction work refer to the CIDB website.

C.2.1.4.2 Compliance with requirements of LANGEBERG MUNICIPALITY SCM Policy and procedures

Only those tenders that are compliant with the requirements below will be declared responsive:

a) A completed **Compulsory Enterprise Questionnaire** to be provided (applicable schedule to be completed);
b) A completed **Certificate of Authority for Companies/Partnerships/Joint Ventures/Consortiums** to be provided authorising the tender to be made and the signatory to sign the tender on the partnership /joint venture/consortium's behalf (applicable schedule to be completed);
c) A copy of the partnership / joint venture / consortium agreement to be provided;
d) A completed **Declaration of Interest – State Employees** to be provided and which does not indicate any non-compliance with the legal requirements relating to state employees (applicable schedule to be completed);
e) A completed **Declaration – Conflict of Interest** and **Declaration of Bidder's past Supply Chain Management Practices** to be provided and which does not indicate any conflict or past practises that renders the tender non-responsive based on the conditions contained thereon (applicable schedules to be completed);
f) A completed **Certificate of Independent Bid Determination** to be provided and which does not indicate any non-compliance with the requirements of the schedule (applicable schedule to be completed);
g) The tenderer (including any of its directors or members), has not been restricted in terms of abuse of the Supply Chain Management Policy;
h) The tenderer's tax matters with SARS are in order, or the tenderer is a foreign supplier that is not required to be registered for tax compliance with SARS;
i) The tenderer is not an advisor or consultant contracted with the Employer whose prior or current obligations creates any conflict of interest or unfair advantage;
j) The tenderer is not a person, advisor, corporate entity or a director of such corporate entity, involved with the bid specification committee;
k) A completed Authorisation for the Deduction of Outstanding Amounts Owed to the Langeberg Municipality to be provided and which does not indicate any details that renders the tender non-responsive based on the conditions contained thereon (applicable schedules to be completed);
l) The tenderer (including any of its directors or members), has not been found guilty of contravening the Competition Act 89 of 1998, as amended from time to time;
m) The tenderer (including any of its directors or members), has not been found guilty on any other basis listed in the SCM Policy.

C.2.1.4.3 Minimum score for functionality based on a pre-qualification inspection

Please note that points scored for Quality (functionality) will not have an influence on the total tender evaluation points and will therefore not affect the ranking of the tenderers, it will only be regarded as a pre-qualification. The minimum points required to be eligible to tender is 70 out of a 100.

THE CRITERIA to be applied in evaluating the proposal is set out in the table below:

Calculate the points for functionality according to the following formula:

$$P_s = S_o/M_s \times A_p$$

Where P_s = Percentage scored for functionality by bid under consideration
S_o = Total score of bid/proposal under consideration
M_s = Maximum possible score = 500
A_p = percentage allocated for functionality = 100

Total points by bidder on functionality:

i) $P_{s(Criterion\ 1)}$ = (Indicator allocated/scored out of 5) x weight
ii) $P_{s(Criterion\ 2)}$ = (Indicator allocated/scored out of 5) x weight
$P_{s(TOTAL)} = [(P_{s(Criterion\ 1)} + P_{s(Criterion\ 2)}) / 5] \times 100$

Criteria can be amended to suit project complexity or omitted if not applicable.

Criterion	Weight
1) Relevant Experience (Returnable Schedule 14)	50%
2) Construction manager Experience (Returnable Schedule 15)	50%
Total	**100%**

EVALUATION CRITERION 1

Tenderers must have successfully **completed** (please note that current projects will not be included in the evaluation) at least 5 projects of a similar scope and nature in the last 10 years **with a minimum value of R 5 000 000.00 per project** to score full marks on this criterion. Refer to the table below for a measurement of how points will be awarded against this criterion.

A detailed list of successfully completed projects must be completed in/attached to **Schedule 14**.

Projects of a similar scope and nature is regarded as:

- Asphalt Road Construction
- Interlocking Paving with Kerbing, Channeling and Stormwater

Please note that no tenderer will be contacted to clarify any experience or construction equipment, or plant submitted with this bid. If insufficient information is shown, the tenderer will not be contacted for clarification.

1. RELEVANT EXPERIENCE	
INDICATOR	**Evaluation Criteria for Relevant Experience:** (number of similar projects completed by the contractor in the last 10 years)
0	The tenderer has completed zero projects in the last 10 years
1	The tenderer has completed only 1 project in the last 10 years
2	The tenderer has completed exactly 2 projects in the last 10 years
3	The tenderer has completed exactly 3 projects in the last 10 years
4	The tenderer has completed exactly 4 projects in the last 10 years
5	The tenderer has completed 5 or more projects in the last 10 years

EVALUATION CRITERION 2

Detailed, project specific CV's to be included in **Schedule 15** of the Returnable Documents. Failure to do so during tender phase will lead to disqualification of tenderer.

Construction managers must have successfully **completed** (please note that current projects will not be included in the evaluation) at least 5 projects of a similar scope and nature in the last 10 years to score full marks on this criterion. Refer to the table below for a measurement of how points will be awarded against this criterion.

Projects of a similar scope and nature is regarded as:

- Asphalt Road Construction
- Interlocking Paving with Kerbing, Channeling and Stormwater

If, during construction, the contractor wishes to replace the construction manager, the contractor will apply in writing to the Engineer as per clause 4.12 of the GCC 2015. Only similarly experienced and competent construction managers will be considered.

2. CONSTRUCTION MANAGER	
INDICATOR	**Evaluation Criteria for Construction manager:** (number of similar projects completed by the Construction manager in the last 10 years)
0	The Construction manager has completed zero projects in the last 10 years
1	The Construction manager has completed only 1 project in the last 10 years
2	The Construction manager has completed exactly 2 projects in the last 10 years
3	The Construction manager has completed exactly 3 or more projects in the last 10 years
4	The Construction manager has completed exactly 4 or more projects in the last 10 years
5	The Construction manager has completed 5 or more projects in the last 10 years

The functionality proposal will be evaluated individually on score sheets, by a representative evaluation panel according to the evaluation criteria indicated above. All service providers who scored less than 70 out of 100 points for functionality will not be considered further. At least 3 evaluators will evaluate the quality schedules separately.

NB: Points scored for Quality (functionality) will not have an influence on the total tender evaluation points.

Where the entity tendering is a Joint Venture the tender must be accompanied by a statement describing exactly what aspects of the work will be undertaken by each party to the joint venture (appended to Schedule 3, Part T2.2: Returnable Schedules).

C.2.1.4.4.3 A copy of the authorisation letter must be submitted together with the bid document at the closing date and time of the bid.

C.2.1.4.5 Compulsory clarification meeting

Tenderers are required to attend a compulsory clarification meeting at which they may familiarise themselves with aspects of the proposed work, services or supply and pose questions.
Details of the meeting(s) are stated in the General Tender Information.
Only those tenders submitted by tenderers whose attendance at this meeting have been recorded, will be declared responsive.

C.2.1.4.6 Good standing with Bargaining Council

Only those tenders submitted by tenderers who are in good standing with the **Bargaining Council for the Civil Engineering Industry (BCCEI)** at the time of the tender award will be declared responsive. Tenderers must attach such proof to the schedule titled **Declaration in Respect of Compliance with Labour Legislation** or obtain such upon being requested to do so in writing and within the period contained in such a request, failing which their tenders will be declared non-responsive.

C.2.1.4.7 Good standing with SARS/Tax Clearance

Bidders are required to submit their unique personal identification number (pin) issued by SARS to enable the organ of state to view the taxpayer's profile and tax status. Application for the tax compliance status (TCS) certificate or pin may also be made via e-filing. In order to use this provision, taxpayers will need to register with SARS as e-filers through the website www.SARS.gov.za. Bidders may also submit a printed TCS certificate together with the bid (valid and original). In Bids where

Consortia/Joint Venture/Sub-contractors are involved each party must submit a separate and Original Valid Tax Clearance Certificate.

C.2.3 Check documents

Delete the clause content and replace with the following:
The Tenderer should check the tender documents on receipt for completeness, missing or duplicated pages, indistinct figures or writing and any obvious errors. The Tenderer must notify the Employer's agent at once of any such problems identified

C.2.7 Clarification meeting

Add the following after the second sentence:
The arrangements for the site visit/clarification meeting are as stated on the General Tender Information page and in the Responsiveness Criteria (if applicable). Failure to provide proof of attendance of this clarification meeting will result in disqualification of the tender. The applicable schedule in the returnable documents must be signed by employer **or** employer's agent as proof of attendance or the signed (signed by attending tenderers) attendance register should be attached to this schedule.

Tenderers should be represented at the clarification meeting by a person who is suitably qualified and experienced to comprehend the implications of the work involved. The employer or employer's agent cannot be held liable for any information discussed during the Clarification Meeting not correctly carried forward to the authorised person signing the tender document.

C.2.8 Seek Clarification

Add the following after the first sentence:
The tenderer warrants that it has:

a) inspected the Specifications and read and fully understood the Conditions of Contract.
b) read and fully understood the whole text of the Specifications and Price Schedule and thoroughly acquainted itself with the nature of the goods proposed and generally of all matters which may influence the Contract.
c) 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 Municipal or other Authorities in regard to access and transport of materials, plant and construction equipment to and from the site(s) and made the necessary provisions for any additional costs involved thereby.
d) requested the Employer to clarify the requirements contained in the Specifications and Price Schedule, the exact meaning or interpretation of which is not clearly intelligible to the tenderer.
e) received any notices to the tender documents which have been issued in accordance with the Employer's SCM Policy.

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.

C.2.11 Alterations to documents

Delete the first sentence and replace with the following:
Do not make any alterations or additions to the tender documents, except to comply with instructions issued by the employer in writing, or necessary to correct errors made by the tenderer.

C.2.12 Alternative tender offers

C.2.12.1 *Add the following to C.2.12.1 at the end of the first sentence:*
If a tenderer wishes to submit an alternative tender offer, he shall do so as a separate offer on a separate set of tender documents. The alternative tender offer shall be submitted in a separate sealed envelope on a separate Form of Offer, both clearly marked "Alternative Tender" in order to distinguish it from the main tender offer.

While it is not necessary to duplicate all parts of the main tender offer, the alternative tender offer shall be supported by the following documents as applicable:

a) the schedule that compares the alternative(s) offered with the requirements of the issued tender documents
b) preliminary designs, calculations, drawings and all other pertinent technical information and characteristics must be submitted with the alternative tender offer, in order to enable the Employer to evaluate the efficacy of the alternatives proposed
c) revised Bills of Quantities, or parts thereof, highlighting the changes made, together with a revised Summary, the total of which has been carried to the Form of Offer
d) details of any proposed amendments to the Pricing Assumptions

An alternative of the highest ranked acceptable main tender offer that is priced higher than the main tender offer may be recommended for award, provided that the ranking of the alternative tender -offer is higher than the ranking of the next ranked acceptable main tender offer.

The Employer's costs in confirming the acceptability of the alternative offer will be, *inter alia*, considered in considering the alternative offer.

The Employer will not be bound to consider alternative tenders and shall have sole discretion in this regard.

If the alternative is accepted, the Contractor shall accept full responsibility that the alternative offer complies in all respects with the Employer's standards and requirements.

C.2.13 Submitting a tender offer

Add the following to C.2.13.1 at the end of the first sentence:

C.2.13.1 Where the tendering entity is a joint venture it is recommended that the standard CIDB Joint Venture Agreement be used.

Delete the following word from C.2.13.2 and add the following sentence after the first sentence:

C.2.13.2 Delete "either electronically (if they were issued in electronic format) or". No electronic submissions will not be accepted unless specifically requested by the Employer in writing.

Add the following to C.2.13.3:

C.2.13.3 Parts of each tender offer communicated on paper shall be submitted as an original, plus 0 (nil) copies.

Add the following after the first sentence of C.2.13.4:

C.2.13.4 The tender shall be signed by a person duly authorised to do so. Tenders submitted by joint ventures of two or more firms shall be accompanied by the document of formation of the joint venture, authenticated by a notary public or other official deputed to witness sworn statements, in which is defined precisely the conditions under which the joint venture will function, its period of duration, the persons authorised to represent and obligate it, the participation of the several firms forming the joint venture, and any other information necessary to permit a full appraisal of its functioning.

Delete the clause and replace with the following.

C.2.13.5 The tender submission details are all described on the General Tender Information page.

The Employer's address for delivery of tender offers and identification details to be shown on each tender offer package are:

Location of tender box:	Langeberg Municipal Office
Physical address:	Langeberg Municipality, Main Street 28, Ashton
Identification details:	Tender number: 20/2025
Title of tender:	REFURBISHMENT OF VARIOUS ROADS AND STORMWATER IN LANGEBERG MUNICIPALITY; FOR A PERIOD OF THREE (3) YEARS

Sealed tenders with the name and address of the tenderer, the tender No. and title and the closing date indicated on the envelope, must be placed in the appropriate official tender box at the abovementioned address.

Add the following to C.2.13.6:

C.2.13.6 A two-envelope procedure will **not** be followed (C.3.5).

Add the following new Clauses after C.2.13.9 and before C.2.14:

C.2.13.10 By signing the offer part of C1.1 Form of Offer and Acceptance the tenderer declares that all information provided in the tender submission is true and correct.

C.2.13.11 The Employer shall not formally issue tender documents in electronic format and shall only issue tender documents in hardcopy. An electronic version of the issued tender documents, or elements thereof, may be made available to the tenderer at the Employer's discretion, upon written request in terms of this clause, subject to the following:

a) No Electronic copies of the issued tender documents including BOQ, or parts thereof, will be provided to tenderers.
b) The Employer shall not accept tenders submitted in electronic format. Only those tenders that have been completed on the issued hard copy tender document shall be considered.
c) Where Addenda have been issued which amend the Bills of Quantities, then the printed Bills of Quantities shall take these into account. The pages of the issued Bills of Quantities should not be removed from the tender document.
d) The Employer accepts no responsibility or liability arising from any reliance on or use of the electronic version provided in terms of this clause. Tenderers are alerted to the fact that electronic versions of the tender documents may not reflect any notices or addenda that amend the tender document.
e) Any non-compliance with these provisions, including effecting any unauthorised alterations to the tender documents as contemplated in C.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.

C.2.15 Closing time

Add the following to C.2.15.1 after the first sentence:

C.2.15.1 The closing time for submission of tender offers is as stated in the Tender Notice and Invitation to Tender.

C.2.16 Tender offer validity

Add the following to C.2.16.1 after the first sentence:

C.2.16.1 The tender offer validity period is **90 days**.

C.2.16.2 Delete the clause and replace with the following:
Notwithstanding the period stated above, bids shall remain valid for acceptance for a period of twelve (12) months after the expiry of the original validity period, unless the Municipality is notified in writing of anything to the contrary by the bidder. The validity of bids may be further extended by a period of not more than six months subject to mutual agreement and administrative processes and upon approval by the Municipal Manager.

C.2.17 Clarification of tender offer after submission

Add the following to C.2.17 at the end of the third sentence:

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.

C.2.18 Provide other material

Delete the following word in C.2.18.1:

C.2.18.1 "notarized"

Add the following to C.2.18.1 at the end of the first paragraph:

Provide, on written request by the Employer, where the transaction value (tendered amount) inclusive of VAT **exceeds R 10 million**:

a) audited annual financial statement for the past 3 years, or for the period since establishment if established during the past 3 years, if required by law to prepare annual financial statements for auditing;
b) a certificate signed by the tenderer certifying that the tenderer has no undisputed commitments for municipal services towards a municipality or other service provider in respect of which payment is overdue for more than 30 days;
c) particulars of any contracts awarded to the tenderer by an organ of state during the past five years, including particulars of any material non-compliance or dispute concerning the execution of such contract;
d) a statement indicating whether any portion of the goods or services are expected to be sourced from outside the Republic, and, if so, what portion and whether any portion of payment from the municipality or municipal entity is expected to be transferred out of the Republic.

Each party to a Consortium/Joint Venture shall submit separate certificates/statements in the above regard.

Add the following Clauses after C.2.18.2 and before Clause C.2.19:

C.2.18.3 Tenderers shall fully cooperate with the Employer's external service provider appointed to perform a due diligence review and risk assessment upon receipt of such written instruction from the Employer.

Failure to fully cooperate could result in a tender being declared as non-responsive.

C.2.18.4 Compliance with Occupational Health and Safety Act, 85 of 1993

Tenderers are to note the requirements of the Occupational Health and Safety Act, 85 of 1993 and the Construction Regulations, 2014 issued in terms of Section 43 of the Act. The Tenderer shall be deemed to have read and fully understood the requirements of the above Act and Regulations and to have allowed for all costs in compliance therewith.

In this regard the Tenderer shall submit with his tender or upon request, appended to Schedule 21: Health and Safety Plan in T2.2: Returnable Schedules, a draft Health and Safety Plan in respect of the Works in sufficient detail to demonstrate the necessary competencies and resources to perform the construction work all in accordance with the Act, Regulations and Health and Safety Specification in Part C6 in the Scope of Work.

Such Health and Safety Plan shall cover inter-alia the following details:

(1) Management Structure, Site Supervision and Responsible Persons including a succession plan.
(2) Contractor's induction training programme for employees, sub-contractors, and visitors to the Site.
(3) Health and safety precautions and procedures to be adhered to, to ensure compliance with the Act, Regulations and Safety Specifications.
(4) Regular monitoring procedures to be performed.
(5) Regular liaison, consultation, and review meetings with all parties.
(6) Site security, welfare facilities and first aid.
(7) Site rules and fire and emergency procedures.

Tenderers are to note that the Contractor is required to ensure that all sub-contractors or others engaged in the performance of the contract also comply with the above requirements.

The Contractor shall prepare and maintain a Health and Safety File in respect of the project, which shall always be available for inspection on Site and handed over to the Employer on Final Completion of the project.

The Contractor is required to submit to the Employer the Occupational Health and Safety Agreement (included in C1.5 of the Contract Document) and a letter of good standing from the Compensation Commissioner, or a licensed compensation insurer, within 14 days after the Commencement Date of the Contract.

C.2.23 Certificates

Add the following after the first sentence:

The tenderer is required to submit the following:

C.2.23.1 Evidence of tax compliance

Tenderers shall be registered with the South African Revenue Service (SARS) and their tax affairs must be in order and they must be tax compliant subject to the requirements of clause C.2.1.4.2.h. In this regard, it is the responsibility of the Tenderer to submit evidence in the form of a valid Tax Clearance Certificate issued by SARS to the Employer at the Supplier Management Unit located within the Supplier Management / Registration Office 28 Main Street, Ashton. (Tel 023 656 8200) or included with this tender. The tenderer must also provide its Tax Compliance Status PIN number on the **Compulsory Enterprise Questionnaire**

Each party to a Consortium/Joint Venture shall submit a separate Tax Clearance Certificate.

Before making an award the Langeberg Municipality must verify the bidder's tax compliance status. Where the recommended bidder is not tax compliant, the bidder should be notified of the non-compliant status and be requested to submit to the Langeberg Municipality, within 7 working days, written proof from SARS that they have made arrangement to meet their outstanding tax obligations. The proof of tax compliance submitted by the bidder must be verified by the Langeberg Municipality via CSD or e-Filing. The Langeberg Municipality should reject a bid submitted by the bidder if such bidder fails to provide proof of tax compliance within the timeframe stated herein.

Only foreign suppliers who have answered "NO" to all the questions contained in the Questionnaire to Bidding Foreign Suppliers section on the **Details of Tenderer** pages of the tender submission, are not required to register for a tax compliance status with SARS.

C.2.23.2 Broad-Based Black Economic Empowerment Status Level Documentation

In order to qualify for preference points, it is the responsibility of the tenderer to submit documentary proof, either as certificates, sworn affidavits or any other requirement prescribed in terms of the B-BBEE Act, of its B-BBEE status level of contribution in accordance with the applicable Codes of good practise as issued by the Department of Trade and Industry, to the LANGEBERG MUNICIPALITY at the Supplier Management Unit located within the Supplier Management / Registration Office, 28 Main Street, Ashton.(Tel: 023 626 8200) or included with the tender submission.

Consortiums/Joint Ventures will qualify for preference points, provided that the **entity** submits the relevant certificate/scorecard in accordance with the applicable codes of good practise. Note that, in the case of unincorporated entities, a verified consolidated B-BBEE scorecard must be submitted in the form of a certificate with the tender.

Tenderers are further referred to the content of the **Preference Schedule** for the full terms and conditions applicable to the awarding of preference points.

The applicable code for this tender is the **Amended Codes for Measuring Broad-Based Black Economic Empowerment in the Construction Sector.**

The tenderer shall indicate in Section 25 of the **Preference Schedule** the Level of Contribution in respect of the enterprise status or structure of the tendering entity (the supplier).

Add the follow new clause after C.2.23.2

C.2.24 Proposed Deviations and Qualifications

Where the tenderer cannot tender in all respects in accordance with the provisions contained in the tender documents, all deviations therefrom shall be clearly and separately listed in the schedule titled **Proposed Deviations and Qualifications by Tenderer** in T2.2 Returnable Schedules, or in a tenderer's covering letter expressly referenced in this schedule.

The tenderer accept that the Employer will examine such deviations in terms of clause C.3.8.2 and shall not be bound to accept any such deviations or qualifications.

It must be clearly stated by the tenderer whether the sum tendered in the Tender Offer includes for all such deviations or qualifications listed or referred to in the schedule titled **Proposed Deviations and Qualifications by Tenderer** or not.

C.3 The Employer's undertakings

C.3.2 Issue Addenda

Delete the first sentence and replace with:
If necessary, issue addenda in writing that may amend or amplify the tender documents to each tenderer during the period from the date the tender documents are available until one week before the tender closing time stated in the Tender Data. The Employer reserves its rights to issue addenda less than one week before the tender closing time in exceptional circumstances.

Add the following to C.3.2 at the end of the paragraph:
Notwithstanding any requests for confirmation of receipt of` Addenda issued, the tenderer shall be deemed to have received such addenda if the employer can show proof of transmission thereof (or a notice in respect thereof) via electronic mail, facsimile, or registered post. It is therefore of great importance that the contact details provided during the compulsory clarification meeting is legible and contactable.

C3.4 Opening of tender submissions

Add the following to C.3.4.2 at the end of the paragraph:
The location for opening of the tender offers is the Tender Submission Office at the address as stated on the General Tender Information page.

C.3.8 Test for responsiveness

C.3.8.2 *Replace the final sentence of C.3.8.2 with the following:*
Reject a non-responsive tender offer, and not allow it to be subsequently made responsive by correction or withdrawal of the material deviation.

Add the following after clause C.3.8.2
C.3.8.3 The Employer reserves the right to accept a tender offer which does not, in the Employer's opinion, materially and/or substantially deviate from the terms, conditions, and specifications of the tender documents.

C.3.9 Arithmetical errors, omissions, and discrepancies

Add the following after clause C.3.9.4
C.3.9.5 In the event of tendered rates or lump sums being declared by the Employer to be unacceptable to it because they are not priced, either excessively low or high, or not in proper balance with other rates or lump sums, 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.

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 non-responsive.

C.3.10 Clarification of a tender offer

Delete the clause and replace with the following:
C3.10 The Employer may, after the closing date, request additional information or clarification from any tenderer, in writing on any matter affecting the evaluation of the tender offer or that could give rise to ambiguity in a contract arising from the tender offer, which written request and related response shall not change or affect their competitive position or the substance of the tenderer's offer.

C.3.11 Evaluation of tender offers

Add the following Clauses after clause C.3.11.1 and before Clause C.3.12

C.3.11.2 Where the scoring of functionality forms part of a bid process, each member of the Bid Evaluation Committee must individually score functionality. The individual scores must then be interrogated and calibrated if required where there are significant discrepancies. The individual scores must then be added together and averaged to determine the final score.

C.3.11.3 The tender will be evaluated in terms of the requirements of the Preferential Procurement Regulations of 2022 as follows:

C.3.11.3.1 The preference point system applicable to this tender is the 80/20 preference point system.

C.3.11.3.2 Price and specific goals will be scored, as relevant, to two decimal places.

C.3.11.3.3 Confirm that tenderers are eligible for the preferences claimed in accordance with the provisions of the tender data and reject all claims for preferences where tenderers are not eligible for such preferences.

Points will be awarded to tenderers who are eligible for preferences in terms of the **Preference Schedule** (where preferences are granted in respect of B-BBEE contribution) which is included in T2.2 Returnable Schedules.

The terms and conditions of the **Preference Schedule** shall apply in all respects to the tender evaluation process and any subsequent contract.

In addition, the various deemed B-BBEE Status Level of Contributor in accordance with the relevant Codes can be attained and such tenderers must be awarded the appropriate number of points.

It should be noted that such Deemed B-BBEE Status Level of Contribution can be enhanced or discounted in accordance with the relevant clauses in the applicable Codes.

C.3.11.4 Risk Analysis

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:

a) reasonableness of the financial offer
b) reasonableness of unit rates and prices
c) the tenderer's ability to fulfil its obligations in terms of the tender document, that is, that the tenderer can demonstrate that he/she/it possesses the necessary professional and technical qualifications, professional and technical competence, financial resources (Bank Ratings will be requested), equipment and other physical facilities, managerial capability, reliability, capacity, experience, reputation, personnel to perform the contract, etc.; the Employer reserves the right to consider a tenderer's existing contracts with the Employer in this regard
d) any other matter relating to the submitted bid, the tendering entity, matters of compliance, verification of submitted information and documents.

The conclusions drawn from this risk analysis will be used by the Employer in determining the acceptability of the tender offer in terms of C.3.13.

C.3.13 Acceptance of tender offer

Delete first sentence of C.3.13 and replace with the following):

Accept the tender offer, if in the opinion of the employer, it does not present any material risk and only if the tenderer:

Delete C.3.13 a) and replace with the following):

a) is not under restrictions, has any principals who are under restrictions, or is not currently a supplier to whom notice has been served for abuse of the supply chain management system, preventing participation in the employer's procurement;

Add the following below C.3.13 f)

If an award cannot be made in terms of anything contained herein, the Employer reserves the right to consider the next ranked tenderer(s). The Employer does not bind himself to accept the lowest priced tender, highest evaluation points

tender or any tender offer. The Employer has the right to accept any part of a tender as he may deem expedient subject to negotiation with the successful tenderer for the whole tender.

C.3.13.1 The Employer reserves the right not to make an award, or revoke an award already made, where the implementation of the contract may result in reputational risk or harm to the Langeberg Municipality as a result of (inter alia):

a) reports of poor governance and/or unethical behaviour;
b) association with known family of notorious individuals;
c) poor performance issues, known to the Langeberg Municipality;
d) negative social media reports; and
e) adverse assurance (e.g. due diligence) report outcomes.

C.3.13.2 The Employer reserves the right to nominate an alternative bidder at the time when an award is made and in the event that a contract is terminated during the execution thereof, the LANGEBERG MUNICIPALITY may consider the award of the contract, or non-award, to the alternative bidder in terms of the procedures included its SCM Policy.

C.3.13.3 The Employer shall notify the successful tenderer in writing of the decision of the Employer's Bid Adjudication Committee to award the tender to the successful tenderer. No rights shall accrue to the successful tenderer in terms of this notice.

C.3.13.4 The Employer shall, at the same time as notifying the successful tenderer of the Bid Adjudication Committee's decision to award the tender to the successful tenderer, also give written notice to the other tenderers informing them that they have been unsuccessful.

C.3.17 Provide copies of the contract

Add the following after the first sentence:

The number of paper copies of the signed contract to be provided by the Employer is one.

Add the following Clauses after C.3.18:

C.3.19 Negotiations with preferred tenderers

The Employer may negotiate the final terms of a contract with tenderers identified through a competitive tendering process as preferred tenderers provided that such negotiation:

a) does not allow any preferred tenderer a second or unfair opportunity;
b) is not to the detriment of any other tenderer; and
c) does not lead to a higher price than the tender as submitted.

If negotiations fail to result in acceptable contract terms, the Municipal Manager (or his delegated authority) may terminate the negotiations and cancel the tender or invite the next ranked tenderer for negotiations. The original preferred tenderer should be informed of the reasons for termination of the negotiations. If the decision is to invite the next highest ranked tenderer for negotiations, the failed earlier negotiations may not be reopened by the LANGEBERG MUNICIPALITY.

Minutes of any such negotiations shall be kept for record purposes.

The provisions of this clause will be equally applicable to any invitation to negotiate with any other tenderers.

In terms of the PPPFA Regulations, 2017, tenders must be cancelled in the event that negotiations fail to achieve a market related price with any of the three highest scoring tenderers.

C.3.20 Claims arising after submission of tender

No claim for any extras arising out of any doubt or obscurity as to the true intent and meaning of anything shown on the Contract Drawings or contained in the Conditions of Contract, Scope of Work and Pricing Data, will be admitted by the Employer/Employer's Agent after the submission of any tender and the Tenderer shall be deemed to have:

a) inspected the Contract Drawings and read and fully understood the Conditions of Contract.
b) read and fully understood the whole text of the Scope of Work and Pricing Data and thoroughly acquainted himself with the nature of the works proposed and generally of all matters which may influence the Contract.

c) visited the site of the proposed works, carefully examined existing conditions, the means of access to the site, the conditions under which the work is to be done and acquainted himself with any limitations or restrictions that may be imposed by the Municipal or other Authorities in regard to access and transport of materials, plant and construction equipment to and from the site and made the necessary provisions for any additional costs involved thereby.

d) requested the Employer or his duly authorised agent to make clear the actual requirements of anything shown on the Contract Drawings or anything contained in the Scope of Work and Pricing Data, the exact meaning or interpretation of which is not clearly intelligible to the Tenderer.
Before submission of any tender, the Tenderer should check the number of pages, and if any are found to be missing or duplicated, or the figures or writing indistinct, or if the Pricing Data contain any obvious errors, the tenderer must apply to the Employer/Employer's Agent at once to have the same rectified, as no liability will be admitted by the Employer/Employer's Agent in respect of errors in any tender due to the foregoing.

e) received any Addenda to the tender documents which have been issued in accordance with the Employer's Supply Chain Management Policy.

C.3.21 General supply chain management conditions applicable to tenders

In terms of its Supply Chain Management Policy the Employer may not consider a tender unless the provider who submitted the tender:

a) has furnished the Employer with that provider's:
- full name;
- identification number or company or other registration number; and
- tax reference number and VAT registration number, if any;

b) has indicated whether:
- the provider is in the service of the state, or has been in the service of the state in the previous twelve months;
- the provider is not a natural person, whether any of the directors, managers, principal shareholders or stakeholders is in the service of the state, or has been in the service of the state in the previous twelve months;
- whether a spouse, child or parent of the provider or of a director, manager, shareholder or stakeholder referred to above is in the service of the state, or has been in the service of the state in the previous twelve months; or

c) irrespective of the procurement process followed, the Employer is prohibited from making an award to:
- a person who is in the service of the state;
- a juristic entity of which any director, manager, principal shareholder or stakeholder is in the service of the state;
- an advisor or consultant contracted with the Employer, or
- a person, advisor or corporate entity involved with the bid specification committee, or a director of such corporate entity.

The Contract Price shall not be subject to any contract price adjustment, the rates and prices tendered in the bills of quantities shall. In this regard, tenderers shall complete Schedule 1, Part T2.2: Returnable Schedules: Compulsory Enterprise Questionnaire. Failure to complete this Schedule may result in the tender not being considered.

C.3.22 Combating abuse of the Supply Chain Management Policy

In terms of the Municipality's Supply Chain Management Policy, the Employer may reject the tender of any tenderer if that tenderer or any of its directors has:

a) failed to pay municipal rates and taxes or municipal service charges and such rates, taxes and charges are in arrears for more than three months

b) failed, during the last five years, to perform satisfactorily on a previous contract with the Municipality or any other organ of state after written notice was given to that tenderer that performance was unsatisfactory.

c) abused the supply chain management system of the Employer or has committed any improper conduct in relation to this system.

d) been convicted of fraud or corruption during the past five years.

e) wilfully neglected, reneged on, or failed to comply with any government, municipal or other public sector contract during the past five years; or

f) been listed with the Register of Tender Defaulters in terms of section 29 of the Prevention and Combating of Corrupt Activities Act (No 12 of 2004) or has been listed on National Treasury's database as a person or juristic entity prohibited from doing business with the public sector.

In this regard, tenderers shall complete Part T2.2: Returnable Schedules: Declaration of Tenderer's Past Supply Chain Management Practices (in terms of the Municipal Finance Management Act). Failure to complete this Schedule may result in the tender not being considered.

C.3.23 UIF payments

The Tenderer shall submit to the Employer a letter from the Industrial Council indicating his good standing with regard to UIF payments upon being requested to do so.

C.3.24 Price variations

Tender document or part thereof. Only those tenders that have been completed on the issued hard copy tender final and binding throughout the period of the contract. However, price adjustments for variations in the costs of special materials may be applicable where the Employer/Employer's Agent specifies such materials and the relevant information in the Contract Data.

Notwithstanding the above, if, as a result of any extension of time granted, the duration of the contract period exceeds one year, the contract will automatically be subject to contract price adjustment for that period by which the extended contract period exceeds such one year.

Adjustment in rates or prices shall be subject to the provisions of Part C1.2: Contract Data.

C.3.25 Requests for contract documents, or parts thereof, in electronic format

The Employer shall not formally issue tender documents in electronic format as contemplated in C.2.13.2 and C.2.13.3 and shall only issue tender documents in hardcopy. An electronic version of the issued tender documents may be made available to the tenderer, upon written request in terms of this clause, subject to the following:

a) Electronic copies of the contract document, or parts thereof, will only be provided to tenderers who have been issued with the tender documents as contemplated in C.1.2 in hardcopy.
b) The electronic version shall not be regarded as a substitute for the issued tender documents.
c) The Employer shall not accept tenders submitted in electronic format. Tenderers may **not** complete and submit a printed copy of the electronic version of the tender document.
d) The Employer accepts no responsibility or liability arising from any reliance on or use of the electronic version provided in terms of this clause. The Employer further does not guarantee that the electronic version corresponds with the issued tender documents in all respects. Tenderers are alerted to the fact that electronic versions of the tender documents may not reflect any notices or addenda that amend the tender document.
e) Any non-compliance with these provisions, including effecting any unauthorised alterations to the tender document as contemplated in C.2.11, shall render the tender invalid. 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.
f) In requesting the electronic version of the tender document or parts thereof, the tenderer is deemed to have read, understood, and accepted all of the above conditions.

C.3.26 Bidders who do not submit B-BBEE Status Level Verification Certificates or are non-compliant contributors to B-BBEE do not qualify for preference points for B-BBEE but should not be disqualified from the bidding process. They will score points out 80 for price only and zero (0) points out of 20 for B-BBEE. A trust, consortium or joint venture must submit a consolidated B-BBEE Status Level Verification Certificate for every separate bid

Annex C
(normative)
Standard Conditions of Tender

C.1 General

C.1.1 Actions

C.1.1.1 The employer and each tenderer submitting a tender offer shall comply with these conditions of tender. In their dealings with each other, they shall discharge their duties and obligations as set out in C.2 and C.3, timeously and with integrity, and behave equitably, honestly and transparently, comply with all legal obligations and not engage in anticompetitive practices.

C.1.1.2 The employer and the tenderer and all their agents and employees involved in the tender process shall avoid conflicts of interest and where a conflict of interest is perceived or known, declare any such conflict of interest, indicating the nature of such conflict. Tenderers shall declare any potential conflict of interest in their tender submissions. Employees, agents and advisors of the employer shall declare any conflict of interest to whoever is responsible for overseeing the procurement process at the start of any deliberations relating to the procurement process or as soon as they become aware of such conflict and abstain from any decisions where such conflict exists or recuse themselves from the procurement process, as appropriate.

Note:
1) A conflict of interest may arise due to a conflict of roles which might provide an incentive for improper acts in some circumstances. A conflict of interest can create an appearance of impropriety that can undermine confidence in the ability of that person to act properly in his or her position even if no improper acts result.
2) Conflicts of interest in respect of those engaged in the procurement process include direct, indirect or family interests in the tender or outcome of the procurement process and any personal bias, inclination, obligation, allegiance or loyalty which would in any way affect any decisions taken.

C.1.1.3 The employer shall not seek and a tenderer shall not submit a tender without having a firm intention and the capacity to proceed with the contract.

C.1.2 Tender Documents issued by the employer for the purpose of a tender offer are listed in the tender data.

C.1.3 Interpretation

C.1.3.1 The tender data and additional requirements contained in the tender schedules that are included in the returnable documents are deemed to be part of these conditions of tender.

C.1.3.2 These conditions of tender, the tender data and tender schedules which are required for tender evaluation purposes, shall form part of any contract arising from the invitation to tender.

C.1.3.3 For the purposes of these conditions of tender, the following definitions apply:

a) conflict of interest means any situation in which:
i) someone in a position of trust has competing professional or personal interests which make it difficult to fulfil his or her duties impartially;
ii) an individual or tenderer is in a position to exploit a professional or official capacity in some way for their personal or corporate benefit; or
iii) incompatibility or contradictory interests exist between an employee and the tenderer who employs that employee.
b) comparative offer means the price after the factors of a non-firm price and all unconditional discounts it can be utilised to have been taken into consideration;
c) corrupt practice means the offering, giving, receiving or soliciting of anything of value to influence the action of the employer or his staff or agents in the tender process;
d) fraudulent practice means the misrepresentation of the facts in order to influence the tender process or the award of a contract arising from a tender offer to the detriment of the employer, including collusive practices intended to establish prices at artificial levels;

C.1.4 Communication and employer's agent
Each communication between the employer and a tenderer shall be to or from the employer's agent only, and in a form that can be readily read, copied and recorded. Communications shall be in the English language. The employer shall

not take any responsibility for non-receipt of communications from or by a tenderer. The name and contact details of the employer's agent are stated in the tender data.

C.1.5 Cancellation and Re-Invitation of Tenders

C.1.5.1 An employer may, prior to the award of the tender, cancel a tender if-
a) due to changed circumstances, there is no longer a need for the engineering and construction works specified in the invitation;
b) funds are no longer available to cover the total envisaged expenditure; or
c) no acceptable tenders are received.
d) there is a material irregularity in the tender process.

C.1.5.2 The decision to cancel a tender invitation must be published in the same manner in which the original tender invitation was advertised

C.1.5.3 An employer may only with the prior approval of the relevant treasury cancel a tender invitation for the second time.

C.1.6 Procurement procedures

C.1.6.1 General
Unless otherwise stated in the tender data, a contract will, subject to C.3.13, be concluded with the tenderer who in terms of C.3.11 is the highest ranked or the tenderer scoring the highest number of tender evaluation points, as relevant, based on the tender submissions that are received at the closing time for tenders.

C.1.6.2 Competitive negotiation procedure

C.1.6.2.1 Where the tender data require that the competitive negotiation procedure is to be followed, tenderers shall submit tender offers in response to the proposed contract in the first round of submissions. Notwithstanding the requirements of C.3.4, the employer shall announce only the names of the tenderers who make a submission. The requirements of C.8 relating to the material deviations or qualifications which affect the competitive position of tenderers shall not apply.

C.1.6.2.2 All responsive tenderers or at least a minimum of not less than three responsive tenderers that are highest ranked in terms of the evaluation criteria stated in the tender data shall be invited to enter into competitive negotiations based on the principle of equal treatment, keeping confidential the proposed solutions and associated information.

Notwithstanding the provisions of C.2.17, the employer may request that tenders be clarified, specified and fine-tuned in order to improve a tenderer's competitive position provided that such clarification, specification, fine-tuning or additional information does not alter any fundamental aspects of the offers or impose substantial new requirements which restrict or distort competition or have a discriminatory effect.

C.1.6.2.3 At the conclusion of each round of negotiations, tenderers shall be invited by the employer to revise their tender offer based on the same evaluation criteria, with or without adjusted weightings. Tenderers shall be advised when they are to submit their best and final offer.

C.1.6.2.4 The contract shall be awarded in accordance with the provisions of C.3.11 and C.3.13 after tenderers have been requested to submit their best and final offer.

C.1.6.3 Proposal procedure using the two stage-system

C.1.6.3.1 Option 1
Tenderers shall in the first stage submit technical proposals and, if required, cost parameters around which a contract may be negotiated. The employer shall evaluate each responsive submission in terms of the method of evaluation stated in the tender data, and in the second stage negotiate a contract with the tenderer scoring the highest number of evaluation points and award the contract in terms of these conditions of tender.

C.1.6.3.2 Option 2

C.1.6.3.2.1 Tenderers shall submit in the first stage only technical proposals. The employer shall invite all responsive tenderers to submit tender offers in the second stage, following the issuing of procurement documents.

C.1.6.3.2.2 The employer shall evaluate tenders received during the second stage in terms of the method of evaluation stated in the tender data and award the contract in terms of these conditions of tender.

C.2 Tenderer's obligations

C.2.1 Eligibility

C.2.1.1 Submit a tender offer only if the tenderer satisfies the criteria stated in the tender data and the tenderer, or any of his principals, is not under any restriction to do business with employer.

C.2.1.2 Notify the employer of any proposed material change in the capabilities or formation of the tendering entity (or both) or any other criteria which formed part of the qualifying requirements used by the employer as the basis in a prior process to invite the tenderer to submit a tender offer and obtain the employer's written approval to do so prior to the closing time for tenders.

C.2.2 Cost of tendering

C.2.2.1 Accept that, unless otherwise stated in the tender data, the employer will not compensate the tenderer for any costs incurred in the preparation and submission of a tender offer, including the costs of any testing necessary to demonstrate that aspects of the offer complies with requirements.

C.2.2.2 The cost of the tender documents charged by the employer shall be limited to the actual cost incurred by the employer for printing the documents. Employers must attempt to make available the tender documents on its website so as not to incur any costs pertaining to the printing of the tender documents.

C.2.3 Check documents
Check the tender documents on receipt for completeness and notify the employer of any discrepancy or omission.

C.2.4 Confidentiality and copyright of documents
Treat as confidential all matters arising in connection with the tender. Use and copy the documents issued by the employer only for the purpose of preparing and submitting a tender offer in response to the invitation.

C.2.5 Reference documents
Obtain, as necessary for submitting a tender offer, copies of the latest versions of standards, specifications, conditions of contract and other publications, which are not attached but which are incorporated into the tender documents by reference.

C.2.6 Acknowledge addenda
Acknowledge receipt of addenda to the tender documents, which the employer may issue, and if necessary, apply for an extension to the closing time stated in the tender data, in order to take the addenda into account.

C.2.7 Clarification meeting
Attend, where required, a clarification meeting at which tenderers may familiarize themselves with aspects of the proposed work, services or supply and raise questions. Details of the meeting(s) are stated in the tender data.

C.2.8 Seek clarification
Request clarification of the tender documents, if necessary, by notifying the employer at least five (5) working days before the closing time stated in the tender data.

C.2.9 Insurance
Be aware that the extent of insurance to be provided by the employer (if any) might not be for the full cover required in terms of the conditions of contract identified in the contract data. The tenderer is advised to seek qualified advice regarding insurance.

C.2.10 Pricing the tender offer

C.2.10.1 Include in the rates, prices, and the tendered total of the prices (if any) all duties, taxes except Value Added Tax (VAT), and other levies payable by the successful tenderer, such duties, taxes and levies being those applicable fourteen (14) days before the closing time stated in the tender data.

C.2.10.2 Show VAT payable by the employer separately as an addition to the tendered total of the prices.

C.2.10.3 Provide rates and prices that are fixed for the duration of the contract and not subject to adjustment except as provided for in the conditions of contract identified in the contract data.

C.2.10.4 State the rates and prices in Rand unless instructed otherwise in the tender data. The conditions of contract identified in the contract data may provide for part payment in other currencies.

C.2.11 Alterations to documents
Do not make any alterations or additions to the tender documents, except to comply with instructions issued by the employer, or necessary to correct errors made by the tenderer. All signatories to the tender offer shall initial all such alterations.

C.2.12 Alternative tender offers

C.2.12.1 Unless otherwise stated in the tender data, submit alternative tender offers only if a main tender offer, strictly in accordance with all the requirements of the tender documents, is also submitted as well as a schedule that compares the requirements of the tender documents with the alternative requirements that are proposed.

C.2.12.2 Accept that an alternative tender offer must be based only on the criteria stated in the tender data or criteria otherwise acceptable to the employer.

C.2.12.3 An alternative tender offer must only be considered if the main tender offer is the winning tender.

C.2.13 Submitting a tender offer

C.2.13.1 Submit one tender offer only, either as a single tendering entity or as a member in a joint venture to provide the whole of the works identified in the contract data and described in the scope of works, unless stated otherwise in the tender data.

C.2.13.2 Return all returnable documents to the employer after completing them in their entirety, either electronically (if they were issued in electronic format) or by writing legibly in non-erasable ink.

C.2.13.3 Submit the parts of the tender offer communicated on paper as an original plus the number of copies stated in the tender data, with an English translation of any documentation in a language other than English, and the parts communicated electronically in the same format as they were issued by the employer.

C.2.13.4 Sign the original and all copies of the tender offer where required in terms of the tender data. The employer will hold all authorized signatories liable on behalf of the tenderer. Signatories for tenderers proposing to contract as joint ventures shall state which of the signatories is the lead partner whom the employer shall hold liable for the purpose of the tender offer.

C.2.13.5 Seal the original and each copy of the tender offer as separate packages marking the packages as "ORIGINAL" and "COPY". Each package shall state on the outside the employer's address and identification details stated in the tender data, as well as the tenderer's name and contact address.

C.2.13.6 Where a two-envelope system is required in terms of the tender data, place and seal the returnable documents listed in the tender data in an envelope marked “financial proposal” and place the remaining returnable documents in an envelope marked “technical proposal”. Each envelope shall state on the outside the employer’s address and identification details stated in the tender data, as well as the tenderer's name and contact address.

C.2.13.7 Seal the original tender offer and copy packages together in an outer package that states on the outside only the employer's address and identification details as stated in the tender data.

C.2.13.8 Accept that the employer will not assume any responsibility for the misplacement or premature opening of the tender offer if the outer package is not sealed and marked as stated.

C.2.13.9 Accept that tender offers submitted by facsimile or e-mail will be rejected by the employer, unless stated otherwise in the tender data.

C.2.14 Information and data to be completed in all respects
Accept that tender offers, which do not provide all the data or information requested completely and, in the form, required, may be regarded by the employer as non-responsive.

C.2.15 Closing time

C.2.15.1 Ensure that the employer receives the tender offer at the address specified in the tender data not later than the closing time stated in the tender data. Accept that proof of posting shall not be accepted as proof of delivery.

C.2.15.2 Accept that, if the employer extends the closing time stated in the tender data for any reason, the requirements of these conditions of tender apply equally to the extended deadline.

C.2.16 Tender offer validity

C.2.16.1 Hold the tender offer(s) valid for acceptance by the employer at any time during the validity period stated in the tender data after the closing time stated in the tender data.

C.2.16.2 If requested by the employer, consider extending the validity period stated in the tender data for an agreed additional period with or without any conditions attached to such extension.

C.2.16.3 Accept that a tender submission that has been submitted to the employer may only be withdrawn or substituted by giving the employer's agent written notice before the closing time for tenders that a tender is to be withdrawn or substituted. If the validity period stated in C.2.16 lapses before the employer evaluating tender, the contractor reserves the right to review the price based on Consumer Price Index (CPI).

C.2.16.4 Where a tender submission is to be substituted, a tenderer must submit a substitute tender in accordance with the requirements of C.2.13 with the packages clearly marked as "SUBSTITUTE".

C.2.17 Clarification of tender offer after submission
Provide clarification of a tender offer in response to a request to do so from the employer during the evaluation of tender offers. This may include providing a breakdown of rates or prices and correction of arithmetical errors by the adjustment of certain rates or item prices (or both). No change in the competitive position of tenderers or substance of the tender offer is sought, offered, or permitted.

Note: Sub-clause C.2.17 does not preclude the negotiation of the final terms of the contract with a preferred tenderer following a competitive selection process, should the Employer elect to do so.

C.2.18 Provide other material

C.2.18.1 Provide, on request by the employer, any other material that has a bearing on the tender offer, the tenderer's commercial position (including notarized joint venture agreements), preferencing arrangements, or samples of materials, considered necessary by the employer for the purpose of a full and fair risk assessment.

Should the tenderer not provide the material, or a satisfactory reason as to why it cannot be provided, by the time for submission stated in the employer's request, the employer may regard the tender offer as non-responsive.

C.2.18.2 Dispose of samples of materials provided for evaluation by the employer, where required.

C.2.19 Inspections, tests, and analysis
Provide access during working hours to premises for inspections, tests and analysis as provided for in the tender data.

C.2.20 Submit securities, bonds, and policies
If requested, submit for the employer's acceptance before formation of the contract, all securities, bonds, guarantees, policies, and certificates of insurance required in terms of the conditions of contract identified in the contract data.

C.2.21 Check final draft
Check the final draft of the contract provided by the employer within the time available for the employer to issue the contract.

C.2.22 Return of other tender documents

If so, instructed by the employer, return all retained tender documents within twenty-eight (28) days after the expiry of the validity period stated in the tender data.

C.2.23 Certificates
Include in the tender submission or provide the employer with any certificates as stated in the tender data.

C.3 The employer's undertakings

C.3.1 Respond to requests from the tenderer

C.3.1.1 Unless otherwise stated in the tender Data, respond to a request for clarification received up to five (5) working days before the tender closing time stated in the Tender Data and notify all tenderers who collected tender documents.

C.3.1.2 Consider any request to make a material change in the capabilities or formation of the tendering entity (or both) or any other criteria which formed part of the qualifying requirements used to prequalify a tenderer to submit a tender offer in terms of a previous procurement process and deny any such request if as a consequence:
a) an individual firm, or a joint venture as a whole, or any individual member of the joint venture fails to meet any of the collective or individual qualifying requirements;
b) the new partners to a joint venture were not prequalified in the first instance, either as individual firms or as another joint venture; or
c) in the opinion of the Employer, acceptance of the material change would compromise the outcome of the prequalification process.

C.3.2 Issue Addenda
If necessary, issue addenda that may amend or amplify the tender documents to each tenderer during the period from the date that tender documents are available until three (3) working days before the tender closing time stated in the Tender Data. If, as a result a tenderer applies for an extension to the closing time stated in the Tender Data, the Employer may grant such extension and, shall then notify all tenderers who collected tender documents.

C.3.3 Return late tender offers
Return tender offers received after the closing time stated in the Tender Data, unopened, (unless it is necessary to open a tender submission to obtain a forwarding address), to the tenderer concerned.

C.3.4 Opening of tender submissions

C.3.4.1 Unless the two-envelope system is to be followed, open valid tender submissions in the presence of tenderers' agents who choose to attend at the time and place stated in the tender data. Tender submissions for which acceptable reasons for withdrawal have been submitted will not be opened.

C.3.4.2 Announce at the meeting held immediately after the opening of tender submissions, at a venue indicated in the tender data, the name of each tenderer whose tender offer is opened and, where applicable, the total of his prices, number of points claimed for its BBBEE status level and time for completion for the main tender offer only.

C.3.4.3 Make available the record outlined in C.3.4.2 to all interested persons upon request.

C.3.5 Two-envelope system

C.3.5.1 Where stated in the tender data that a two-envelope system is to be followed, open only the technical proposal of valid tenders in the presence of tenderers' agents who choose to attend at the time and place stated in the tender data and announce the name of each tenderer whose technical proposal is opened.

C.3.5.2 Evaluate functionality of the technical proposals offered by tenderers, then advise tenderers who remain in contention for the award of the contract of the time and place when the financial proposals will be opened. Open only the financial proposals of tenderers, who score in the functionality evaluation more than the minimum number of points for functionality stated in the tender data, and announce the score obtained for the technical proposals and the total price and any points claimed on BBBEE status level. Return unopened financial proposals to tenderers whose technical proposals failed to achieve the minimum number of points for functionality.

C.3.6 Non-disclosure

Not disclose to tenderers, or to any other person not officially concerned with such processes, information relating to the evaluation and comparison of tender offers, the final evaluation price and recommendations for the award of a contract, until after the award of the contract to the successful tenderer.

C.3.7 Grounds for rejection and disqualification

Determine whether there has been any effort by a tenderer to influence the processing of tender offers and instantly disqualify a tenderer (and his tender offer) if it is established that he engaged in corrupt or fraudulent practices.

C.3.8 Test for responsiveness

C.3.8.1 Determine, after opening and before detailed evaluation, whether each tender offer properly received:

a) complies with the requirements of these Conditions of Tender,
b) has been properly and fully completed and signed, and
c) is responsive to the other requirements of the tender documents.

C.3.8.2 A responsive tender is one that conforms to all the terms, conditions, and specifications of the tender documents without material deviation or qualification. A material deviation or qualification is one which, in the Employer's opinion, would:

a) detrimentally affect the scope, quality, or performance of the works, services or supply identified in the Scope of Work,
b) significantly change the Employer's or the tenderer's risks and responsibilities under the contract, or
c) affect the competitive position of other tenderers presenting responsive tenders if it were to be rectified.

Reject a non-responsive tender offer, and not allow it to be subsequently made responsive by correction or withdrawal of the non-conforming deviation or reservation.

C.3.9 Arithmetical errors, omissions, and discrepancies

C.3.9.1 Check responsive tenders for discrepancies between amounts in words and amounts in figures. Where there is a discrepancy between the amounts in figures and the amount in words, the amount in words shall govern.

C.3.9.2 Check the highest ranked tender or tenderer with the highest number of tender evaluation points after the evaluation of tender offers in accordance with C.3.11 for:
a) the gross misplacement of the decimal point in any unit rate;
b) omissions made in completing the pricing schedule or bills of quantities; or c) arithmetic errors in:

(i) line item totals resulting from the product of a unit rate and a quantity in bills of quantities or schedules of prices; or
(ii) the summation of the prices.

C.3.9.3 Notify the tenderer of all errors or omissions that are identified in the tender offer and either confirm the tender offer as tendered or accept the corrected total of prices.

C.3.9.4 Where the tenderer elects to confirm the tender offer as tendered, correct the errors as follows:
a) If bills of quantities or pricing schedules apply and there is an error in the line item total resulting from the product of the unit rate and the quantity, the line item total shall govern, and the rate shall be corrected. Where there is an obviously gross misplacement of the decimal point in the unit rate, the line item total as quoted shall govern, and the unit rate shall be corrected.
b) Where there is an error in the total of the prices either as a result of other corrections required by this checking process or in the tenderer's addition of prices, the total of the prices shall govern and the tenderer will be asked to revise selected item prices (and their rates if bills of quantities apply) to achieve the tendered total of the prices.

C.3.10 Clarification of a tender offer

Obtain clarification from a tenderer on any matter that could give rise to ambiguity in a contract arising from the tender offer.

C.3.11 Evaluation of tender offers

The Standard Conditions of Tender standardize the procurement processes, methods, and procedures from the time that tenders are invited to the time that a contract is awarded. They are generic in nature and are made project specific through choices that are made in developing the Tender Data associated with a specific project.

Conditions of tender are by definition the document that establishes a tenderer's obligations in submitting a tender and the employer's undertakings in soliciting and evaluating tender offers. Such conditions establish the rules from the time a tender is advertised to the time that a contract is awarded and require employers to conduct the process of offer and acceptance in terms of a set of standard procedures.

The CIDB Standard Conditions of Tender are based on a procurement system that satisfies the following system requirements:	
Requirement	Qualitative interpretation of goal
Fair	The process of offer and acceptance is conducted impartially without bias, providing simultaneous and timely access to participating parties to the same information.
Equitable	Terms and conditions for performing the work do not unfairly prejudice the interests of the parties.
Transparent	The only grounds for not awarding a contract to a tenderer who satisfies all requirements are restrictions from doing business with the employer, lack of capability or capacity, legal impediments and conflicts of interest.
Competitive	The system provides for appropriate levels of competition to ensure cost effective and best value outcomes.
Cost effective	The processes, procedures and methods are standardized with sufficient flexibility to attain best value outcomes in respect of quality, timing and price, and least resources to effectively manage and control procurement processes.

The activities associated with evaluating tender offers are as follows:

a) Open and record tender offers received
b) Determine whether or not tender offers are complete
c) Determine whether or not tender offers are responsive
d) Evaluate tender offers
e) Determine if there are any grounds for disqualification
f) Determine acceptability of preferred tenderer
g) Prepare a tender evaluation report
h) Confirm the recommendation contained in the tender evaluation report

C.3.11.1 General

The employer must appoint an evaluation panel of not less than three persons conversant with the proposed scope of works to evaluate each responsive tender offer using the tender evaluation methods and associated evaluation criteria and weightings that are specified in the tender data.

C.3.12 Insurance provided by the employer

If requested by the proposed successful tenderer, submit for the tenderer's information the policies and / or certificates of insurance which the conditions of contract identified in the contract data, require the employer to provide.

C.3.13 Acceptance of tender offer

Accept the tender offer; if in the opinion of the employer, it does not present any risk and only if the tenderer:

a) is not under restrictions, or has principals who are under restrictions, preventing participating in the employer's procurement;
b) can, as necessary and in relation to the proposed contract, demonstrate that he or she possesses the professional and technical qualifications, professional and technical competence, financial resources, equipment and other physical facilities, managerial capability, reliability, experience and reputation, expertise and the personnel, to perform the contract;
c) has the legal capacity to enter into the contract;
d) is not; insolvent, in receivership, under Business Rescue as provided for in chapter 6 of the Companies Act No. 2008, bankrupt or being wound up, has his/her affairs administered by a court or a judicial officer, has suspended his/her business activities or is subject to legal proceedings in respect of any of the foregoing;
e) complies with the legal requirements, if any, stated in the tender data; and
f) is able, in the opinion of the employer, to perform the contract free of conflicts of interest.

C.3.14 Prepare contract documents

C.3.14.1 If necessary, revise documents that shall form part of the contract and that were issued by the employer as part of the tender documents to take account of:
a) addenda issued during the tender period,
b) inclusion of some of the returnable documents and
c) other revisions agreed between the employer and the successful tenderer.

C.3.14.2 Complete the schedule of deviations attached to the form of offer and acceptance, if any.

C.3.15 Complete adjudicator's contract
Unless alternative arrangements have been agreed or otherwise provided for in the contract, arrange for both parties to complete formalities for appointing the selected adjudicator at the same time as the main contract is signed.

C.3.16 Registration of the award
An employer must, within twenty-one (21) working days from the date on which a contractor's offer to perform a construction works contract is accepted in writing by the employer, register and publish the award on the CIDB Register of Projects.

C.3.17 Provide copies of the contracts
Provide to the successful tenderer the number of copies stated in the Tender Data of the signed copy of the contract as soon as possible after completion and signing of the form of offer and acceptance.

C.3.18 Provide written reasons for actions taken
Provide upon request written reasons to tenderers for any action that is taken in applying these conditions of tender but withhold information which is not in the public interest to be divulged, which is considered to prejudice the legitimate commercial interests of tenderers or might prejudice fair competition between tenderers.

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Part T2:	Returnable Documents

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T2.1	List of Returnable Documents

The tenderer must complete the following Returnable Documents in non-erasable **black ink**:

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Schedule 2: Clarification meeting attendance certificate *44*
Schedule 3: Certificate of Independent Tender determination (MBD9) *45*
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Schedule 10: Confirmation of Central Supplier Database (CSD) registration *59*
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Schedule 14: Schedule of work experience of Tenderer *63*
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Schedule 16: Schedule of construction equipment *67*
Schedule 17: Preliminary programme (for information purposes only) *69*
Schedule 18: Proposed work plan *70*
Schedule 19: Schedule of estimated monthly expenditure *71*
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Schedule 21: Health and Safety plan *73*
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Schedule 24: Preference Schedule: Measuring B-BBEE in the construction sector (2022) *78*
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T2.2	Returnable Schedules

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Schedule 1: Compulsory Enterprise questionnaire

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 4a: National Treasury Central Supplier Database registration number: … … … … … … … … … … … … … …

Section 4b: SARS Tax Compliance Status PIN: …

Section 5: Particulars of sole proprietors and partners in partnerships

Name*	**Identity number***	**Personal income tax number***

Section 6: Particulars of companies and close corporations

Company registration number… …

Close corporation number… …

Tax reference number… …

Section 7: MBD4 – Attached to this document

Section 8: MBD6 – Attached to this document

Section 9: MBD8 – Attached to this document

Section 10: MBD9 – Attached to this document	
Section 11: Foreign Bidding Suppliers Is tenderer the accredited representative in South Africa for the Goods / Services / Works offered?	☐Yes ☐No If yes, enclose proof
Is tenderer a foreign based supplier for the Goods / Services / Works offered?	☐Yes ☐No If yes, answer the Questionnaire to Bidding Foreign Suppliers (below)
Questionnaire to Bidding Foreign Suppliers	
a) Is the tenderer a resident of the Republic of South Africa or an entity registered in South Africa?	☐Yes ☐No
b) Is the tenderer a resident of the Republic of South Africa or an entity registered in South Africa?	☐Yes ☐No
c) Does the tenderer have a permanent establishment in the Republic of South Africa?	☐Yes ☐No
d) Does the tenderer have any source of income in the Republic of South Africa?	☐Yes ☐No
e) Is the tenderer liable in the Republic of South Africa for any form of taxation?	☐Yes ☐No

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 or Database of Restricted Suppliers;

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; and

v) 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 ON BEHALF OF TENDERER:	
NAME, SURNAME & POSITION	
DATE	

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Schedule 2: **Clarification meeting attendance certificate**

Refer to tender conditions C.2.7 in section T1.2 Tender data

This is to certify that I/we, (the representative(s)) .....

representing (the tenderer) .....

of address .....

.....

.....

.....

Telephone and cell phone number .....

fax number .....

on (date) ..... .

attended the clarification meeting, have examined the Site of the Works and its surroundings for which I/we am/are submitting this Tender and have, so far as is practicable, familiarized myself/ourselves with all the information, risks, contingencies and other circumstances which may influence of affect my/our Tender.

Attendance of the above person(s) at the Clarification Meeting is confirmed by:

EMPLOYER'S AGENT / REPRESENTATIVE: . (Name) ……

SIGNED BY EMPLOYER'S AGENT / REPRESENTATIVE: ……

SIGNED ON BEHALF OF TENDERER:	
NAME, SURNAME & POSITION	
DATE	

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Schedule 3: Certificate of Independent Tender determination (MBD9)

I, the undersigned, in submitting this tender for **TENDER 20/2025: REFURBISHMENT OF VARIOUS ROADS AND STORMWATER IN LANGEBERG MUNICIPALITY; FOR A PERIOD OF THREE (3) YEARS**
in response to the invitation for the tender made by the Langeberg Municipality, do hereby make the following statements that I certify to be true and complete in every respect:

I certify, on behalf of _____ that:
(Name of Tenderer)

1. I have read, and I understand the contents of this Certificate;
2. I understand that this tender will be disqualified if this Certificate is found not to be true and complete in every respect;
3. I am authorized by the tenderer to sign this Certificate, and to submit this tender on behalf of the tenderer;
4. Each person whose signature appears on this tender has been authorized by the tenderer to determine the terms of, and to sign, the tender, on behalf of the tenderer;
5. For the purposes of this Certificate and this tender, I understand that the word "competitor" shall include any individual or organization, other than the tenderer, whether affiliated with the tenderer or not, who:
   (a) has been requested to submit a tender in response to this invitation to tender;
   (b) could potentially submit a tender in response to this invitation to tender, based on their qualifications, abilities, or experience; and
   (c) provides the same goods and services as the tenderer and/or is in the same line of business as the tenderer;
6. The tenderer has arrived at this tender independently from, and without consultation, communication, agreement, or arrangement with any competitor. However, communication between partners in a joint venture or consortium[1] will not be construed as collusive tendering;
7. In particular (without limiting the generality of paragraph 6 above) there has been no consultation, communication, agreement, or arrangement with any competitor regarding:
   (a) prices;
   (b) geographical area where product or service will be rendered (market allocation);
   (c) methods, factors, or formulas used to calculate prices;
   (d) the intention or decision to submit or not to submit a tender;
   (e) the submission of a tender which does not meet the specifications and conditions of the tender; or
   (f) tendering with the intention not to win the tender;
8. In addition, there have been no consultations, communications, agreements, or arrangements with any competitor regarding the quality, quantity, specifications and conditions or delivery particulars of the products or services to which this invitation to tender relates;
9. The terms of this tender have not been, and will not be, disclosed by the tenderer, directly or indirectly, to any competitor, prior to the date and time of the official tender opening or of the awarding of the contract;
10. I am aware that , in addition and without prejudice to any other remedy provided to combat any restrictive practices related to tenders and contracts, tenders 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.

[1]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.

SIGNED ON BEHALF OF TENDERER:	
NAME, SURNAME & POSITION	
DATE	

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Schedule 4: **Certificate of Authority (for Companies/Joint Ventures/etc.)**

Assurance shall be given at the time of submission of the tender that the tender has been signed by someone properly authorised thereto by resolution of the Directors, Members or Partners. Tenderers shall submit with their tenders the following information:

Single Company, Close Corporation or Partnership

Signatories for companies shall confirm their authority by attaching to this form a copy of the relevant resolution of the board of directors, duly signed and dated.

By resolution of the board of directors taken on (*Date*).....
Mr/Ms (*Print Name*) .....
has been duly authorized to sign all documents in connection with this tender / contract on behalf of.....
(*Print Company Name*).....
.....
Signed on behalf of Company .....
In his/her capacity as.....
Date .....

Joint Ventures

We, the undersigned, are submitting this tender offer in joint venture and hereby authorize;
Mr/Ms..... , authorised signatory
of the company, close corporation, or partnership .....
acting in the capacity of lead partner, to sign all documents in connection with the tender offer and any contract resulting from it on our behalf.

Date .....

NAME OF FIRM	ADDRESS	DULY AUTHORISED SIGNATORY
Lead partner		Signature, Name &Designation
		Signature, Name &Designation
		Signature, Name &Designation

Note: A copy of the Joint Venture Agreement, showing clearly the **percentage contribution of each partner** to the joint venture, shall be appended to this schedule. Lead partner need to be clearly stated.

SIGNED ON BEHALF OF TENDERER:	
NAME, SURNAME & POSITION	
DATE	

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Schedule 5: Declaration of Tenderer's past Supply Chain Management practices (MBD8)

Where the entity tendering is a joint venture, each party to the joint venture must sign a declaration in terms of the Municipal Finance Management Act, 56 of 2003, and attach it to this schedule.

1 The tender offer of any tenderer may be rejected if that tenderer or any of its directors/members have:

a) abused the municipality's / municipal entity's supply chain management system or committed any improper conduct in relation to such system;
b) been convicted for fraud or corruption during the past five years;
c) willfully neglected, reneged on or failed to comply with any government, municipal or other public sector contract during the past five years; or
d) been listed in the Register for Tender Defaulters in terms of section 29 of the Prevention and Combating of Corrupt Activities Act (No 12 of 2004).

2 In order to give effect to the above, the following questionnaire must be completed and submitted with the bid.

Item	Question	Yes	No
2.1	Is the Tenderer or any of its directors listed on the National Treasury's Database of Restricted Suppliers as a company or person prohibited from doing business with the public sector? (Companies or persons who are listed on this Database were informed in writing of this restriction by the Accounting Officer/Authority of the institution that imposed the restriction after the *audi alteram partem* rule was applied). **The Database of Restricted Suppliers now resides on the National Treasury's website www.treasury.gov.za and can be accessed by clicking on its link at the bottom of the home page.**	Yes ☐	No ☐
2.1.1	If so, furnish particulars:		
2.2	Is the Tenderer or any of its directors listed on the Register for Tender Defaulters in terms of section 29 of the Prevention and Combating of Corrupt Activities Act, 12 of 2004? **The Register for Tender Defaulters can be accessed on the National Treasury's website (www.treasury.gov.za) by clicking on its link at the bottom of the home page.**	Yes ☐	No ☐
2.2.1	If so, furnish particulars:		
2.3	Was the Tenderer or any of its directors convicted by a court of law (including a court of law outside the Republic of South Africa) for fraud or corruption during the past five years?	Yes ☐	No ☐
2.3.1	If so, furnish particulars:		

2.4	Does the Tenderer or any of its directors owe any municipal rates and taxes or municipal charges to the municipality / municipal entity, or to any other municipality / municipal entity, that is in arrears for more than three months?	Yes ☐	No ☐
2.4.1	If so, furnish particulars:		
2.5	Was any contract between the Tenderer and the municipality / municipal entity or any other organ of state terminated during the past five years on account of failure to perform on or comply with the contract?	Yes ☐	No ☐
2.5.1	If so, furnish particulars:		

I, _____, the undersigned,
(full name in block letters)

certify that the information furnished on this declaration form is true and correct, and accept that, in addition to cancellation of a contract, action may be taken against me should this declaration prove to be false.

SIGNED ON BEHALF OF TENDERER:	
NAME, SURNAME & POSITION	
DATE	

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REFURBISHMENT OF VARIOUS ROADS AND STORMWATER IN LANGEBERG MUNICIPALITY; FOR A PERIOD OF THREE (3) YEARS

Schedule 6: **Declaration of interest – State Employees (MBD 4 amended)**

- No bid will be accepted from:
  - 1.1 persons in the service of the state[1], or
  - 1.2 if the person is not a natural person, of which any director, manager or principal shareholder[2] or stakeholder is in the service of the state, or
  - 1.3 from persons, or entities of which any director, manager or principal shareholder or stakeholder, has been in the service of the Langeberg Municipality during the twelve (12) months after the Langeberg Municipality employee has left the employ of the Langeberg Municipality, or
  - 1.4 from an entity who has employed a former Langeberg Municipality employee who was at a level of T14 of higher at the time of leaving the LANGEBERG Municipality's employ and involved in any of the Langeberg Municipality's bid committees for the bid submitted, if:
    - 1.4.1 the Langeberg Municipality employee left the Langeberg Municipality's employment voluntarily, during a period of twelve (12) months after the Langeberg Municipality employee has left the employ of the Langeberg Municipality;
    - 1.4.2 the Langeberg Municipality employee left the Langeberg Municipality's employment whilst facing disciplinary action by the Langeberg Municipality, during a period of twenty-four (24) months after the Langeberg Municipality employee has left the employ of the Langeberg Municipality, or any other period prescribed by applicable legislative provisions, after having left the Langeberg Municipality's employ.

- Any person, having a kinship with persons in the service of the state, including a blood relationship, may make an offer or offers in terms of this invitation to bid. In view of possible allegations of favouritism, should the resulting bid, or part thereof, be awarded to persons connected with or related to persons in service of the state, it is required that the tenderer or their authorised representative declare their position in relation to the evaluating/adjudicating authority.

3 In order to give effect to the above, the following questionnaire must be completed and submitted with the bid.

3.1 Full Name of tenderer or his or her representative:……

3.2 Identity Number:……..

3.3 Position occupied in the Company (director, trustee, shareholder[2]):……

3.4 Company or Close Corporation Registration Number:……

3.5 Tax Reference Number:……

3.6 VAT Registration Number:……

3.7 The names of all directors / trustees / shareholders members, their individual identity numbers and state employee numbers must be indicated in paragraph 4 below.

3.8 Are you presently in the service of the state? **YES / NO**

3.8.1 If yes, furnish particulars:

……
……
……

3.9 Have you been in the service of the state for the past twelve months? **YES / NO**

3.9.1 If yes, furnish particulars:
……
……
……

3.10 Do you have any relationship (family, friend, other) with persons in the service of the state and who may be involved with the evaluation and or adjudication of this bid? **YES / NO**

3.10.1 If yes, furnish particulars:
……
……
……
……

3.11 Are you, aware of any relationship (family, friend, other) between any other supplier and any persons in the service of the state who may be involved with the evaluation and or adjudication of this bid? **YES / NO**

3.11.1 If yes, furnish particulars
……
……
……
……

3.12 Are any of the company's directors, trustees, managers, principle shareholders or stakeholders in service of the state? **YES / NO**

3.12.1 If yes, furnish particulars:
……
……
……
……

3.13 Are any spouse, child or parent of the company's directors, trustees, managers, principle shareholders or stakeholders in service of the state? **YES / NO**

3.13.1 If yes, furnish particulars:
……
……
……
……

13.4 Do you or any of the directors, trustees, managers, principle shareholders, or stakeholders of this company have any interest in any other related companies or business whether or not they are bidding for this contract? **YES / NO**

3.14.1 If yes, furnish particulars:
……

……
……
……

3.15 Have you, or any of the directors, trustees, managers, principle shareholders, or stakeholders of this company been in the service of the LANGEBERG Municipality in the past twelve months? **YES / NO**

3.15.1 If yes, furnish particulars:
……
……
……
……

3.16 Do you have any employee/s who was/were in the service of the LANGEBERG Municipality at a level of T14 or higher at the time they left the employ of the LANGEBERG Municipality, and who was involved in any of the LANGEBERG Municipality's bid committees for this bid? **YES / NO**

3.16.1 If yes, furnish particulars:
……
……
……

4. Full details of directors / trustees / members / shareholders.

Full Name	Identity Number	State Employee Number

If the above table does not sufficient to provide the details of all directors / trustees / shareholders, please append full details to the tender submission.

The tenderer hereby certifies that the information set out in this schedule and/or attached thereto is true and correct, and acknowledges that failure to properly and truthfully complete this schedule may result in the tender being disqualified, and/or (in the event that the tenderer is successful) the cancellation of the contract, restriction of the tenderer or the exercise by the employer of any other remedies available to it

[1] MSCM Regulations: "in the service of the state" means to be –

(a) a member of –
- *(i) any municipal council;*
- *(ii) any provincial legislature; or*
- *(iii) the national Assembly or the national Council of provinces;*

(b) a member of the board of directors of any municipal entity;
(c) an official of any municipality or municipal entity;
(d) an employee of any national or provincial department, national or provincial public entity or constitutional institution within the meaning of the Public Finance Management Act, 1999 (Act No.1 of 1999);
(e) an executive member of the accounting authority of any national or provincial public entity; or
(f) an employee of Parliament or a provincial legislature.

[2] Shareholder" means a person who owns shares in the company and is actively involved in the management of the company or business and exercises control over the company.

SIGNED ON BEHALF OF TENDERER:	
NAME, SURNAME & POSITION	
DATE	

LANGEBERG MUNICIPALITY

TENDER 20/2025

REFURBISHMENT OF VARIOUS ROADS AND STORMWATER IN LANGEBERG MUNICIPALITY; FOR A PERIOD OF THREE (3) YEARS

Schedule 7:	Authorisation for the deduction of outstanding amounts owed to the Langeberg Municipality

To: **THE MUNICIPAL MANAGER, LANGEBERG MUNICIPALITY**

From: _____

(Name of tenderer)

The tenderer:

a) hereby acknowledges that according to SCM Regulation 38(1)(d)(i) the Municipal Manager may reject the tender of the tenderer if any municipal rates and taxes or municipal service charges owed by the tenderer (or any of its directors/members/partners) to the LANGEBERG MUNICIPALITY, or to any other municipality or municipal entity, are in arrears for more than 3 (three) months; and

b) therefore hereby agrees and authorises the LANGEBERG MUNICIPALITY to deduct the full amount outstanding by the Tenderer or any of its directors/members/partners from any payment due to the tenderer; and

c) confirms the information as set out in the tables below for the purpose of giving effect to b) above;

d) The tenderer hereby certifies that the information set out in this schedule and/or attached hereto is true and correct, and acknowledges that failure to properly and truthfully complete this schedule may result in steps being taken against the tenderer, the tender being disqualified, and/or (in the event that the tenderer is successful) the cancellation of the contract and/or steps in terms of abuse of the Supply Chain Management Policy.

Physical Business address of the Tenderer	Municipal Account number(s)

If there is not enough space for all the names, please attach the additional details to the Tender Document

Name of Director / Member / Partner	Identity Number	Physical residential address of Director / Member / Partner	Municipal Account number(s)

SIGNED ON BEHALF OF TENDERER:	
NAME, SURNAME & POSITION	
DATE	

LANGEBERG MUNICIPALITY

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REFURBISHMENT OF VARIOUS ROADS AND STORMWATER IN LANGEBERG MUNICIPALITY; FOR A PERIOD OF THREE (3) YEARS

Schedule 8: **Declaration in respect of compliance with labour legislation**

Tenderers must be registered with the relevant Bargaining Council as contained in the tender conditions and must append to this schedule a certificate of compliance / letter of good standing in terms of the relevant Government Gazette that indicates compliance / validity at the time of tender award.

Each party to a Consortium/Joint Venture shall append separate certificates in the above regard.

Declaration in respect of labour legislation

The tenderer, by signing this schedule, declares that it will comply with all labour legislation, as may be applicable.

SIGNED ON BEHALF OF TENDERER:	
NAME, SURNAME & POSITION	
DATE	

LANGEBERG MUNICIPALITY

TENDER 20/2025

REFURBISHMENT OF VARIOUS ROADS AND STORMWATER IN LANGEBERG MUNICIPALITY; FOR A PERIOD OF THREE (3) YEARS

Schedule 9:	**Declaration for procurement above R10 million (MBD5)**

For all procurement expected to exceed R10 million (all applicable taxes included), bidders must complete the following questionnaire:

1. Are you by law required to prepare annual financial statements for auditing?***YES / NO**

   1.1. If yes, submit audited annual financial statements for the past three years or since the date of establishment if established during the past three years.

   ……

   ……

2. Do you have any outstanding undisputed commitments for municipal services towards any municipality for more than three months or any other service provider in respect of which payment is overdue for more than 30 days?***YES / NO**

   2.1 If no, this serves to certify that the bidder has no undisputed commitments for municipal services towards any municipality for more than three months or other service provider in respect of which payment is overdue for more than 30 days.

   2.2 If yes, provide particulars.

   ……

   ……

3. Has any contract been awarded to you by an organ of state during the past five years, including particulars of any material non-compliance or dispute concerning the execution of such contract?***YES / NO**

   3.1 If yes, furnish particulars

   ……

   ……

4. Will any portion of goods or services be sourced from outside the Republic, and, if so, what portion and whether any portion of payment from the municipality / municipal entity is expected to be transferred out of the Republic?***YES / NO**

   4.1 If yes, furnish particulars

   ……

   ……

** Delete if not applicable*

CERTIFICATION:
I, THE UNDERSIGNED (NAME)……
CERTIFY THAT THE INFORMATION FURNISHED ON THIS DECLARATION FORM IS CORRECT. I ACCEPT THAT THE STATE MAY ACT AGAINST ME SHOULD THIS DECLARATION PROVE TO BE FALSE.

SIGNED ON BEHALF OF TENDERER:	
NAME, SURNAME & POSITION	
DATE	

LANGEBERG MUNICIPALITY

TENDER 20/2025

REFURBISHMENT OF VARIOUS ROADS AND STORMWATER IN LANGEBERG MUNICIPALITY; FOR A PERIOD OF THREE (3) YEARS

Schedule 10: Confirmation of Central Supplier Database (CSD) registration

CENTRAL SUPPLIER DATABASE REGISTRATION		
COMPANY NAME	**REGISTERED YES/NO**	**REGISTRATION NUMBER IF APPLICABLE**

SIGNED ON BEHALF OF TENDERER:	
NAME, SURNAME & POSITION	
DATE	

LANGEBERG MUNICIPALITY

TENDER 20/2025

REFURBISHMENT OF VARIOUS ROADS AND STORMWATER IN LANGEBERG MUNICIPALITY; FOR A PERIOD OF THREE (3) YEARS

Schedule 11: Tax Clearance Certificate

SARS Tax Compliance Status PIN	
COMPANY NAME	**SARS Tax Compliance Status PIN**

Bidders are required to submit their unique personal identification number (pin) issued by SARS to enable the organ of state to view the taxpayers' profile and tax status.

Application for the tax compliance status (TCS) certificate or pin may also be made via e-filing. In order to use this provision, taxpayers will need to register with SARS as e-filers through the website www.sars.gov.za.

Bidders may also submit a printed TCS certificate together with the bid (valid and original). In Bids where Consortia/Joint Venture/Sub-contractors are involved each party must submit a separate and Original Valid Tax Clearance Certificate.

Failure to submit proof of good standing with SARS (Tax Clearance Certificate) will result in the invalidation of the tender/bid. **Certified copies of the Tax clearance Certificate will not be acceptable.**

SIGNED ON BEHALF OF TENDERER:	
NAME, SURNAME & POSITION	
DATE	

LANGEBERG MUNICIPALITY

TENDER 20/2025

REFURBISHMENT OF VARIOUS ROADS AND STORMWATER IN LANGEBERG MUNICIPALITY; FOR A PERIOD OF THREE (3) YEARS

Schedule 12: **Confirmation of Contractor Enterprise Registration**

CIDB REGISTRATION

We hereby confirm our registration on Construction Industry Development Board (CIDB) Contractor Database:

COMPANY NAME	CIDB CONTRACTOR GRADING DESIGNATION	CRS REGISTRATION NUMBER AS APPLICABLE

I/We attach a printed copy of the Active Contractor's Listing off the CIDB website www.cidb.org.za as documentary proof of the Contractor's Registration issued by the Construction Industry Development Board (CIDB) to this schedule.

Where a tenderer satisfies CIDB Contractor grading designation requirements through joint venture formation, such tenderers must submit the Certificates of Contractor Registration in respect of each partner.

Failure to affix such documentation as proof of Contractor Enterprise registration as prescribed to this Schedule shall result in this tender not being further considered for the award of the Contract.

Number of sheets appended by the tenderer to this Schedule ..... (If nil, enter NIL).

SIGNED ON BEHALF OF TENDERER:	
NAME, SURNAME & POSITION	
DATE	

LANGEBERG MUNICIPALITY

TENDER 20/2025

REFURBISHMENT OF VARIOUS ROADS AND STORMWATER IN LANGEBERG MUNICIPALITY; FOR A PERIOD OF THREE (3) YEARS

Schedule 13: Tenderer's banking details

Notes to tenderer:

1. **The tenderer shall attach to this form a letter from the bank at which he declares he conducts his account. The contents of the bank's letter must state the credit rating that it, in addition to the information required below, accords to the tenderer for the business envisaged by this tender. The Employer will also do an independent Bank Rating investigation via the Employer's Agent's independent source.**
2. **The tenderer's banking details as they appear below shall be completed.**
3. **If the tenderer is a joint venture enterprise, details of all the members of the joint venture shall be similarly provided and attached to this form. The nominated bank account that will be used for this project need to be completed below. Only one bank account may be used, shown below.**

The method used to obtain a bank rating is an online service provided by ABSA bank. If the tendered contract period is three months or more, an average 3-month cash flow for each tender submitted will be calculated and used as input into the online service. This process ensure that an equivalent method is used when determining the bank ratings of each tenderer. The Employer will obtain codes from the relevant independent financial institutions. The evaluation of your offer will be based on the Bank Rating received from our own independent investigation and not the Bank Rating attached by the tenderer himself. This is to ensure a fair and equal evaluation of bids.

Bidders must provide their banking details below.

The tenderer shall provide the following:

Name of Account Holder: .....

Account Number: .....

Bank name: .....

Branch Number: .....

Bank and branch contact details .....

.....

.....

Number of sheets appended by the tenderer to this Schedule ..... (If nil, enter NIL).

SIGNED ON BEHALF OF TENDERER:	
NAME, SURNAME & POSITION	
DATE	

LANGEBERG MUNICIPALITY

TENDER 20/2025

REFURBISHMENT OF VARIOUS ROADS AND STORMWATER IN LANGEBERG MUNICIPALITY; FOR A PERIOD OF THREE (3) YEARS

Schedule 14: Schedule of work experience of Tenderer

The tenderer shall insert in the spaces provided below a list of completed contracts with a price and scope of similar nature. This information is deemed to be material to the award of the Contract. Failure to do so during tender phase will lead to disqualification of tenderer.

Projects of a similar scope and nature is regarded as:
- Asphalt Road Construction
- Interlocking Paving with Kerbing, Channelling and Stormwater

Please note that no tenderer will be contacted to clarify any experience or construction equipment, or plant submitted with this bid. If insufficient information is shown, the tenderer will not be contacted for clarification.
The information provided in this schedule will be utilized to calculate the pre-qualification functionality scores. Tenderers must have successfully completed (please note that current incomplete projects will not be included in the evaluation) at **least 5 projects of a similar scope and nature in the last 10 years to score full marks on this criterion.**

A detailed list of successfully completed projects must be completed below (or attached to this schedule).

COMPLETED SIMILAR CONTRACTS				
EMPLOYER (NAME, TEL No AND FAX No)	**CONSULTING ENGINEER (NAME, TEL No AND FAX No)**	**NATURE OF WORK**	**VALUE OF WORK R(m)**	**DATE COMPLETED**

CURRENT SIMILAR PROJECTS				
EMPLOYER (NAME, TEL No AND FAX No)	**CONSULTING ENGINEER (NAME, TEL No AND FAX No)**	**NATURE OF WORK**	**VALUE OF WORK R(m)**	**DATE COMPLETED**

Number of sheets appended by the tenderer to this Schedule ..... (If nil, enter NIL).

SIGNED ON BEHALF OF TENDERER:	
NAME, SURNAME & POSITION	
DATE	

LANGEBERG MUNICIPALITY

TENDER 20/2025

REFURBISHMENT OF VARIOUS ROADS AND STORMWATER IN LANGEBERG MUNICIPALITY; FOR A PERIOD OF THREE (3) YEARS

Schedule 15: **Details of qualifications and experience of staff**

Tenderers shall set out in the Schedule hereunder details of the Construction Manager and General Foreman's experience in work of a similar nature to that for which their Tender is submitted. Detailed, project specific CV's to be included in this Schedule. Failure to do so during tender phase will lead to disqualification of tenderer.

Construction managers must have successfully **completed** (please note that current projects will not be included in the evaluation) at least 5 projects of a similar scope and nature in the last 10 years to score full marks on this criterion. Projects of a similar scope and nature is regarded as:

- Asphalt Road Construction
- Interlocking Paving with Kerbing, Channelling and Stormwater

Please note that no tenderer will be contacted to clarify any experience or construction equipment, or plant submitted with this bid. If insufficient information is shown, the tenderer will **not** be contacted for clarification.

CONSTRUCTION MANAGER/SITE AGENT	**NAME**: ……			
CLIENT/CLIENT AGENT'S NAME AND CONTACT DETAILS	**NATURE OF WORK**	**POSITION HELD**	**VALUE OF WORK**	**YEAR COMPLETED**

GENERAL FOREMAN/CONSTRUCTION SUPERVISOR	**NAME**: ……			
CLIENT/CLIENT AGENT'S NAME AND CONTACT DETAILS	**NATURE OF WORK**	**POSITION HELD**	**VALUE OF WORK**	**YEAR COMPLETED**

Number of sheets appended by the tenderer to this Schedule ..... (If nil, enter NIL).

SIGNED ON BEHALF OF TENDERER:	
NAME, SURNAME & POSITION	
DATE	

LANGEBERG MUNICIPALITY

TENDER 20/2025

REFURBISHMENT OF VARIOUS ROADS AND STORMWATER IN LANGEBERG MUNICIPALITY; FOR A PERIOD OF THREE (3) YEARS

Schedule 16: Schedule of construction equipment

The tenderer shall state below what construction equipment will be available for this Contract. The tenderer shall differentiate, if applicable, between construction equipment immediately available and construction equipment which will become available by virtue of outstanding orders, and indicate what further construction equipment will be acquired or hired for the work should he be awarded the Contract.

CONSTRUCTION EQUIPMENT IMMEDIATELY AVAILABLE

DESCRIPTION, SIZE, CAPACITY	NUMBER

CONSTRUCTION EQUIPMENT ON ORDER

(State details of arrangements made, with delivery dates)

DESCRIPTION, SIZE, CAPACITY	NUMBER

CONSTRUCTION EQUIPMENT THAT WILL BE ACQUIRED OR HIRED

(State details of delivery arrangements)

DESCRIPTION, SIZE, CAPACITY	NUMBER

Number of sheets appended by the tenderer to this Schedule ..... (If nil, enter NIL).

SIGNED ON BEHALF OF TENDERER:	
NAME, SURNAME & POSITION	
DATE	

LANGEBERG MUNICIPALITY

TENDER 20/2025

REFURBISHMENT OF VARIOUS ROADS AND STORMWATER IN LANGEBERG MUNICIPALITY; FOR A PERIOD OF THREE (3) YEARS

Schedule 17: Preliminary programme

The tenderer shall attach a preliminary programme, reflecting the proposed sequence and tempo of execution of the various activities comprising the work for the Contract, to this page.

This programme shall be in the form of a bar chart (Gantt chart) or similar acceptable time/activity form reflecting the proposed sequence and tempo of the various activities and the quantities that will be carried out every week under each of the elements, comprising the work for this contract. The programme shall also indicate the point where the tenderer intends to commence work operations and the direction in which the work will proceed. The working hours shall be indicated.

The tenderer shall also take into account the additional requirements stated in the Project Specifications when drawing up the programme.

Details of the preliminary programme shall be appended to this Schedule.

Number of sheets, appended by the tenderer to this Schedule ..... (If nil, enter NIL).

SIGNED ON BEHALF OF TENDERER:	
NAME, SURNAME & POSITION	
DATE	

LANGEBERG MUNICIPALITY

TENDER 20/2025

REFURBISHMENT OF VARIOUS ROADS AND STORMWATER IN LANGEBERG MUNICIPALITY; FOR A PERIOD OF THREE (3) YEARS

Schedule 18: Proposed work plan

The tenderer shall append their proposed work plan to this Schedule.

It should be noted that while a programme may form part of the required work plan, more than a programme is expected in response to this requirement. The work plan must indicate the approach and methodology that the tenderer intends following to reach the required outcomes. The work plan must show that the tenderer has comprehended the Scope of Work and has good insight as to what actions or activities are required to comply with the Employer's objectives.

The proposed work plan must not exceed two A4 pages.

SIGNED ON BEHALF OF TENDERER:	
NAME, SURNAME & POSITION	
DATE	

LANGEBERG MUNICIPALITY

TENDER 20/2025

REFURBISHMENT OF VARIOUS ROADS AND STORMWATER IN LANGEBERG MUNICIPALITY; FOR A PERIOD OF THREE (3) YEARS

Schedule 19: Schedule of estimated monthly expenditure

Not applicable for term contract, expected monthly expenditure will be requested upon successful appointment.

SIGNED ON BEHALF OF TENDERER:	
NAME, SURNAME & POSITION	
DATE	

LANGEBERG MUNICIPALITY

TENDER 20/2025

REFURBISHMENT OF VARIOUS ROADS AND STORMWATER IN LANGEBERG MUNICIPALITY; FOR A PERIOD OF THREE (3) YEARS

Schedule 20: **Schedule of sub-contractors**

We notify you that it is our intention to employ the following sub-contractors for work (excluding work covered by provisional sums and contingencies) in this contract.

Acceptance of this tender shall not be construed as approval of all or any of the listed sub-contractors. Should any of the sub-contractors not be approved subsequent to acceptance of the tender, this shall in no way invalidate the contract, and the tendered unit rates for the various items making up the work activities shall remain final and binding.

Local Sub-Contractors must be utilized.

SUB-CONTRACTORS		
Sub-contractor's name	Work activities to be undertaken by the Sub-contractor	Estimated value of work (Rand)

Number of sheets appended by the tenderer to this Schedule ..... (If nil, enter NIL).

SIGNED ON BEHALF OF TENDERER:	
NAME, SURNAME & POSITION	
DATE	

LANGEBERG MUNICIPALITY

TENDER 20/2025

REFURBISHMENT OF VARIOUS ROADS AND STORMWATER IN LANGEBERG MUNICIPALITY; FOR A PERIOD OF THREE (3) YEARS

Schedule 21: **Health and Safety plan**

Tenderers are referred to the requirements of Clause C.2.18.4 in Part T1.2 Tender Data and shall append the required draft Health and Safety Plan to this Schedule.

Number of sheets appended by the tenderer to this Schedule ..... (If nil, enter NIL).

SIGNED ON BEHALF OF TENDERER:	
NAME, SURNAME & POSITION	
DATE	

LANGEBERG MUNICIPALITY

TENDER 20/2025

REFURBISHMENT OF VARIOUS ROADS AND STORMWATER IN LANGEBERG MUNICIPALITY; FOR A PERIOD OF THREE (3) YEARS

Schedule 22: Proposed deviations and qualifications by tenderer

The Tenderer should record any **proposed** deviations or qualifications he may wish to make to the tender documents in this Returnable Schedule. Alternatively, a tenderer may state such proposed deviations and qualifications in a covering letter attached to his tender and reference such letter in this schedule. Any proposed deviations or qualifications contained in a covering letter which is not referenced in this schedule will not be considered.

The Tenderer's attention is drawn to clause C.3.8 of the Standard Conditions of Tender referenced in the Tender Data regarding the Employer's handling of material deviations and qualifications.

If no deviations or qualifications are proposed, the schedule hereunder is to be marked NIL and signed by the Tenderer.

PAGE	CLAUSE OR ITEM	PROPOSED DEVIATION OR QUALIFICATION

Number of sheets appended by the tenderer to this Schedule ..... (If nil, enter NIL).

SIGNED ON BEHALF OF TENDERER:	
NAME, SURNAME & POSITION	
DATE	

LANGEBERG MUNICIPALITY

TENDER 20/2025

REFURBISHMENT OF VARIOUS ROADS AND STORMWATER IN LANGEBERG MUNICIPALITY; FOR A PERIOD OF THREE (3) YEARS

Schedule 23: Functionality criteria

The Tenderer shall provide information for the functionality criteria listed in this Returnable Schedule.

Please note that no tenderer will be contacted to clarify any experience or construction equipment, or plant submitted with this bid. If insufficient information is shown, the tenderer will be **deemed as non-responsive and not be considered truther.**

The Tenderer's attention is drawn to clause C.2.1.4.3 in the Tender Data for a more detailed explanation of the functionality criteria given in the table below and how the score will be calculated (with applicable values).

Please note that points scored for Quality (functionality) will not have an influence on the total tender evaluation points and will therefore not affect the ranking of the tenderers, it will only be regarded as a pre-qualification. The minimum points required to be eligible to tender is 70 out of a 100.

THE CRITERIA to be applied in evaluating the proposal is set out in the table below:

Calculate the points for functionality according to the following formula:

$$P_s = S_o/M_s \times A_p$$

Where P_s = Percentage scored for functionality by bid under consideration
S_o = Total score of bid/proposal under consideration
M_s = Maximum possible score = 500
A_p = percentage allocated for functionality = 100

Total points by bidder on functionality:

i) $P_{s(Criterion\ 1)}$ = (Indicator allocated/scored out of 5) x weight
ii) $P_{s(Criterion\ 2)}$ = (Indicator allocated/scored out of 5) x weight
$P_{s(TOTAL)} = [(P_{s(Criterion\ 1)} + P_{s(Criterion\ 2)}) / 5] \times 100$

Criteria can be amended to suit project complexity or omitted if not applicable.

Criterion	Weight
1) Relevant Experience (Returnable Schedule 14)	50%
2) Construction manager Experience (Returnable Schedule 15)	50%
Total	**100%**

EVALUATION CRITERION 1

Tenderers must have successfully **completed** (please note that current projects will not be included in the evaluation) at least 5 projects of a similar scope and nature in the last 10 years **with a minimum value of R 5 000 000.00 per project** to score full marks on this criterion. Refer to the table below for a measurement of how points will be awarded against this criterion.

A detailed list of successfully completed projects must be completed in/attached to **Schedule 14**.

Projects of a similar scope and nature are regarded as:

- Asphalt Road Construction
- Interlocking Paving with Kerbing, Channelling and Stormwater

Please note that no tenderer will be contacted to clarify any experience or construction equipment, or plant submitted with this bid. If insufficient information is shown, the tenderer will **not** be contacted for clarification.

5. RELEVANT EXPERIENCE	
INDICATOR	**Evaluation Criteria for Relevant Experience:** (number of similar projects completed by the contractor in the last 10 years)
0	The tenderer has completed zero projects in the last 10 years
1	The tenderer has completed only 1 project in the last 10 years
2	The tenderer has completed exactly 2 projects in the last 10 years
3	The tenderer has completed exactly 3 projects in the last 10 years
4	The tenderer has completed exactly 4 projects in the last 10 years
5	The tenderer has completed 5 or more projects in the last 10 years

EVALUATION CRITERION 2

Detailed, project specific CV's to be included in **Schedule 15** of the Returnable Documents. Failure to do so during tender phase will lead to disqualification of tenderer.

Construction managers must have successfully **completed** (please note that current projects will not be included in the evaluation) at least 5 projects of a similar scope and nature in the last 10 years to score full marks on this criterion. Refer to the table below for a measurement of how points will be awarded against this criterion. Failure to do so during tender phase will lead to disqualification of tenderer.

Projects of a similar scope and nature are regarded as:

- Asphalt Road construction
- Interlocking paving with kerbing and channelling.

Please note that no tenderer will be contacted to clarify any experience or construction equipment, or plant submitted with this bid. If insufficient information is shown, the tenderer will **not** be contacted for clarification.

If, during construction, the contractor wishes to replace the construction manager, the contractor will apply in writing to the Engineer as per clause 4.12 of the GCC 2015. Only similarly experienced and competent construction managers will be considered.

2. CONSTRUCTION MANAGER	
INDICATOR	**Evaluation Criteria for Construction manager:** (number of similar projects completed by the Construction manager in the last 10 years)
0	The Construction manager has completed zero projects in the last 10 years
1	The Construction manager has completed only 1 project in the last 10 years
2	The Construction manager has completed exactly 2 projects in the last 10 years
3	The Construction manager has completed exactly 3 or more projects in the last 10 years
4	The Construction manager has completed exactly 4 or more projects in the last 10 years
5	The Construction manager has completed 5 or more projects in the last 10 years

The functionality proposal will be evaluated individually on score sheets, by a representative evaluation panel according to the evaluation criteria indicated above. All service providers who scored less than 70 out of 100 points for functionality will not be considered further. At least 3 evaluators will evaluate the quality schedules separately.

NB: Points scored for Quality (functionality) will not have an influence on the total tender evaluation points.

Where the entity tendering is a Joint Venture the tender must be accompanied by a statement describing exactly what aspects of the work will be undertaken by each party to the joint venture (appended to Schedule 4, Part T2.2: Returnable Schedules).

SIGNED ON BEHALF OF TENDERER:	
NAME, SURNAME & POSITION	
DATE	

LANGEBERG MUNICIPALITY

TENDER 20/2025

REFURBISHMENT OF VARIOUS ROADS AND STORMWATER IN LANGEBERG MUNICIPALITY; FOR A PERIOD OF THREE (3) YEARS

Schedule 24: **Preference Schedule: Measuring B-BBEE in the construction sector**

PREFERENCE POINTS CLAIM FORM IN TERMS OF THE PREFERENTIAL PROCUREMENT REGULATIONS 2022
MBD 6.1

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

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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**

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:

(a) Price; and

(b) Specific Goals.

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

The maximum points for this tender are allocated as follows:

	POINTS
PRICE	**80**
SPECIFIC GOALS	**20**
Total points for Price and SPECIFIC GOALS	**100**

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 SERVICE

3.1. **POINTS AWARDED FOR PRICE**

3.1.1 **Application of preference point system**

3.1.1.1 The Municipality will, in the tender documents, stipulate —

(a) the preference point system applicable; and

(b) any specific goal as envisaged in section 2(1)(d) and (e) of the Preferential Procurement Act.

3.1.1.2 If it is unclear whether the 80/20 or 90/10 preference point system applies—

(a) in the case of a tender to generate income or to dispose of or lease assets, the highest acceptable tender; or

(b) in the case of any other tender, the lowest acceptable tender, must be used to determine the applicable preference point system.

3.1.2 Points for Price: 80/20 preference point system for acquisition of goods or services with Rand value equal to or above R30 000 and up to R50 million

3.1.2.1 The following formula must be used to calculate the points out of 80 for price in respect of a tender with a Rand value equal to or above R30 000 and up to a Rand value of R50 million, inclusive of all applicable taxes:

$$Ps = 80\left(1 - \frac{Pt - P\,min}{P\,min}\right)$$

Where-

Ps = Points scored for price of tender under consideration;

Pt = Price of tender under consideration; and

Pmin = Price of lowest acceptable tender.

3.1.2.2 A maximum of 20 points may be awarded to a tenderer for the specified goals envisaged in section 2(1)(d) and (e) of the Act.

3.1.2.3 The points scored must be rounded off to the nearest two decimal places.

3.1.2.4 The contract must be awarded to the tenderer scoring the highest points.

3.1.3 . Points for price: 90/10 preference point system for acquisition of goods or services with Rand value above R50 million

3.1.3.1 The following formula must be used to calculate the points out 90 for price in respect of a tender with a Rand value above R50 million, inclusive of all applicable taxes:

$$Ps = 90\left(1 - \frac{Pt - P\,min}{P\,min}\right)$$

Where-

Ps = Points scored for price of tender under consideration;

Pt = Price of tender under consideration; and

Pmin = Price of lowest acceptable tender.

3.1.3.2 A maximum of 10 points may be awarded to a tenderer for the specified goals envisaged in section 2(1)(d) and (e) of the Act.

3.1.3.3 The points scored must be rounded off to the nearest 2 decimal places.

3.1.3.4 The contract must be awarded to the tenderer scoring the highest points.

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

The following formula must be used to calculate the points for price in respect of a tender to generate income or to dispose of or lease assets, with a Rand value equal to, or above R 30 000 and up to a Rand value of R50 million, inclusive of all applicable taxes:

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

Where-

Ps = Points scored for price of tender under consideration;

Pt = Price of tender under consideration; and

Pmax = Price of highest acceptable tender.

3.2.1 A maximum of 20 points may be awarded to a tenderer for the specified goals envisaged in section 2(1)(d) and (e) of the Act.

3.2.2 The points scored must be rounded off to the nearest 2 decimal places.

3.3.3 The contract must be awarded to the tenderer scoring the highest points.

3.3.4 Points for price:90/10 preference point system for tenders to generate income or to dispose of or lease assets with Rand value equal to or above R50 million

3.3.5 The following formula must be used to calculate the points for price in respect of a tender to generate income or to dispose of or lease assets, with a Rand value above R50 million, inclusive of all applicable taxes:

$$Ps = 90\left(1 + \frac{Pt - Pmax}{Pmax}\right)$$

Where-

Ps = Points scored for price of tender under consideration;

Pt = Price of tender under consideration; and

Pmax = Price of highest acceptable tender.

3.3.6 A maximum of 10 points may be awarded to a tenderer for the specified goals envisaged in section 2(1)(d) and (e) of the Act.

3.3.7 The points scored must be rounded off to the nearest 2 decimal places.

3.3.8 The contract must be awarded to the tenderer scoring the highest points.

4. POINTS AWARDED FOR SPECIFIC GOALS

4.1 The tendering conditions will stipulate the specific goals, as contemplated in section 2(1)(d)(ii) of the Preferential Procurement Act, be attained.

4.2 A maximum of 20 points (80/20 preference points system) or 10 (90/10) preference points system), will be allocated for specific goals. These goals are:

(a) contracting with persons, or categories of persons, historically disadvantaged by unfair discrimination on the basis of race, gender or disability (BBBEE);

(b) Promotion of enterprises located in the municipal area

4.3 Regarding par 4.2 (a) 50% of the 20/10 points will be allocated to promote this goal and points will be allocated in terms of the BBBEE scorecard as follows:

B-BBEE Status Level of Contributor	Number of Points for Preference (80/20)	Number of Points for Preference (90/10)
1	20	10
2	18	9
3	16	8
4	12	5
5	8	4
6	6	3
7	4	2
8	2	1
Non-compliant contributor	0	0

4.4 A tenderer must submit proof of its BBBEE status level contributor [scorecard].

4.5 A tenderer failing to submit proof of BBBEE status level of contributor –

4.5.1 may only score in terms of the 80/90-point formula for price; and

4.5.2 scores 0 points out of 10/5 BBBEE status level of contributor, which is in line with section 2 (1) (d) (i) of the Act, where the supplier or service provider did not provide proof thereof.

4.6 Regarding par 4.2 (b) 50% of the **20/10 points** will be allocated to promote this goal. Points will be allocated as follows.

Locality of supplier	Points
Within the boundaries of the Langeberg municipality	10/5
Outside of the boundaries of the Langeberg municipality	0

4.7 The policy should not include Pre-qualification goals.

4.8 Any specific goal for which a point may be awarded, must be clearly specified in the invitation to submit a tender.

4.9 A tenderer failing to submit proof of required evidence to claim preferences for other specified goals, which is in line with section 2 (1) (d) (ii) of the Act.

4.9.1 may only score in terms of the 80/90-point formula for price; and

4.9.2 scores 0 points out of 10/5 of the relevant specific goals where the supplier or service provider did not stipulate.

4.10 The preference points scored by a tenderer must be added to the points scored for price.

4.11 The points scored must be rounded off to the nearest two decimal places.

4.12 The contract must be awarded to the tenderer scoring the highest procurement points.

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.)

The specific goals allocated points in terms of this tender	Number of points allocated (90/10 system) (To be completed by the organ of state)	Number of points allocated (80/20 system) (To be completed by the organ of state)	Number of points claimed (90/10 system) (To be completed by the tenderer)	Number of points claimed (80/20 system) (To be completed by the tenderer)
BBBEE preference points system	05	10		
Promotion of enterprises located in the municipal area	05	10		

5. DECLARATION WITH REGARD TO COMPANY/FIRM

Name of company/firm……

5.1. Company registration number: ……...

5.2. 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]

5.3. 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.

……
SIGNATURE(S) OF TENDERER(S)

SURNAME AND NAME: ……

DATE: ……

ADDRESS: ……

……

……

……

LANGEBERG MUNICIPALITY

TENDER 20/2025

REFURBISHMENT OF VARIOUS ROADS AND STORMWATER IN LANGEBERG MUNICIPALITY; FOR A PERIOD OF THREE (3) YEARS

Schedule 25: **Record of addenda to tender documents**

We confirm that the following communications received from the Employer before the submission of this tender offer, amending the tender documents, have been taken into account in this tender offer:

	Date	Title or Details
1.		
2.		
3.		
4.		
5.		
6.		
7.		
8.		
9.		
10.		

Attach additional pages if more space is required.

SIGNED ON BEHALF OF TENDERER:	
NAME, SURNAME & POSITION	
DATE	

LANGEBERG MUNICIPALITY

TENDER 20/2025

REFURBISHMENT OF VARIOUS ROADS AND STORMWATER IN LANGEBERG MUNICIPALITY; FOR A PERIOD OF THREE (3) YEARS

Part C1: **Agreements and Contract Data**

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LANGEBERG MUNICIPALITY

TENDER 20/2025

REFURBISHMENT OF VARIOUS ROADS AND STORMWATER IN LANGEBERG MUNICIPALITY; FOR A PERIOD OF THREE (3) YEARS

C1.1 Form of Offer and Acceptance

Offer

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

TENDER 20/2025: REFURBISHMENT OF VARIOUS ROADS AND STORMWATER IN LANGEBERG MUNICIPALITY; FOR A PERIOD OF THREE (3) YEARS

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 conditions of tender.

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 document to the tenderer before the end of the period of validity stated in the tender data, whereupon the tenderer becomes the party named as the contractor in the conditions of contract identified in the contract data.

Signature(s): …… ……

Name(s): …… ……

Capacity: …… ……

Name of organization/tenderer: ……

Address of organization/tenderer: ……

……

Name and signature of witness: …… Date: ……

For official use.		
INITIALS OF MUN. OFFICIALS AT TENDER OPENING		
1.	**2.**	**3.**

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 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 agreement)
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 the above listed Parts.

Deviations from and amendments to the documents listed in the tender data and any addenda thereto as listed in the returnable 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. 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 securities, bonds, guarantees, proof of insurance and any other documents 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.

ONLY TO BE COMPLETED AT ACCEPTANCE STAGE

Notwithstanding anything contained herein, this agreement comes into effect on the date when the parties have signed the table below and confirms receipt from the employer of one fully completed original copy of this agreement, including the schedule of deviations (if any). The tenderer (now contractor) shall within five working days of the agreement coming into effect notify the employer in writing of any reason why he cannot accept the contents of this agreement as a complete and accurate memorandum thereof, failing which the agreement presented to the contractor shall constitute the binding contract between the parties.

The Parties	**Employer**	**Contractor**
Business Name		
Business Registration		
Tax number (VAT)		
Physical Address		
Accepted contract sum (incl. tax)		
Accepted contract duration		
Signed (who by signature hereto warrants authority)		
Name of signatory		
Signed: Date		
Signed: Location		
Signed: Witness		
Name of Witness		

Schedule of Deviations

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 conditions of tender.
2. 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, become the subject of agreements reached during the process of offer and acceptance, the outcome of such agreement shall be recorded here.
3. 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.
4. 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.

1 Subject . . . . . .

Details . . . . . .

. . . . . .

. . . . . .

. . . . . .

2 Subject . . . . . .

Details . . . . . .

. . . . . .

. . . . . .

. . . . . .

3 Subject . . . . . .

Details . . . . . .

. . . . . .

. . . . . .

. . . . . .

4 Subject . . . . . .

Details . . . . . .

. . . . . .

. . . . . .

. . . . . .

By the duly authorised representatives signing this agreement, 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 returnable 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.

LANGEBERG MUNICIPALITY

TENDER 20/2025

REFURBISHMENT OF VARIOUS ROADS AND STORMWATER IN LANGEBERG MUNICIPALITY; FOR A PERIOD OF THREE (3) YEARS

C1.2	Contract Data (Part 1)

Part 1: Contract Data provided by the Employer

GENERAL CONDITIONS OF CONTRACT

The following standardised General Conditions of Contract:

General Conditions of Contract for Construction Works, Third Edition, 2015

Prepared by the South African Institution of Civil Engineering (SAICE) shall apply to and from the General Conditions of Contract for this contract. Copies of these conditions of contract are obtainable from the South African Institution of Civil Engineering (SAICE), Private Bag X200, Halfway House 1685, Tel: (011) 805 5947, Fax: (011) 805 5971, e-mail: civilinfo@saice.org.za.

Prepared by the South African Institution of Civil Employer's Agenting (SAICE) shall apply to and from the General Conditions of Contract for this Contract. Copies of these conditions of contract are obtainable from the South African Institution of Civil Employer's Agenting (SAICE), Private Bag X200, Halfway House 1685, Tel: (011) 805 5947, Fax: (011) 805 5971, e-mail: civilinfo@saice.org.za.

Copies of the General Conditions of Contract are available for inspection and scrutiny at the offices of the Employer.
The General Conditions of Contract make several references to the Contract Data for specific data, which together with these conditions collectively describe the risks, liabilities and obligations of the contracting parties and the procedures for the administration of the Contract. The Contract Data shall have precedence in the interpretation of any ambiguity or inconsistency between it and the General Conditions of Contract. Each item of data given below is cross-referenced to the clause in the General Conditions of Contract to which it mainly applies.

The General Conditions of Contract shall be read in conjunction with the variations, amendments and additions set out in the Special Conditions of Contract below.

In the event of any discrepancy and/or ambiguity in the Contract, the following precedence will govern (priority in order from highest to lowest):

1. Contract Data
2. GCC
3. Project Specifications
4. Drawings
5. Bill of Quantities
6. SANS 1200

SPECIAL CONDITIONS OF CONTRACT

In this regard, the Standard Conditions of Contract – GCC 2015 is amended by the numbered clauses set out below, as follows:

(i) where the Standard Conditions of Contract – GCC 2015 contains no provision with the corresponding clause number, the clause set out herein is inserted into the Contract; and
(ii) where the Standard Conditions of Contract – GCC 2015 contains a provision with the corresponding clause number, it is amended, as set out herein.

Save as amended in terms of this document, the provisions of the Standard Conditions of Contract – GCC 2015 shall remain unchanged.

1.1 Definitions

1.1.1.1 "agreed" means agreed by the Employer and the Contractor; or the Employer's Agent and the Contractor expressly authorised in terms of the Contract, unless specifically stated otherwise.

1.1.1.5 "Commencement Date" means the date that the Contract, made in terms of the Form of Offer and Acceptance, comes into effect by signing the Acceptance part and returning one fully completed original copy of this document, the Contract Agreement.

1.1.1.7 "Contract" means the documentation of the agreement between the parties in terms of the Form of Offer and Acceptance, and such written amendments or additions to the Contract as may be agreed and signed by both parties.

1.1.1.13 "Defects Liability Period" means the period stated in the Contract Data, commencing from the issue of the Certificate of Completion or Certificates of Completion in the event of more than one Certificate of Completion having been issued for different portions of the Works, during which the Contractor has both the right and the obligation to make good defects in the materials, Plant and workmanship covered by the Contract.

1.1.1.16 "Employer's Agents" means the person named as the Employers' Agent in the Contract Data, or any other person appointed from time to time by the Employer, and of whom the Contractors is notified, in writing, to act as the Employers Agent for the purposes of the Contract as substitute for the Employer's Agent so named. In terms of this Contract the term "Employers Agent" will mean to be "Engineer" and vice versa.

1.1.1.14 "Due Completion Date" means the date or dates of the expiry of the time stated in the Contract Data for achieving Practical Completion for the whole or portions of the Works, calculated from the Commencement Date and as adjusted by such extensions of time or acceleration as may be allowed or agreed in terms of Contract.

1.1.1.20 "Form of Offer and Acceptance" means the document defined as the Contract Agreement that formalises the legal process of offer and acceptance and gives rise to the Contract.

1.1.1.35 **"**parties**"** means the Contractor and the Employer.

1.1.1.36 "approved programme" means the latest programme submitted by the Contractor and approved by the Employer's Agent. The latest programme approved by the Employer's Agent supersedes previous approved programmes.

1.2 Interpretations

1.2.1 Any written communication between the parties shall have been duly delivered if:
1.2.1.1 Handed to the addressee or to his duly authorise agent; or
1.2.1.2 Delivered at the address of the addressee as stated in the Contract Data, including an e-mail address; and
1.2.1.3 Any notice or claim required in accordance with this Contract shall be communicated separately from other communications, on a separate cover with specific reference to the clause in terms of which the communication was made
Provided that the Employer, Employer's Agent and Contractor shall be entitled, by written notice to each other, to change their said addresses.

1.2.6 Any act or communication, including but not limited to "accept, agree, appoint, approve, certify, decide, delegate, dispute, elect, grant, inform, instruct, issue, notice, object, order, record, refuse, request, require, state, dispute, call for" and their derivatives indicate an act to be carried out in writing.

1.4 Non Variation Clause

1.4.1 This Contract is the entire contract between the parties regarding the matters addressed in this Contract. No representations, terms, conditions or warranties not contained in this Contract shall be binding on the parties. No agreement or addendum varying, adding to, deleting or terminating this Contract including this clause shall be effective unless reduced to writing and signed by both parties.

2.4 Ambiguity or discrepancy

2.4.2 If compliance with any such instruction shall result in delay to Practical Completion and/or the incurrence of proven additional cost the Contractor shall be entitled to make a claim in accordance with Clause 10.1 as read with Clause 6.3.

2.5 Assignment

2.5.1 Neither the Contractor nor the Employer shall, without the written consent of the other, assign the Contract or any part thereof, or any obligation under the Contract, or cede any right or benefit thereunder. Such assignment or cession shall be null and void without the other parties consent.

3.1 Qualifications of the Employer's Agent

3.1.1 The natural person appointed by the Employer to administer the Contract shall be a registered professional in a built environment profession that is appropriate to the Scope of Work.

3.2 Functions of the Employer's Agent

3.2.1 The function of the Employer's Agent is to administer the Contract in accordance with the provisions of the Contract.

4.1 Extent of obligations and liability

4.1.1 The Contractor shall, save insofar as it is legally or physically impossible, design (to the extent provided in the Contract Data), execute and complete the Works and obligations remedy any defects therein in accordance with the provisions of the Contract.

4.1.2 Where the Contract Data provides that part of the Works shall be designed by the Contractor,

4.1.2.1 the relevant part of the Works shall be fit for such purposes for which it is intended as are specified in the Contract, and

4.1.2.2 the Contractor shall, notwithstanding approval by the Employer's Agent, be liable for any error or deficiency in any drawing or document supplied by him for that part of the Works, and for any loss or damage arising out of such error or deficiency.

4.1.2.3 the Contractor shall submit to the Employer's Agent the "as-built" documents and operation and maintenance manuals in accordance with the Scope of Works and in sufficient detail for the Employer to operate, maintain, dismantle, reassemble, adjust and repair this part of the Works. Such part shall not be considered to be completed for the purposes of issuing a Certificate of Practical Completion in terms of Clause 5.14.1 as read with the relevant Contract data until these documents and manuals have been submitted to the Employer's Agent.

4.1.4 The Contractor indemnifies the Employer against any liability for any breach of the provisions of Clause 4.1.

4.2 Employer's Agent's instructions

4.2.3 Should the Contractor fail to proceed with due diligence with any Employer's Agent's instruction, the Employer's Agent may notify the Contractor to proceed within 7 days from receipt of such notice. Without further notice, on default by the Contractor, the Employer may employ other parties or use its own resources to give effect to such instruction in addition to any other rights that the Employer may have inter alia in terms of Clause 9.2.1.3.6. The Employer may recover such costs from the Contractor resulting from same.

4.3 Legal provisions

4.3.3 The Employer and the Contractor shall enter into an agreement required for the construction of the Works in terms of the provisions of Section 37(2) of the Occupational Health and Safety Act (Act 85 of 1993) and the latest Construction Regulations promulgated thereunder.

4.12 Contractors Superintendence

4.12.2 The Contractor, or a competent and authorized agent or representative approved in writing by the Employers Agent (which approval may at any time be withdrawn in writing), hereinafter called the Construction Manager, shall be on site at all times when work is being performed, or when the Employers Agent shall, with reason, require his presence. The Construction Manager must be in possession of the following:
a) NQF level 5 for labour intensive construction methods.
b) Completed at least 5 projects by means of labour intensive construction.
c) Minimum ND Civil qualification.

5.3 Commencement of the Works

5.3.1 Upon the Employer's Agent's instruction the Contractor shall, save as may be otherwise provided in the Contract or be legally or physically impossible, commence executing the Works. Such instruction shall be subject to the submission by the Contractor, and approval by the Employer, of documentation required before commencement with Works execution, as set out in the Contract Data.

5.3.3 If the Employer's Agent's instruction to commence executing the Works, or to resubmit documentation with reasons after having found to be unacceptable by the Employer, is not received by the Contractor within 7 days from the actual date of the submission of all the documentation referred to in Clause 5.3.1, commencement of the Works shall be taken to be on the expiry of such 7 days. However, deemed commencement of the Works shall not be construed as approval of the documentation submitted.

5.4 Access to Site

5.4.3 If the Contractor suffers delay to Practical Completion and/or incurs proven additional cost from failure of the Employer to give access to or possession in accordance with the terms of this Clause, the Contractor shall be entitled to make a claim in accordance with Clause 10.1, for which purpose the time limits of 28 days provided in Clause 10.1.1.1 shall commence to run only from the time when access to or possession of the Site has actually been given.

5.6 Programme

5.6.1 The Contractor shall deliver to the Employer's Agent as part the documentation required before commencement with Works execution in accordance with Clause 5.3.1, an initial programme and method statement for carrying out the Works in order to meet the Due Completion Date.

5.6.2 The initial programme and all subsequent adjusted programmes shall show and, when relevant, describe in method statements, the entire scope of the Works to be performed including but not limited to:

5.6.2.1 The Commencement Date, commencement of the Works, Due Completion Date(s) or revisions thereof, and the planned date(s) of Practical Completion for the Works as a whole or in respect of different portions of the Works.
5.6.2.8 Health and safety requirements
5.6.2.9 Critical path including the links between all predecessors and successors for activities on the critical path

5.6.3 The Employer's Agent shall, within 7 days after the Contractor has submitted an initial or adjusted programme, approve such programme or rejecting same with reasons and instruct the Contractor to amend such programme. Reasons for rejecting a programme are *inter alia* that it is not in accordance with the Contract or is not reflecting the actual progress. The Employer's Agents failure to approve or reject with reasons the submitted programme,

5.6.3.1 in the event of the submitted programme being an adjusted programme, shall be considered to be the approved programme; and
5.6.3.2 in the event of the submitted programme being an initial programme, shall not be considered to be the approved programme. However, the Contractor shall have the right to suspend the Works in terms of Clause 5.11.1.3 and if the Contractor suffers delay to Practical Completion and/or incurs proven additional cost from such suspension, the Contractor shall be entitled to make a claim in accordance with Clause 10.1.

5.6.4 The programme, method statement and the cash flow forecast shall be subject to updates and review on a monthly basis. The Contractor shall deliver to the Employer's Agent an adjusted programme reflecting actual progress and updated dates in accordance with Clause 5.6.2, even though it may reflects that the planned date(s) of Practical Completion will be later than the corresponding Due Completion Date(s), every month, and in addition;

5.6.4.1 when instructed by the Employer's Agent,
5.6.4.2 when it no longer reflects the actual progress,
5.6.4.3 when a specific event, circumstance, act or omission may delay the execution of the Works, or
5.6.4.4 with each extension of time claim

5.6.5 The submission to and approval by the Employer's Agent of any programme, method statement and/or cash flow forecast or its adjustments, or the delivery of any other relevant particulars, shall not relieve the Contractor of any of his duties or responsibilities under the Contract.

5.7 Progress of the Works

5.7.3 The Employer's Agent may request the Contractor to submit, or the Contractor may submit to the Employer's Agent, a revised programme and cost determined in accordance with Clause 6.4 for accelerating the rate of progress to achieve Practical Completion before the Due Completion Date. If accepted by the Employer, the adjusted Due Completion Date and the conditions for payment of cost shall be agreed in writing and signed by the parties.

5.9 Instructions

5.9.3 The Contractor shall give adequate written notice to the Employer's Agent of any instructions or drawings, which the Contractor may require for the execution of the Works and the Employer's Agent shall deliver such instructions and/or drawings to the Contractor. The notice shall include details of the necessary drawing or instruction, details of by when it should be issued, and details of the nature and amount of the delay likely to be suffered if it is late.

5.11 Suspension of the Works

5.11.1 The Contractor may, after giving fourteen (14) days written notice to the Employer, with a copy to the Employer's Agent, (with specific reference to this Clause) suspend the progress of the Works where the Employer has failed in terms of Clause 6.10.4 to:

5.11.1.1 Deliver a payment certificate, or
5.11.1.2 Make full payment of the amount certified in the payment certificate without prejudice to the Contractor's other rights under this Contract or by law, or
5.11.1.3 Failed to approve an initial programme in terms of Clause 5.6.3.2

5.12 Extension of the time for Practical Completion

5.12.1 If circumstances of any kind whatsoever which occurred be such as fairly entitle the Contractor to an extension of time and will actually delay Practical Completion of the Works beyond the Due Completion Date, the Contractor shall claim in accordance with Clause 10.1 such extension of time as is appropriate. Such extension of time shall take into account any special non-working days and all relevant circumstances, including concurrent delays or savings of time which might apply in respect of such claim and the Due Completion Date will be revised accordingly.

5.12.2.2 No extension of time will be granted in respect of any delays attributed to normal climatic conditions. Normal climatic conditions shall be deemed to include normal rainfall and associated wet conditions and materials, strong winds and extremes of temperature. However, in the event that delays to critical activities exceed the number of working days listed below cumulatively for the construction period, then abnormal climatic conditions shall be deemed to exist, and an extension of time may be claimed in accordance with the provisions of Clause 5.12.

The cumulative days for normal climatic conditions must be indicated on the initial programme as a single bar item/activity and as the immediate predecessor to Practical Completion and on the critical path of the programme. The normal climatic conditions will be recorded on the specific days, as and when they occur. Should the days listed below for normal climatic conditions not be used, the days, will become float in terms of Clause 5.6.2 of the GCC 2015 (3rd Edition). The float shall belong to the project and shall only be taken up on prior approval by the Employers Agent.

The number of days quoted below shall be regarded as a fair estimate of the delays to be anticipated and allowed for under normal climatic conditions where inclement weather prevents or disrupts critical work.

January	2 days
February	3 days
March	4 days

April	4 days
May	4 days
June	5 days
July	5 days
August	4 days
September	4 days
October	3 days
November	2 days
December	2 days

Claims for delays for abnormal climatic conditions shall be accompanied by substantiating facts and evidence, which shall be submitted timeously as each day or half-day delay is experienced.

It shall be further noted that where the critical path is not affected, no extension of time for abnormal climatic conditions or for any other reason will be entertained.

5.12.2.5 Any delay, impediment, or prevention caused by or attributable to the Employer, Employer's Agent, the Employer's personnel or the Employer's other contractor's on the Site.

5.12.4 Instead of granting extension of time, if feasible, the Employer's Agent may request the Contractor to accelerate the rate of progress to achieve Practical Completion without extension of time and agree the cost for payment of such acceleration in accordance with Clause 5.7.3.

5.13 Penalties for delay

5.13.2.1 Refer to 1.2.2 Contract specific data.

5.14 Completion

5.14.1 Save as otherwise provided in the Contract, the Contractor shall be entitled to receive a Certificate of Practical Completion when the Works have reached Practical Completion.

When the Works are about to reach the said stage, the Contractor shall, in writing, request a Certificate of Practical Completion and the Employer's Agent shall, within 14 days after receiving such request, either where the Works;

5.14.1.1 has reached Practical Completion issue a Certificate of Practical Completion to the Contractor and to the Employer or
5.14.1.2 has not reached Practical Completion, issue a written list to the Contractor defining the incomplete work and defects to be rectified to achieve Practical Completion.

Should the Employer's Agent not issue a Certificate of Practical Completion or such a list within the 14 days, Practical Completion shall be considered to have been achieved on the expiry of the 14 days of the written request in terms of Clause 5.14.1.

5.14.2 As soon as the work referred to in the list issued in terms of Clause 5.14.1 has been duly completed and defects that manifested after the list was issued rectified, the Employer's Agent shall deliver to the Contractor and to the Employer a Certificate of Practical Completion together with a further written list setting out the work to be completed to justify the issuing of a Certificate of Completion.

5.14.6 The Employer need not occupy the Works before the Due Completion Date

5.14.7 If, in terms of the Contract Data stated for Clause 1.1.1.14, different times for achieving Practical Completion are specified in respect of different portions of the Works, the provisions for the Works as a whole shall apply with necessary adjustment in respect of such portions.

6.2 Security

6.2.1 The Contractor shall deliver to the Employer, as part of the documentation required before commencement with Works execution in accordance with Clause 5.3.1, at his cost, the type of security for the due performance of the Contract, as selected in the Contract Data.

6.2.2 If the Contractor fails to provide or maintain the security as selected in the Contract Data within the time period stated in Clause 5.3.2 or if the performance guarantee is not in accordance with the relevant pro forma performance guarantee, the Employer, in his sole discretion, may either

6.2.2.1 Hand over the Site to the Contractor and withhold payment from the Contractor until the amount withheld is equal to ten per cent (10%) of the Contract Price. Such amount shall be reduced to five per cent (5%) of the Contract Price when the Employer's Agent has issued a Certificate of Completion [5.14.4] and to zero per cent (0%) in the Final Payment Certificate [6.10.9] or

6.2.2.2 Terminate this Contract in terms of Clause 5.3.2 as read with Clause 9.2.1.3.2.

6.2.3 If the Contractor is to provide a performance guarantee as security, he shall ensure that it remains valid and enforceable until the Final Approval Certificate is issued. The performance guarantee shall specify an expiry date, and if the Contractor has not become entitled to receive the Final Approval Certificate of the Works by the date 28 days prior to the expiry date, the Contractor shall extend the validity of the performance guarantee until such time that work have been completed and any defects have been remedied.

6.7 Measurement of the Works

6..7.3.1 The Construction Manager identified in terms of Clause 4.12.2 will attend to assist the Employer's Agent in making such measurement, or to make such measurement in the presence of the Employer's Agent. Should the Construction Manager fail to attend, Clause 6.7.4.2 will apply.

6.8 Adjustment in rates and/or prices

6.8.2 Contract Price Adjustment (CPA):
Contract Price Adjustment will become applicable after a period of twelve (12) months from the commencement date of the contract. Thereafter, adjustments shall be effected annually, specifically at the end of months 12, 24, and 36.

Where applicable, in terms of the foregoing, 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 0,15.

The values of the coefficients are:
a = 0,20 b = 0,25 c = 0,50 d = 0,05

The base month is the eleventh month after the Commencement Date of the Contract.

In addition, the Contract Price Adjustment Schedule shall be amended as follows:

"L" is the "Labour Index" and shall be the Consumer Price Index (CPI per Province) for the National Province wherein the larger part of the Site is located, as published in the Statistical News Release, P0141 Table A of Statistics South Africa.

"P" is the "Plant Index" and shall be the Producer Price Index for Civil engineering plant as published in the Statistical News Release P0142.1, Table 12 of Statistics South Africa.

"M" is the "Materials Index" and shall be the Producer Price Index for materials for Building and construction – Civil engineering as published in the Statistical News Release P0142.1, Table 11 of Statistics South Africa.

"F" is the "Fuel Index" and shall be the Producer Price Index for Diesel at wholesale level – Coast as published in the Statistical News Release P0142.1, Table 12 of Statistics South Africa.

The amount "Ac" shall be sub-divided into Ac1 and Ac2, as appropriate, and each of these shall be multiplied by its Contract Price Adjustment Factor (CPAF), with the resultant amounts added together to produce the adjustment as envisaged in the CPA Schedule:

where

Ac1 is the proportion of Ac applicable to "Concrete works", and
Ac2 is the proportion of Ac applicable to "Roads and earthworks"

and where

Ac1 = T1 – S1 – D1 – E1 – G1 – Ap1, and
Ac2 = T2 – S2 – D2 – E2 – G2 – Ap2

in which formulae the values associated with the symbols T1 and T2…. Ap1 and Ap2 shall be applicable to the proportions of T …. Ap in "Bulk Earthworks" and "Township Roads and Services", respectively.

Furthermore, the value of the General Items shall be proportional to the value of work done and materials on Site in T1 and T2 respectively.

6.10 Payment

6.10.1 With regard to all amounts that become due to the Contractor in respect of the matters set out in Clauses 6.10.1.1,6.10.1.2,6.10.1.3,6.10.1.4, and 6.10.1.5 below, the Contractor shall deliver to the Employer's Agent a monthly statement for payment of all amounts he considers to be due to him (in such form and on such date as may be agreed between the Contractor and the Employer's Agent, failing to supply the statement within the provided date will result in a penalty payment of R5000 per day, as the Employer's Agent may require) and the Employer's Agent shall, by signed payment certificates issued to the Employer and the Contractor, certify the amount he considers to be due to the Contractor or the Employer, taking into account the following:

6.10.1.5 The value up to the percentage limit stated in the Contract Data of Plant and materials referred to in Clause 6.9.1 not yet built into the Permanent Works. No payment will be made for any Plant and/or materials off site, except if expressly agreed otherwise;

Provided that the Contractor has produced documentary evidence of ownership of such Plant and/or materials and has delivered to the Employer an indemnity, approved in writing by the Employer, against any claim to or in respect of such Plant and/or materials by reason of the Contractor's sequestration or liquidation, or of any defect in the Contractor's title to the Plant and/or materials.

6.10.4 The Employer's Agent shall deliver to the Employer and the Contractor the payment certificate referred to in Clause 6.10.1 within 7 days of the receipt by the Employer's Agent of the Contractor's said statement. The Employer's Agent shall not be relieved from its responsibility to issue a payment certificate whether or not the Contractor submits the said statement. Any dissatisfaction in respect of such payment certificate shall be dealt with in terms of Clause 10.2. The Employer or the Contractor, as the case may be, shall pay the amount due to the other within 28 days of receipt by the Employer and the Contractor of the payment certificate signed by the Employer's Agent. Payment shall be subject to the Contractor or the Employer, as the case may be, submitting a tax invoice, if required by law, to the other party for the amount due.

6.10.8 Within 14 days of the date of the Certificate of Completion, the Contractor shall deliver to the Employer's Agent a completion statement showing the value of work done in respect of which a Certificate of Completion has been issued and shall supply such further information as the Employer's Agent may reasonably require. The Contractor shall not be entitled to any payment in respect of any matter which has not been included in such completion statement save as provided for in Clauses 5.14, 7.7 and 7.8 in respect of work executed during the Defects Liability Period and/or Clauses 10.3 to 10.11 in respect of any dispute. The Employer's Agent shall deliver to the Employer and the Contractor the payment certificate in respect of the completion referred to above within 14 days of the receipt by the Employer's Agent of the Contractor's said statement, and the Employer or the Contractor, as the case may be, shall pay the amount due to the other party within 28 days after receipt by the Employer and the Contractor of the payment certificate signed by the Employer's Agent.

6.10.9 Within 14 days of the date of final approval as stated in the Final Approval Certificate, the Contractor shall deliver to the Employer's Agent a final statement claiming final settlement of all moneys due to him (save in respect of matters in dispute, in terms of Clauses 10.3 to 10.11, and not yet resolved). The Employer's Agent shall within 14 days issue to the Employer and the Contractor a Final Payment Certificate, the amount of which shall be paid to the Contractor or the Employer, as the case may be, within 28 days of the date of such certificate, after which no further payments shall be due to the Contractor (save in respect of matters in dispute, in terms of Clauses 10.3 to 10.11 and not yet resolved).

8.6 Insurances

8.6.1.5 In addition to the insurances required in terms of General Conditions of Contract Clauses 8.6.1.1 to 8.6.1.4 the following insurance is also required:

(a) Insurance of Construction Equipment (including tools, offices and other temporary structures and contents) and other things (except those intended for incorporation into the Works) brought onto the site for a sum sufficient to provide for their replacement.

(b) Insurance in terms of the provisions of the Compensation for Occupational injuries and Diseases Act No. 130 of 1993.

(c) Motor Vehicle Liability Insurance comprising (as a minimum) "Balance of Third Party" Risks including Passenger Liability Indemnity.

(d) Where the contract involves manufacturing and/or fabrication of the works or part thereof at premises other than the Site, the Contractor shall satisfy the Employer that all materials and equipment for incorporation in the works are adequately insured during manufacture and/or fabrication. In the event of the Employer having an insurable interest in such works during manufacture or fabrication then such interest shall be noted by endorsement to the Contractor's Policies of Insurance.

9.2 Termination by Employer

9.2.1.3.2 Has failed, in terms of Clause 5.3.2, to submit documentation in time, or to submit acceptable documentation, or to maintain and extend the validity of the performance guarantee until the Certificate of Completion; or

9.2.1.3.6 Is not executing the Works in accordance with the Contract, or is neglecting or failing to carry out his obligations under the Contract, *inter alia* to comply with any instruction under Clause 4.2; or

10.1 Contractor's Claim

10.1.1 The following provisions shall apply to any claim by the Contractor for an extension of time for Practical Completion of the Works in terms of Clause 5.12, or in terms of any Clause that refers to Clause 10.1 for additional payment or compensation:

10.1.1.1 The Contractor shall within 28 days after the commencement of each circumstance, event, act or omission giving rise to such a claim, deliver to the Employer's Agent a written claim, referring to this Clause and setting out:

10.1.1.1.1 The particulars of the circumstance, event, act or omission giving rise to the claim concerned,
10.1.1.1.2 The provisions of the Contract on which he bases the claim
10.1.1.1.3 The length of the extension of time, if any, claimed and the basis of the calculation by incorporating the effects of each circumstance, event, act or omission on the critical path of an Approved Programme, indicating the delay on Practical Completion, and
10.1.1.1.4 The amount of money claimed and the basis of calculation thereof.

10.1.1.2 If, by reason of the nature and circumstances of the claim, the Contractor cannot reasonably comply with all or any of the provisions of Clause 10.1.1.1.1 to 10.1.1.1.4 to deliver a claim within the said period of 28 days, he shall:

10.1.1.2.1 within the said period of 28 days issue a further notice referring to the relevant notice in terms of Clause 10.1.2 and confirming his intention to make the claim and comply with such of the requirements of Clause 10.1.1.1.1 to 10.1.1.1.4 as he reasonably can, and
10.1.1.2.2 As soon as practicable, comply with such of the requirements of Clause 10.1.1.1.1 to 10.1.1.1.4 as have not yet been complied with.

10.1.1.3 If the circumstance, event, act or omission relating to the claim are of an ongoing nature:

10.1.1.3.1 the Contractor shall, within 14 days after the commencement of each circumstance, event, act or omission giving rise to such a claim, deliver to the Employer's Agent a written notice of his intention to submit a claim, referring to this Clause and setting out the particulars of the circumstance, event, act or omission. Provided that the additional payment or compensation or delay that occurred before 14 days prior the date on which the notice in terms of this clause was delivered, shall be deemed to be covered by the rates and/or prices set out in the Pricing Data and the time stated in the Contract Data relating to Clause 5.5.1

10.1.1.3.2 The Contractor shall, in addition to delivering the said further notice within 28 days in terms of Clause 10.1.1.2.1, each month deliver to the Employer's Agent, in writing, updated particulars required in terms of Clause 10.1.1.1.1 to 10.1.1.1.4 and, within 28 days after the end of the circumstance, event, act or omission deliver his final claim.

10.1.2 The Contractor shall issue an early warning notifying to the Employer's Agent as soon as he becomes aware of any circumstance, event, act or omission which could:

10.1.2.1 Increase the Contract Prices,
10.1.2.2 Delay Practical Completion, or
10.1.2.3 Impact on the quality or
10.1.2.4 Impair the performance of the Works in use

10.1.3.6 The Employer, the Employer's Agent and the Contractor shall not in any proceedings in accordance with Clauses 10.3 to 10.11 be entitled to give or lead evidence of or rely on any fact or circumstance not recorded in terms of this Clause.

10.1.4 If, in respect of any claim to which this Clause refers, the Contractor fails to deliver his claim within the 28 day claim period in terms of Clause 10.1.1.1 or does not deliver a further notice within the period of 28 days in terms of Clause 10.1.1.2.1 or does not deliver his final claim within 28 days after the circumstance, event, act or omission ceased in terms of Clause 10.1.1.3.2, the Due Completion Date shall not be extended, the Contractor shall not be entitled to additional payment, and the Employer shall be discharged all liability in connection with the claim.

Provided that failure by the Contractor to give an early warning notice in terms of Clause 10.1.2 which an experienced Contractor could have given, the claim shall be assessed by the Employer's Agent and the ruling in terms of Clause 10.1.5 shall be taken into account the lack of mitigation measures employed due the lack of such early warning notice.

10.1.5 Unless otherwise provided in the Contract, the Employer's Agent shall within 28 days after the Contractor has delivered his claim in terms of Clause 10.1.1, give effect to Clause 3.1.2 and deliver to the Contractor and the Employer his written and adequately reasoned ruling on the claim referring specifically to this Clause. The amount thereof, if any, allowed by the Employer's Agent shall be included to the credit of the Contractor the next payment certificate. Where the Employer's Agent fails to make a ruling within such 28 days the claim shall be deemed to be refused;

Provided that:

10.1.5.1 The said period of 28 days may be extended if so agreed between the Contractor and the Employer's Agent prior to the expiry of such 28 days, and
10.1.5.2 Any amount that has been established to the satisfaction of the Employer's Agent, before his ruling on the whole claim, shall be included to the credit of the Contractor in the next payment certificate.

10.3.1 Any dispute of whatsoever nature arising out of this Contract concerning any of the rights and/or obligations of any party thereto, either during the currency of the Contract or after the completion thereof, including any dispute as to the validity of the Contract, shall be referred to adjudication in terms of Clause 10.5. The Contractor or the Employer, hereinafter referred to as "the parties", may deliver to the other a written notice, hereinafter referred to as a "Dispute Notice", of any dispute arising out of or in connection with the Contract;

10.10.1 Nothing herein contained shall deprive the Contractor or the Employer of either party's right to institute immediate court proceedings in respect of failure by the Employer or the Contractor, as the case may be, to pay the amount of a payment certificate on its due date, or to pay any amount of retention money on its due date for payment.

10.10.3 The Adjudication Board, arbitrator and the court shall have full power to open up, review and revise any ruling, decision, order, instruction, certificate or valuation of the Employer's Agent. The Arbitrator and the court shall have full power to and to reconsider any decision by the Adjudication Board relevant to the matter in dispute, and neither party shall be limited in such proceedings before such arbitrator or court to the evidence or arguments put before the Employer's Agent for the purpose of obtaining his ruling, or the Adjudication Board for the purpose of obtaining a decision.

1.2.2 CONTRACT SPECIFIC DATA

The following contract specific data, referring to the General Conditions of Contract for Construction Works, Third Edition, 2015, are applicable to this Contract:

	CL No	
Defects liability period	1.1.1.13	12 calendar months
Time for achieving practical completion	1.1.1.14	**3 Year term oncontract** – inclusive of the 14 day period referred to in Clause 5.3.2 and inclusive of non-working days referred to in Clause 5.8.1, but exclusive of special non-working days.
Name of Employer	1.1.1.15	Langeberg Municipality
Name of Employers Agent	1.1.1.16	Langeberg Municipality
Address, telephone and fax number of Employers Agent	1.2.1.2	Ashton Office, Faure Street, Ashton (023) 615 8000
Address, telephone and fax number of Employer	1.2.1.2	28 Main Road, Ashton, (tel) 023 615 8000, (fax) 023 615 1563
The Pricing Strategy	1.1.1.26	Re-measurement Contract
Health and Safety Plan	5.3.1	Within 14 days after Commencement Date
Initial programme	5.3.1	Within 14 days after Commencement Date
The agreement in terms of the provisions of Section 37(2) of the Occupational Health and Safety Act (no. 85 of 1993) and the Construction Regulations Promulgated there under must be signed	5.3.1	Within 14 days after Commencement Date
Time within which Performance Guarantee (Security) must be provided	5.3.1	Within 14 days after Commencement Date
Time within which Insurance must be provided	5.3.1	Within 14 days after Commencement Date
Letter of Good Standing from the Compensation Commissioner	5.3.1	Within 14 days after Commencement Date
Time to submit documentation before commencement of the Works is	5.3.2	14 days
Non-working days	5.8.1	The special non-working days are: (1) All gazetted public holidays falling outside the year end break. (2) The year end break commencing as published by SAFCEC The following conditions apply: a) No work allowed after 18:00 on weekdays. b) Working times for Saturdays are 08:00 - 14:00. c) No work allowed on Sundays, Public Holidays and year end break as published by SAFCEC. d) Approval for work outside of normal working hours to be obtained from Employer. Penalty for the transgression of above conditions is R 5 000/transgression.

Special non-working hours/days	5.8.1	The SAFCEC published industry shutdown period in December and January. All statutory holidays.
Amount of penalty for delay	5.13.1	R 5 000 per day
The requirements for achieving Practical Completions are	5.14.1	All payment items in the bill of quantities must be incorporated into the Works or as determined by the Employer's Agent.
Latent defect period beyond the date of final Approval Certificate	5.16.3	10 Years
The Security provided by the Contractor	6.2.1	Performance guarantee of 10% of the Contract Sum plus Retention of 10% of the value of the Works
The percentage allowance on the net cost of materials actually used in the completed works is	6.5.1.2.3	5%
Failing to provide monthly statement for payment on time	6.10.1	R5000.00 per day
Percentage advance on materials not yet built into the Permanent Works is	6.10.1.5	80% of value of materials on site or value of the MOS Guarantee submitted and approved, whichever is the lesser amount. Proof of payment for material must be submitted (before the MOS will be certified) of alternative a MOS guarantee may be provided (at the Contractors cost).
Limit of retention money	6.10.3	Ten percent (10%) of the contract sum
The value of Plant and materials supplied by the Employer to be included in the insurance sum is	8.6.1.1.2	Not Required
The amount to cover professional fees for the repairing damage and loss to be included in the Insurance sum	8.6.1.1.3	15% of the Contract Sum
Limit of indemnity or liability insurance required	8.6.1.3	R 10 000 000-00 for any single claim and the number of claims to be unlimited during the construction defects liability period
Dispute resolution	10.5.1	Ad Hoc Adjudication
The number of Adjudication Board Members to be appointed is	10.5.3	One

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REFURBISHMENT OF VARIOUS ROADS AND STORMWATER IN LANGEBERG MUNICIPALITY; FOR A PERIOD OF THREE (3) YEARS

C1.2	**Contract Data (Part 2)**

Data provided by the Contractor

The name of the Contractor is ……

The address of the Contractor is

Physical Address : ……..…. Postal Address : ……..

……..…. ……..

……..…. ……..

……..…. ……..

……..…. ……..

Telephone : ……..…. Fax: ……..

email : ……..….

CONTRACTOR'S ANNUAL HOLIDAY PERIODS DURING CONSTRUCTION PERIOD

Year 1 contractor's annual holiday period	Start date		End date

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C1.3 **Form of Performance Guarantee**

PERFORMANCE GUARANTEE

For use with the Conditions of Contract as described in C1.2: Contract Data Part 1: Contract Data provided by the Employer

GUARANTOR DETAILS AND DEFINITIONS

"Guarantor" means: .....

"Physical address: .....

"Employer" means: The Langeberg Municipality, DIRECTORATE.

"Contractor" means: .....

"Employer's Agent" means: Wec-consult .....

"Works" means: "20/2025": REFURBISHMENT OF VARIOUS ROADS AND STORMWATER IN LANGEBERG MUNICIPALITY; FOR A PERIOD OF THREE (3) YEARS .....

"Site" means: The site as defined in the Contract Data.

"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 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 Employer's Agent of the Certificate of Completion of the Works.

CONTRACT DETAILS
Employer's Agent issues: Interim Payment Certificates, Final Payment Certificate and the Certificate of 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 and including the Expiry Date or the date of payment in full of the Guaranteed Sum, whichever occurs first. The Employer's 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.

3. 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.

4. 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 Employer's 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.

5. 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:

5.1 the Contract has been terminated due to the Contractor's default and that this Performance Guarantee is called up in terms of 5; or

5.2 a provisional or final sequestration or liquidation court order has been granted against the Contractor and that the Performance Guarantee is called up in terms of 5; and

5.3 the aforesaid written demand is accompanied by a copy of the notice of termination and/or the provisional/final sequestration and/or the provisional liquidation court order.

6. 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.

7. 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.

8. 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.

9. 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.

10. The Guarantor chooses the physical address as stated above for the service of all notices for all purposes in connection herewith.

11. 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.

12. 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.

13. 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) .....

ANNEXURE

LIST OF APPROVED FINANCIAL INSTITUTIONS

The following financial institutions are currently (as at 18 October 2016) approved for issue of contract guarantees to the LANGEBERG Municipality:

National Banks:
ABSA Bank Ltd.
FirstRand Bank Ltd.
Investec Bank Ltd.
Nedbank Ltd.
Standard Bank of SA Ltd.

International Banks (with branches in SA):
Barclays Bank plc.
Citibank n.a.
Credit Agricole Corporate and Investment Bank
HSBC Bank plc.
JP Morgan Chase Bank
Societe Generale
Standard Chartered Bank

Insurance companies:
ABSA Insurance
Coface s.a.
Compass Insurance Co.
Constantia Insurance Co.
Credit Guarantee Insurance Co.
Guardrisk Insurance Co.
Hollard Insurance Company Ltd.
Infiniti Insurance Limited
Lombard Insurance
New National Assurance Co.
Regent Insurance Co.
Renasa Insurance Company Ltd.
Santam Limited
Zurich Insurance Co.

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REFURBISHMENT OF VARIOUS ROADS AND STORMWATER IN LANGEBERG MUNICIPALITY; FOR A PERIOD OF THREE (3) YEARS

C1.4 **Form of Advance Payment Guarantee**

ADVANCE PAYMENT GUARANTEE

For use with the Conditions of Contract as described in C1.2: Contract Data Part 1: Contract Data provided by the Employer

GUARANTOR DETAILS AND DEFINITIONS

"Guarantor" means: .....

"Physical address: .....

"Employer" means: The Langeberg Municipality, DIRECTORATE.

"Contractor" means: .....

"Employer's Agent" means: Wec-consult.....

"Works" means: TENDER 20/2025 - REFURBISHMENT OF VARIOUS ROADS AND STORMWATER IN LANGEBERG MUNICIPALITY; FOR A PERIOD OF THREE (3) YEARS

"Site" means: The site as defined in the Contract Data.

"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.

"Plant and materials" means: The Plant and materials stored at places other than the Site, or in respect of which an advance payment prior to manufacture is required, which the Employer has agreed may be subject to advance payment, such Plant and materials being listed in the Schedule of Plant and materials.

"Schedule of Plant and materials" means: A list of Plant and materials which shows the value thereof to be included in the Guaranteed Advance Payment Sum.

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

Amount in words: .....

"Expiry Date" means: The date of the payment certificate wherein the Plant and materials have been certified by the Employer's Agent as having been built into the Permanent Works.

CONTRACT DETAILS

Employer's Agent issues: Interim Payment Certificates and Final Payment Certificate.

ADVANCE PAYMENT GUARANTEE

1. The Guarantor's liability shall be limited to the amount of the Guaranteed Advance Payment Sum.

2. The Guarantor's period of liability shall be from and including the date of issue of this Advance Payment Guarantee and up to and including the Expiry Date or the date of payment in full of the Guaranteed Advanced Payment Sum, whichever occurs first.

3. The Guarantor hereby acknowledges that:

3.1 any reference in this Advance Payment 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 Advance Payment Guarantee is restricted to the payment of money.

4. 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 Employer's 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) calendar 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.

5. Subject to the Guarantor's maximum liability referred to in 1, the Guarantor undertakes to pay to the Employer the Guaranteed Advance Payment 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 Advance Payment Guarantee, such demand stating that:

5.1 the Contract has been terminated due to the Contractor's default and that this Advance Payment Guarantee is called up in terms of 5; or

5.2 a provisional or final sequestration or liquidation court order has been granted against the Contractor and that the Advance Payment Guarantee is called up in terms of 5; and

5.3 the aforesaid written demand is accompanied by a copy of the notice of termination and/or the provisional/final sequestration and/or the provisional liquidation court order.

6. 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.

7. 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.

9. 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 Advance Payment Guarantee on account of any conduct alleged to be prejudicial to the Guarantor.

10. The Guarantor chooses the physical address as stated above for the service of all notices for all purposes in connection herewith.

11. This Advance Payment 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.

12. This Advance Payment 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.

13. 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) .....

.

Schedule of Plant and materials

For use with Advance Payment Guarantees on contracts using the General Conditions of Contract for Construction Works, Third Edition, 2015.

Employer The Langeberg Municipality, DIRECTORATE

Contractor ……..

Works Contract No. and Title……

Payment Certificate No. …….

Advance payment is requested in respect of the following items of Plant and materials, which have been manufactured and are stored at places other than the Site, or in respect of which a deposit with order is required from the Contractor by a manufacturer/supplier:

Bill of Quantities item no.	Description of Plant and materials	Deposit with order required (Y/N)	Place of storage (or manufacture, if deposit with order is required)	Unit	Quantity	Unit price R c	Total Price R c
Total Value of Plant and materials to be included in Guaranteed Advance Payment Sum						R	

Signed at …….. on the ……..day of……..20……..

…….. ……

for the Contractor As witness

…… Approved by Employer's Agent

LANGEBERG MUNICIPALITY

TENDER 20/2025

REFURBISHMENT OF VARIOUS ROADS AND STORMWATER IN LANGEBERG MUNICIPALITY; FOR A PERIOD OF THREE (3) YEARS

C1.5 Occupational Health and Safety Agreement

AGREEMENT MADE AND ENTERED INTO BETWEEN THE LANGEBERG MUNICIPALITY (HEREINAFTER CALLED THE "EMPLOYER") AND

……..,
(Contractor/Mandatary/Company/CC Name)

IN TERMS OF SECTION 37(2) OF THE OCCUPATIONAL HEALTH AND SAFETY ACT, 85 OF 1993 AS AMENDED.

I, ……., representing

……., as an employer in its own right, do hereby undertake to ensure, as far as is reasonably practicable, that all work will be performed, and all construction equipment, machinery or plant used in such a manner as to comply with the provisions of the Occupational Health and Safety Act (OHSA) and the Regulations promulgated thereunder.

I furthermore confirm that I am/we are registered with the Compensation Commissioner and that all registration and assessment monies due to the Compensation Commissioner have been fully paid or that I/We are insured with an approved licensed compensation insurer.

COID ACT Registration Number: …….

OR Compensation Insurer: ..... Policy No.: .....

I undertake to appoint, where required, suitable competent persons, in writing, in terms of the requirements of OHSA and the Regulations and to charge him/them with the duty of ensuring that the provisions of OHSA and Regulations as well as the Council's Special Conditions of Contract, Way Leave, Lock-Out and Work Permit Procedures are adhered to as far as reasonably practicable.

I further undertake to ensure that any subcontractors employed by me will enter into an occupational health and safety agreement separately, and that such subcontractors comply with the conditions set.

I hereby declare that I have read and understand the Occupational Health and Safety Specifications contained in this tender and undertake to comply therewith at all times.

I hereby also undertake to comply with the Occupational Health and Safety Specification and Plan submitted and approved in terms thereof.

Signed at .....on the.....day of.....20…….

_____ _____

Witness **Mandatary**

Signed at .....on the.....day of.....20…….

_____ _____

Witness for and on behalf of LANGEBERG Municipality

LANGEBERG MUNICIPALITY

TENDER 20/2025

REFURBISHMENT OF VARIOUS ROADS AND STORMWATER IN LANGEBERG MUNICIPALITY; FOR A PERIOD OF THREE (3) YEARS

C1.6 Insurance Broker's Warranty

Pro Forma

Logo

Letterhead of Contractor's Insurance Broker

Date _____

LANGEBERG MUNICIPALITY
Municipal Manager
PRIVATE BAG X2
ASHTON
6715
TEL: 023 626 8200

Dear Sir

CONTRACT NO.: **20/2025**

CONTRACT TITLE: **REFURBISHMENT OF VARIOUS ROADS AND STORMWATER IN LANGEBERG MUNICIPALITY; FOR A PERIOD OF THREE (3) YEARS**

NAME OF CONTRACTOR:_____

I, the undersigned, do hereby confirm and warrant that all the insurances required in terms of the abovementioned contract have been issued and/or in the case of blanket/umbrella policies, have been endorsed to reflect the interests of the LANGEBERG MUNICIPALITY with regard to the abovementioned contract, and that all the insurances and endorsements, etc., are all in accordance with the requirements of the contract.

I furthermore confirm that all premiums in the above regard have been paid.

Yours faithfully

Signed: _____

For: _____

LANGEBERG MUNICIPALITY

TENDER 20/2025

REFURBISHMENT OF VARIOUS ROADS AND STORMWATER IN LANGEBERG MUNICIPALITY; FOR A PERIOD OF THREE (3) YEARS

Part C2: Pricing Data

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LANGEBERG MUNICIPALITY

TENDER 20/2025

REFURBISHMENT OF VARIOUS ROADS AND STORMWATER IN LANGEBERG MUNICIPALITY; FOR A PERIOD OF THREE (3) YEARS

C2.1 Pricing Assumptions

Pricing Assumptions mean the criteria as set out below, read together with all Parts of this contract document, which it will be assumed in the contract, that the tenderer has taken into account when developing his prices.

1. The method of measurement published by the South African Bureau of Standards in clause 8 of the Standardised Specifications for Civil Engineering Construction is applicable, subject to the variations and amendments contained in the section "Applicable SANS 1200 standardised specifications".

2. Descriptions in the Bills of Quantities are abbreviated and comply generally with those in the Standardised Specifications. Clause 8 of each Standardised Specification, read together with the relevant clauses of the Scope of Work, set out what ancillary or associated activities are included in the rates for the operations specified. Should any requirements of the measurement and payment clause of the applicable Standardised Specification, or the Scope of Work, conflict with the terms of the Schedule, the requirements of the Standardised Specification or Scope of Work, as applicable, shall prevail.

3. The measurement and payment clauses in a specification in which further information regarding the scheduled items is given, are referenced under "Item" (pay items) in the Bills of Quantities. The referenced clauses are not necessarily the only sources of information in respect of scheduled items. Further information and specifications may be found elsewhere in the contract documents. Standardised Specifications are identified by the digits which follow SANS in the SANS 1200 series of specifications, e.g. G for SANS 1200 G.

4. Unless otherwise stated, items are measured net in accordance with the drawings, and no allowance is made for waste.

5. The quantities set out in the Bills of Quantities are the estimated quantities of the Contract Works, but the Contractor will be required to undertake whatever quantities may be directed by the Employer's Agent from time to time. The Contract Price for the completed contract shall be computed from the actual quantities of work done, valued at the relevant unit rates and prices.

6. The prices and rates to be inserted in the Bills of Quantities are to be the full inclusive prices for the work described under the several items. Such prices and rates shall cover all costs and expenses that may be required in and for the execution of the work described, and shall cover the cost of all general risks, liabilities, and obligations set forth or implied in the documents on which the tender is based, as well as overhead charges and profit. Reasonable prices shall be inserted as these will be used as a basis for assessment of payment for additional work that may have to be carried out.

7. A price or rate should be entered against each item in the Bills of Quantities, whether the quantities are stated or not. **An item against which no rate is/are entered, or if anything other than a rate or a nil rate (for example, a zero, a dash or the word "included" or abbreviations thereof) is entered against an item, it will also be regarded as a nil rate having been entered against that item, i.e. that there is no charge for that item.** The Tenderer may be requested to clarify nil rates, or items regarded as having nil rates; and the Employer may also perform a risk analysis with regard to the reasonableness of such rates.

8. Except where rates only are required, insert all amounts to be included in the total tendered price in the "Amount" column and show the corresponding total tendered price.

9. The Tenderer shall fill in rates for all items where the words "rate only" appear in the "Total" column. "Rate Only" items have been included where:

(a) an alternative item or material is contemplated:
(b) variations of specified components in the make-up of a pay item may be expected; and
(c) no work under the item is foreseen at the tender stage but the possibility that such work may be required is not excluded.

For "Rate Only" items no quantities are given in the "Quantity" column but the quoted rate shall apply in the event of work under this item being required. The Tenderer shall however note that in terms of the Tender Data the Tenderer may be asked to reconsider any such rates which the Purchaser may regard as unbalanced.

10. Where Provisional sums or Prime Cost sums are provided for items in the Bill of Quantities, payment for the work done under such items will be made in accordance with the Contract Specifications. The Purchaser reserves the right, during the execution of the works, to adjust the stated amounts upwards or downwards according to the work actually done under the item, or the item may be omitted altogether, without affecting the validity of the Contract.

    The Tenderer shall not under any circumstance whatsoever delete or amend any of the sums inserted in the "Amount" column of the Bill of Quantities and in the Summary of the Bill of Quantities unless ordered or authorized in writing by the Purchaser before closure of tenders. Unauthorized changes made by the Tenderer to provisional items in the Bill of Quantities, or to the stated provisional percentages and sums in the Summary of the Bill of Quantities, will not be tolerated.

11. Arithmetical errors found in the Bill of Quantities as a result of faulty multiplication of addition, will be corrected by the Purchaser's Agent at the tender evaluation stage, as set out in the Condition of Tender and the Tender Data

12. Incorrect entries shall not be erased or obliterated with correction fluid but must be crossed out neatly. The correct figures must be entered above or adjacent to the deleted entry, and the alteration must be initialled by the Tenderer.

13. The units of measurement described in the Bills of Quantities are metric units. Abbreviations which may be used in these Bills of Quantities are as follows:

mm	=	millimetre	h	=	hour
m	=	metre	kg	=	kilogram
km	=	kilometre	t	=	ton (1000 kg)
m2	=	square metre	No.	=	number
m2.pass	=	square metre-pass	sum	=	lump sum
ha	=	hectare	MN	=	meganewton
m3	=	cubic metre	MN.m	=	meganewton-metre
m3.km	=	cubic metre-kilometre	P C sum	=	Prime Cost sum
l	=	litre	Prov sum	=	Provisional sum
kl	=	kilolitre	%	=	per cent
MPa	=	megapascal	kW	=	kilowatt

14. Where fractions of a cent occur in calculations of prices and amounts, they shall be rounded up/down to the nearest whole cent.

15. The Tenderer is referred to C.2.24 in Part T1.2 Tender Data regarding the pricing of Deviations and/or Qualifications.

16. All descriptions or clauses where trade names or proprietary products are specified, are deemed to include the phrase "or equal approved"

17. Tenderers are referred to Clause 6.8.2 in Part C1.2 Contract Data regarding contract price adjustment.

The following bills in Part C2.2 Bills of Quantities are deemed applicable to the following categories for the purposes of Contract Price Adjustment:

NO.	BILL	CPA CATEGORY
1.	All sections	

LANGEBERG MUNICIPALITY

TENDER 20/2025

REFURBISHMENT OF VARIOUS ROADS AND STORMWATER IN LANGEBERG MUNICIPALITY; FOR A PERIOD OF THREE (3) YEARS

C2.2 Bills of Quantities

Bid specifications may not make any reference to any particular trade mark, name, patent, design, type, specific origin or producer, unless there is no other sufficiently precise or intelligible way of describing the characteristics of the work, in which case such reference must be accompanied by the words “or equivalent”.

TENDERERS MUST NOTE THAT WHEREVER THIS DOCUMENT REFERS TO ANY PARTICULAR TRADE MARK, NAME, PATENT, DESIGN, TYPE, SPECIFIC ORIGIN OR PRODUCER, SUCH REFERENCE SHALL BE DEEMED TO BE ACCOMPANIED BY THE WORDS ‘OR EQUIVALENT”

REFURBISHMENT OF VARIOUS ROADS AND STORMWATER IN LANGEBERG MUNICIPALITY; FOR A PERIOD OF THREE (3) YEARS

BOQ

SECTION 1: PRELIMINARY AND GENERAL

ITEM NO	PAYMENT	DESCRIPTION	UNIT	QTY	RATE	AMOUNT R
1	**SANS 1200 A**	**SECTION 1: SITE CLEARANCE AND EARTHWORKS**				
1.1	**8.4**	**SCHEDULED TIME-RELATED ITEMS**				
1.1.1	8.4.1	Contractual Requirements	Month	1.00		
1.1.2	PSA 8.4.6	Contractors obligations in respect of Health and Safety	Month	1.00		
		Establishment of Facilities on the Site				
	8.4.2.2	Facilities for Contractor				
1.1.4		a) Offices and storage sheds	Month	1.00		
1.1.5		b) Workshops	Month	1.00		
1.1.5		d) Living accomodation	Month	1.00		
1.1.7		e) Ablution and latrine facilities	Month	1.00		
1.1.9		f) Tools and equipment	Month	1.00		
1.1.10		g) Water supplies, electric power and communications	Month	1.00		
1.1.11		h) Dealing with water	Month	1.00		
1.1.12		i) Access	Month	1.00		
1.1.13	8.3.3	Other Time Related Charge obligations	Month	1.00		
1.1.14	8.3.4	Site Establishment	Month	1.00		
1.1.15	8.3.4	Removal of Site Establishment	Month	1.00		
1.1.16	8.4.3	Supervision for Duration of Construction	Month	1.00		
1.1.17	8.4.4	Company and Head office Overhead Costs for the Duration of the Contract	Month	1.00		
		Standing time costs				
1.1.18	PSA 8.4.8 b	a) Plant	day	5.00		Rate Only
1.1.19	PSA 8.4.8 b	b) Labour	day	5.00		Rate Only
1.2	**8.5**	**SUMS STATED PROVISIONALLY BY ENGINEER**				
1.2.1	PSA 8.5	a) Cost of calls in connection with contract administration by the Engineers's Representative	Prov Sum	1.00	36 000.00	R 36 000.00
1.2.2	PSA 8.5	b) Handling costs and profit in respect of item above	%	36 000.00		
1.2.3	PSA 8.5	c) Material testing by commercial laboratories if	Prov	1.00	50 000.00	R 50 000.00
1.2.4	PSA 8.5	d) Overhead, charges and profit on item above	%	50 000.00		
1.2.5	PSA 8.5	e) Professional Design and Site Suppervision according	Prov	1.00	690 000.00	R 690 000.00
1.2.6	PSA 8.5	f) Overhead, charges and profit on item above	%	690 000.00		
Total Carried Forward						

SECTION 1: PRELIMINARY AND GENERAL

ITEM NO	PAYMENT	DESCRIPTION	UNIT	QTY	RATE	AMOUNT R
Brought Forward						
1.3	**8.7**	**DAYWORKS**				
1.3.1		**LABOUR**				
1.3.1.1	PSA 8.7	a) Unskilled labour	hr	50.00		
1.3.1.2	PSA 8.7	b) Semi skilled labour	hr	50.00		
1.3.1.3	PSA 8.7	c) Skilled labour	hr	50.00		
1.3.2		**PLANT**				
1.3.2.1	PSA 8.7	d) Excavators	hr	15.00		
1.3.2.2	PSA 8.7	e) Graders	hr	15.00		
1.3.2.3	PSA 8.7	f) Front-end loaders	hr	15.00		
1.3.2.4	PSA 8.7	g) Rollers	hr	15.00		
1.3.2.5	PSA 8.7	h) Pneumatic tyre rollers	hr	15.00		
1.3.2.6	PSA 8.7	i) Trucks (5m3)	hr	15.00		
1.3.2.7	PSA 8.7	j) Water Truck	hr	15.00		
1.3.2.8	PSA 8.7	k) Plate Compactor	hr	15.00		
1.4	**8.8**	**TEMPORARY WORKS**				
1.4.1	PSA.8.8.4	Dealing with traffic	Month	1.00		
	PSA8.8.5	Cost of survey in Terms of the Land Survey Act				
1.4.2		a) Trigonometrical survey and plot boundary pegs -	Prov	1.00	35000.00	35000.00
1.4.3		% Handeling cost on item above	%	35000.00		
Total Carried Forward						

SECTION 2: SITE CLEARANCE AND EARTHWORKS

ITEM NO	PAYMENT	DESCRIPTION	UNIT	QTY	RATE	AMOUNT R
2		**SECTION 2: SITE CLEARANCE AND EARTHWORKS**				
2.1		**CLEAR SITE**				
2.1.3	PS C 8.2.7	Dismantle and remove pipelines ,electricity transmission lines, cables, etc. cart debris to unspecified sites and dump	m	250.00		
2.1.6	PSC 8.2.8	Demolish and remove concrete structures and cart debris to unspecified sites and dump	m³	100.00		
2.2		**EXISTING SURFACE**				
2.2.1		Breaking up and removal of exisitng asphalt surface and dump to unspecified sites and dump	m²	5 000.00		
2.2.2		Saw-cutting of existing aspalt surface	m	200.00		
2.1.8	PSC 8.2.11	Dismantle and remove and stockpill of existing paving (including unlimited free-haul)	m²	1 250.00		
2.1.9	PSC 8.2.12	Dismantle and remove and stockpill of existing kerbing (including unlimited free-haul)	m	100.00		
2.3		**EXISTING SERVICES**				
2.3.1	8.3.8.1	Excavate by hand in soft material to expose existing	m³	500.00		
	8.3.8	Dealing with Existing services				
		a) Services that intersect a trench				
2.3.2	8.3.8.2	Sewer	No.	25.00		
2.3.3	8.3.8.2	Water main	No.	25.00		
2.3.4	8.3.8.2	Overhead power line	No.	10.00		
2.3.5	8.3.8.2	Electrical cable	No.	20.00		
2.3.6	8.3.8.2	Sewer house connections	No.	75.00		
2.3.7	8.3.8.2	Water house connections	No.	75.00		
2.3.8	8.3.8.2	Telkom (the contractor to apply for way-leave from Telkom)	No.	10.00		
		b) Services that adjoin a trench				
2.3.9	8.3.8.2	Sewer	m	250.00		
2.3.10	8.3.8.2	Water main	m	500.00		
Total Carried Forward						

SECTION 2: SITE CLEARANCE AND EARTHWORKS

ITEM NO	PAYMENT	DESCRIPTION	UNIT	QTY	RATE	AMOUNT R
Brought Forward						
2.4		**FINISHING**				
2.4.1	PS DM 8.3.17	Trim, Shape And Compact Sidewalks	m²	3 000.00		
2.5	**D 8.3.4**	**IMPORT MATERIAL**				
2.5.1		Import general fill material to complete terraces	m³	500.00		
Total Carried Forward						

SECTION 3: EXCAVATION

ITEM NO	PAYMENT	DESCRIPTION	UNIT	QTY	RATE	AMOUNT R
3	**SANS**	**SECTION 3: EXCAVATION**				
3.1	**8.3.2(a)**	**Excavate in all materials and place within freehaul**				
3.1.1		Levelling site by means of cut to fill or dispose of suplus material as instructed	m³	1 000.00		
3.2	**8.3.2(b)**	**Extra-over items .2.2 & .2.3 for excavation in:**				
3.2.1		Intermediate material	m³	500.00		
3.2.2		Hard rock material	m³	250.00		
3.2.3		Boulder material, Class A	m³	50.00		
3.2.4		Boulder material, Class B	m³	50.00		
Total Carried Forward To Summary						

SECTION 4: ROAD-BED TREATMENT FOR ASPHALT

ITEM NO	PAYMENT	DESCRIPTION	UNIT	QTY	RATE	AMOUNT R
4	**SANS 1200 DM**	**SECTION 4: ROAD-BED TREATMENT FOR ASPHALT**				
		Premix Asphalt Roads				
4.1		**TREATMENT OF ROAD-BED**				
	PS DM 8.3.3	Road-bed preparation and compaction of material for layer of 150mm				
4.1.1		Compact to 93 % mod. AASHTO maximum density	m³	875.00		
4.2		**EARTHWORKS**				
	PS DM 8.3.7	Cut to spoil from				
4.2.1		Soft excavation	m³	750.00		
4.2.2		Intermediate excavation	m³	125.00		
		UTA				
4.3		**TREATMENT OF ROAD-BED**				
	PS DM 8.3.3	Prep existing road surface for UTA				
4.3.1		Cut, clean, compact and fill cavaties with BTB	m³	250.00		
4.3.2		Seal existing surface cracks with fine slurry mix	m²	500.00		
4.3.3		Clean, pressure wash and sweep existing surface	m²	5 000.00		
		Cape Seal Asphalt				
4.4		**TREATMENT OF ROAD-BED**				
	PS DM 8.3.3	Road-bed preparation and compaction of material layer				
4.4.1		Compact to 93 % mod. AASHTO maximum density	m³	450.00		
	PS DM 8.3.3	In-place treatment of road-bed in soft to intermediate material layer of 150mm				
4.4.2		Rip and Recompact to 93 % mod. AASHTO maximum	m³	450.00		
4.5		**EARTHWORKS**				
	PS DM 8.3.7	Cut to spoil from				
4.5.1		Soft excavation	m³	750.00		
4.5.2		Intermediate excavation	m³	125.00		
4.5.3		Hard excavation	m³	100.00		
4.5.4		Boulder excavation Class A	m³	50.00		
4.5.5		Boulder excavation Class B	m³	50.00		
Total Carried Forward						

SECTION 5: ROAD-BED TREATMENT FOR CONCRETE PAVING

ITEM NO	PAYMENT	DESCRIPTION	UNIT	QTY	RATE	AMOUNT R
5	**SANS 1200 DM**	**SECTION 5: ROAD-BED TREATMENT FOR CONCRETE PAVING**				
5.1		**TREATMENT OF ROAD-BED**				
	PS DM 8.3.3	Road-bed preparation and compaction of material layer				
5.1.1		Compact to 93 % mod. AASHTO maximum density	m³	450.00		
	PS DM 8.3.3	In-place treatment of road-bed in soft to intermediate				
5.1.2		Rip and Recompact to 93 % mod. AASHTO maximum	m³	450.00		
5.2		**EARTHWORKS**				
	PS DM 8.3.7	Cut to spoil from				
5.2.1		Soft excavation	m³	750.00		
5.2.2		Intermediate excavation	m³	125.00		
5.2.3		Hard excavation	m³	100.00		
5.2.4		Boulder excavation Class A	m³	50.00		
5.2.5		Boulder excavation Class B	m³	50.00		
Total Carried Forward To Summary						

SECTION 6: STORMWATER DRAINAGE

ITEM NO	PAYMENT	DESCRIPTION	UNIT	QTY	RATE	AMOUNT R
6		**SECTION 6: STORMWATER DRAINAGE**				
6.1	**SABS 1200DB**	**EXCAVATION FOR STORWATER CHANNEL / TRAPAZOIDAL DITCH LINE**				
	PS DB 8.3.2	Excavate in all materials for concrete channel, backfill, compact, and dispose of surplus/unsuitable material, for Trapeziodal ditch liner: for total trench depth of 400mm and 800mm wide				
6.1.1		As per concrete channel drawing	m³	1 000.00		
6.2		**CONCRETE CHANNEL**				
6.2.1	PS LE 8.2.17	Construct reinfored concete channel as per drawings	m	500.00		
6.3	**SABS 1200DB**	**EXCAVATION STORMWATER PIPES**				
	PS DB 8.3.2	Excavate, select materials, backfill and dispose of surplus/unsuitable material fro pipes upto 600mm				
6.3.1		a) 0 - 1,50 m	m	500.00		
		b) 1,51 - 2,50 m	m	250.00		
6.4	**SANS 1200 LE**	**CONCRETE STORMWATER PIPES**				
	PS LE 8.2.1	Supply, handle, lay, bed Class100D concrete pipe spigot and socket type.				
6.4.1		a) 300 mm diameter	m	250.00		
6.4.2		b) 450 mm diameter	m	500.00		
6.5	**1200 LB**	**BEDDING**				
	PS LB 8.1.1	Supply and compact bedding by importation to 100% MOD AASHTO - density with material				
		From site excavations.				
6.5.1		a) Bedding	m³	100.00		
6.5.2		b) Blanket	m³	175.00		
	PS LB 8.1.1	Supply and compact bedding by importation to 100%				
		From Comercial Sources				
6.5.3		a) Bedding	m³	100.00		
6.5.4		b) Blanket	m³	175.00		
Total Carried Forward						

SECTION 6: STORMWATER DRAINAGE

ITEM NO	PAYMENT	DESCRIPTION	UNIT	QTY	RATE	AMOUNT R
Brought Forward						
6.6	**1200 LE**	**Supply and install manhole, catchpits and the like**				
	PS LE 8.2.8	a) Manholes complete as per drawings with type 9B				
6.6.1		1.0m to 2.0m	No.	10.00		
6.6.2		2.0m to 3,0m	No.	10.00		
		b) Catchpits complete as per drawings with ductile iron cover and frame for depths :				
		Double inlet				
6.6.3	8.2.12	0.0m to 1.5m	No.	20.00		
Total Carried Forward To Summary						

SECTION 7: SUBBASE

ITEM NO	PAYMENT	DESCRIPTION	UNIT	QTY	RATE	AMOUNT R
7.	**SANS 1200 ME**	**SECTION 7: SUBBASE**				
		Premix Asphalt Roads				
	8.3.1	Construct G5 subbase compacted to 95% Mod AASHTO-density with material: from commercial source, as indicated on the typical cross section of the road prism"				
7.1		150mm compacted thickness for roads	m³	950.00		
		Cape Seal Asphalt				
	8.3.1	Construct G5 subbase compacted to 95% Mod AASHTO-density with material: from commercial source, as indicated on the typical cross section of the road prism"				
7.2		150mm compacted thickness for roads	m³	950.00		
		Interlocking Paving				
	8.3.1	Construct G7 subbase compacted to 95% Mod AASHTO-density with material: from commercial source, as indicated on the typical cross section of the road prism"				
7.3		150mm compacted thickness for roads	m³	950.00		
		Total Carried Forward To Summary				

SECTION 8: BASE

ITEM NO	PAYMENT	DESCRIPTION	UNIT	QTY	RATE	AMOUNT R
8	**SANS 1200 MF**	**SECTION 8: BASE**				
		Premix Asphalt Roads				
	8.3.1	Construct G4 base compacted to 98 % Mod AASHTO-density with material: from commercial source, as indicated on the typical cross section of the road prism"				
8.1		150mm compacted thickness for roads	m³	850.00		
		Cape Seal Asphalt				
	8.3.1	Construct G4 base compacted to 98 % Mod AASHTO-density with material: from commercial source, as indicated on the typical cross section of the road prism"				
8.2		150mm compacted thickness for roads	m³	850.00		
		Interlocking Paving				
	8.3.1	Construct G5 base compacted to 98 % Mod AASHTO-density with material: from commercial source, as indicated on the typical cross section of the road prism"				
8.3		150mm compacted thickness for roads	m³	850.00		
Total Carried Forward To Summary						

SECTION 9: BITUMOUS SURFACE TREATMENT

ITEM NO	PAYMENT	DESCRIPTION	UNIT	QTY	RATE	AMOUNT R
9	**SANS 1200 MG**	**SECTION 9: BITUMOUS SURFACE TREATMENT**				
9.1		**Premix Asphalt Roads**				
		PRIME COAT				
	8.4.1	Prime coat using:				
9.1.1		(c) MC-30 medium curing applied at a rate of 0,7 l/m² of net bitumen.	m²	5 000.00		
9.2		**UTA**				
		PRIME COAT				
	8.4.1	Prime coat using:				
9.2.1		(c) MC-30 medium curing applied at a rate of 0,7 l/m² of net bitumen.	m²	5 000.00		
9.3		**Cape Seal Asphalt**				
		PRIME COAT				
	8.4.1	Prime coat using:				
9.3.1		(c) MC-30 medium curing applied at a rate of 0,7 l/m² of net bitumen.	m²	5 000.00		
Total Carried Forward To Summary						

ITEM NO	PAYMENT	DESCRIPTION	UNIT	QTY	RATE	AMOUNT R
10	**SANS 1200 MH**	**SECTION 10: SURFACING**				
10.1		**Premix Asphalt Roads**				
		Asphalt surfacing				
	8.5.5	(a) Continuously graded, medium grading, using AE-2 modified bitumen				
10.1.1		(i) 40 mm thick (road surface)	m²	5 000.00		
10.1.2		100 mm cores in asphalt paving	No.	40.00		
	8.5.5	Placing and compacting asphalt in restricted areas				
10.1.3		(a) Extra over items 11.1	m²	750.00		
10.2		**UTA**				
		Asphalt surfacing				
	8.5.5	Stone skeletal mix - Ultra Thin – continuously graded as defined using 50/70 penetration grade bitumen				
10.2.1		(i) 15 mm thick (road surface)	m²	5 000.00		
10.2.2		100 mm cores in asphalt paving	No.	40.00		
	8.5.5	Placing and compacting asphalt in restricted areas				
10.2.3		(a) Extra over items 11.4	m²	750.00		
10.3		**Cape Seal Asphalt**				
		Asphalt surfacing				
	8.5.5	Bituminous Cape Seal with 14mm aggregate and slurry (tack coat - 65% Spray Grade: Cover spray binder-60% Emulsion, grade of aggregate-Grade 2 and Meduim grade slurry)				
10.3.1		(i) Cape Seal	m²	5 000.00		
10.3.2		100 mm cores in asphalt paving	No.	40.00		
	8.5.5	Placing and compacting asphalt in restricted areas				
10.3.3		(a) Extra over items 11.4	m²	750.00		
10.4	**SANS 1200**	**CONCRETE BLOCK PAVING**				
		Interlocking Paving				
10.4.1	PS MJ	(c) Class 40/2.6 (old Class 35MPa), 80mm concrete interlocking pavers with a 20mm crusher dust blinding layer (Cuttings, header coarse, Sanding joints and all other included to complete)	m²	5 000.00		
Total Carried Forward To Summary						

ITEM NO	PAYMENT	DESCRIPTION	UNIT	QTY	RATE	AMOUNT R
11	**SANS 1200 MK**	**SECTION 11: KERBING AND CHANNELLING**				
		CONCRETE KERBING AND CHANNELLING				
	8.2.1	Supply and install Concrete kerbing				
		a) Type BK2 Kerb				
11.1	8.2.2	i) 1000 mm units	m	750.00		
11.2	8.2.1	i) 300 mm units	m	250.00		
		b) Type C1 Channel Kerb				
11.3	8.2.1	i) 1000 mm units	m	750.00		
11.4	8.2.1	i) 300 mm units	m	250.00		
		b) Type C1-C1 combination Channel Kerb				
11.5	8.2.1	i) 1000 mm units	m	250.00		
11.6	8.2.1	i) 300 mm units	m	125.00		
		a) Type CK5				
11.7	8.2.1	i) 1000 mm units	m	750.00		
11.8	8.2.1	i) 300 mm units	m	250.00		
		b) Type MK10 Kerb:				
11.9	8.2.1	i) 1000 mm units	m	750.00		
11.10	8.2.1	i) 300 mm units	m	250.00		
		b) Type E1 Kerb for sidewalks				
11.11	8.2.1	i) 1000 mm units	m	750.00		
11.12	8.2.1	i) 300 mm units	m	250.00		Rate Only
		b) Type E3 Kerb for edgebeams				
11.13	8.2.1	i) 1000 mm units	m	350.00		
11.14	8.2.1	i) 300 mm units	m	100.00		Rate Only
		c)Inlet, outlet, transition and similar structures				
11.15		Construct 2m long, 25Mpa cast-in-situ kerbing transition sections between transitioning kerbs	No.	40.00		
11.16	8.2.10	Sealed construction joint at every 10th kerb with flexible joint filler	No.	150.00		
Total Carried Forward						

SECTION 12: ANCILLARY ROADWORKS

ITEM NO	PAYMENT	DESCRIPTION	UNIT	QTY	RATE	AMOUNT R
12	**SANS 1200 MM**	**SECTION 12: ANCILLARY ROADWORKS**				
12.1		**ROADWORKS**				
	PSMM 8.4.1	Road marking				
12.1.1		Yellow lines, unbroken, 100mm wide	m	750.00		
12.1.2		White lines, unbroken, 100mm wide	m	750.00		
12.1.3		Word STOP 2,5m high	No.	40.00		
12.2		**SIGNAGE**				
		Supply and install complete with galvanized steel plate (chromadek 1.4 mm thick or approved equivalent) and Steel tubing (76mm dia,3.2m long, 6mm wall thickness, galvanized)				
12.2.1		R3 (600mm)	No	40		
		Dismantling, storing and re-erecting road signs with a				
12.2.2		(a) Up to 2 m²	No	25		
12.3		**SPEED HUMPS**				
12.3.1		Consturct speed hump as per drawing	No	5		
12.3.2		Construct pedestian speed hump cross walk as per drawing	No	5		
Total Carried Forward To Summary						

LANGEBERG MUNICIPALITY

TENDER 20/2025

REFURBISHMENT OF VARIOUS ROADS AND STORMWATER IN LANGEBERG MUNICIPALITY; FOR A PERIOD OF THREE (3) YEARS

A: SUMMARY OF SCHEDULE(S) OF QUANTITIES

A SECTION		DESCRIPTION	TENDERED AMOUNT
1		SECTION 2: P&G	R
2		SECTION 2: SITE CLEARANCE AND EARTHWORKS	R
3		SECTION 3: EXCAVATION	R
4		SECTION 4: ROAD-BED TREATMENT FOR ASPHALT	R
5		SECTION 5: ROAD-BED TREATMENT FOR CONCRETE PAVING	R
6		SECTION 6: STORMWATER DRAINAGE	R
7		SECTION 7: SUBBASE	R
8		SECTION 8: BASE	R
9		SECTION 9: BITUMOUS SURFACE TREATMENT	R
10		SECTION 10: SURFACING	R
11		SECTION 11: KERBING AND CHANNELLING	R
12		SECTION 12: ANCILLARY ROADWORKS	R
B		**TOTAL OF SCHEDULE(S) (SUM OF SECTION 1 to SECTION 12)**	**R**

C	**CONTINGENCIES (10% of TOTAL B above)**	**R**
D	**TOTAL (B+C)**	**R**

The sum provided is under the direct control of the Engineer and may be partially or totally excluded

E	CPA (7% of TOTAL D above)	R
F	**TOTAL (D+E)**	**R**

H	**VALUE ADDED TAX (15% of TOTAL) ON (F) ABOVE**	**R**
G	**CONTRACT PRICE CARRIED FORWARD TO C1.1 FORM OF OFFER (D+E)**	**R**

I/We, the undersigned, do hereby declare that these are the properly priced Bill / Schedules of Quantities forming part of this Contract Document containing Pages in consecutive order upon which my/our Tender for
Contract No.: 20/2025 – REFURBISHMENT OF VARIOUS ROADS AND STORMWATER IN LANGEBERG MUNICIPALITY; FOR A PERIOD OF THREE (3) YEARS has been based.

My/our total Contract Price for these work and above items (Total **I**) is (in words):

……

……

SIGNED ON BEHALF OF TENDERER:	
NAME, SURNAME & POSITION	
DATE	

DECLARATION (In respect of completeness of Tender)

Langeberg Municipality
28 Main Street,
Ashton

I/we, the undersigned, do hereby declare that these are the properly priced Bills of Quantities forming Part C2.2 of this Contract Document containing 262 pages plus 15 BOQ document pages in consecutive order upon which my/our tender for **TENDER 20/2025 – REFURBISHMENT OF VARIOUS ROADS AND STORMWATER IN LANGEBERG MUNICIPALITY; FOR A PERIOD OF THREE (3) YEARS** has been based. If I/we have submitted a printed version of the Bills of Quantities, I/we warrant that no amendments have been made to it from the original, other than amendments issued in any Addenda in terms of Clause C.3.2 in Part T1.2 Tender Data.

SIGNED ON BEHALF OF TENDERER:	
NAME, SURNAME & POSITION	
DATE	

LANGEBERG MUNICIPALITY

TENDER 20/2025

REFURBISHMENT OF VARIOUS ROADS AND STORMWATER IN LANGEBERG MUNICIPALITY; FOR A PERIOD OF THREE (3) YEARS

Part C3: **Scope of Work**

PART C3: SCOPE OF WORK 136

C3.1 DESCRIPTION OF THE WORKS 137
C3.2 ENGINEERING / DESIGN 142
C3.3 PROCUREMENT 143
C3.4 CONSTRUCTION 144
C3.5 MANAGEMENT 270

Status

Should any requirement or provision in the parts of the Scope of Work conflict with any requirement of any Standardised Specification, particular specification or any drawings, the order of precedence, unless otherwise specified, is:

- Scope of Work (Parts C3.1, C3.4 and C3.5)
- Particular Specifications
- SANS Standardised Specifications
- Drawings

LANGEBERG MUNICIPALITY

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REFURBISHMENT OF VARIOUS ROADS AND STORMWATER IN LANGEBERG MUNICIPALITY; FOR A PERIOD OF THREE (3) YEARS

C3.1 **Description of the Works**

CONTENTS

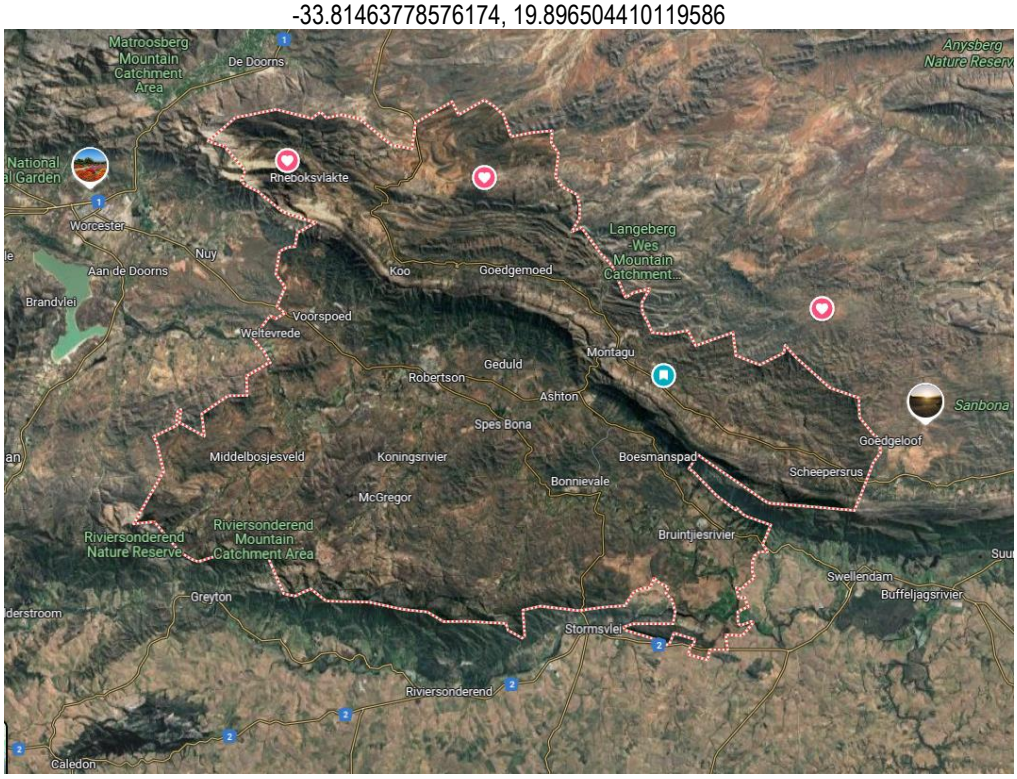
3.1.1 EMPLOYER'S OBJECTIVES
3.1.2 OVERVIEW OF THE WORKS
3.1.3 EXTENT OF THE WORKS
3.1.4 LOCATION OF THE WORKS
3.1.5 TEMPORARY WORKS
3.1.6 CONSTRUCTION TIME PERIOD
3.1.7 CONTRACTOR'S CAMP SITE, POWER SUPPLY AND SERVICES
3.1.8 CONSTRUCTION IN CONFINED AREAS
3.1.9 WATER FOR CONSTRUCTION PURPOSES
3.1.10 FEATURES REQUIRING SPECIAL ATTENTION
3.1.11 ENVIRONMENTAL REQUIREMENTS
3.1.12 MONTHLY STATEMENT AND PAYMENT CERTIFICATE
3.1.13 LIMITED FUNDS

3.1.1 EMPLOYER'S OBJECTIVES

The Employer's objective is to implement the upgrade of existing road infrastructure and the construction of new roads within the Langeberg region. A series of road projects will be identified, with the scope of work for each road section to be defined based on specific requirements and site conditions. The envisaged works may include the construction and rehabilitation of road surfaces using Premix Asphalt, Ultra-Thin Asphalt (UTA), Cape Seal, and Concrete Interlocking Paving. These activities will be supported by the execution of all necessary layerworks, the installation of kerbing, and the development or upgrading of stormwater drainage systems to ensure the structural integrity and long-term performance of the road network.

The Langeberg Municipality is located about 150km from Cape town.

-33.81463778576174, 19.896504410119586



The project will involve a combination of road rehabilitation and new road construction, utilizing a variety of pavement surfacing techniques tailored to suit the specific requirements of each location. The types of road surfacing included in the project are as follows:

- **Premix Asphalt:** Durable, flexible surfacing suitable for high-traffic roads and intersections, offering good skid resistance and a smooth riding surface.
- **Ultra-Thin Asphalt (UTA):** A cost-effective surface treatment applied to extend pavement life and improve surface texture without significant alteration to the existing road profile.
- **Cape Seal:** A surface treatment that combines chip sealing and a slurry seal, ideal for roads requiring enhanced waterproofing and surface texture.
- **Concrete Interlocking Paving:** Used primarily in urban or pedestrian-heavy areas, offering a visually appealing, durable, and low-maintenance surface.

Ancillary Works:
In addition to the road surfacing components, the following supporting infrastructure will be included:

- **Layerworks:** Preparation of subgrade and construction of selected and subbase layers to ensure structural integrity and longevity of the road surface.
- **Kerbing:** Installation of precast or in-situ concrete kerbs for road edge delineation, stormwater channelling, and pedestrian safety.
- **Stormwater Drainage:** Provision and upgrading of stormwater infrastructure, including culverts, catch pits, and drainage channels, to mitigate flooding and ensure effective runoff management.

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 approximate detailed quantities for each type of work to be carried out in accordance with the Contract Documents are included in the Bill of Quantities.

3.1.2 OVERVIEW OF THE WORKS

3.1.2.1 General Description

Work items under this tender shall include any one or more of the following:

i) Establishment on site
ii) Site Clearance
iii) Earthworks (Roads and Subgrade)
iv) Gabions and Pitching

v) Roads
vi) Subbase and Bas
vii) Kerbing and Channeling
viii) Segmented paving

3.1.2.2 Work Areas

The location of the works envisaged for the Project will be shown on the drawings bound into C5 of the Project document.

3.1.2.3 Boundaries of the site

The site will be confined to the areas of construction, including the site camp of the contractor.

3.1.2.3 Occupation of the site

Access to the site of the works will be given to the Contractor on the Commencement Date.

3.1.3 EXTENT OF THE WORKS

The work that is to be carried out under the contract is as provided for in the schedule of quantities. However, if during the course of construction conditions are found to differ from those anticipated, the Engineer reserves the right to modify the scope of the work to suit the prevailing conditions and circumstances. Variations introduced in this manner will be measured and paid for at the rates tendered for appropriate items listed elsewhere in the schedule of quantities or in the absence of such rates, as extra work.

3.1.5 TEMPORARY WORKS

The provision of temporary access to the different sites, temporary shoring, formwork, etc.

3.1.6 CONSTRUCTION TIME PERIOD

The time period specified for completion by the Engineer, as stated in the Contract Data in terms of Clause 1.1.1.14 of the Conditions of Contract, is determined by the contractor and should be inclusive of all special non-working days and year end break (builder's holidays). The Contractor shall plan and programme his construction sequence for completion within the time period specified.

3.1.6.1 Construction work programme

The Contractor shall take note of various factors contained in the specifications, which will have a significant influence on the compilation of the construction work programme. Prominent items are those which might require a lead time for ordering the equipment or which might entail a special manufacturing period.

The Contractor shall take the above into consideration when drawing up his programme and no claims will be entertained in this regard.

3.1.7 CONTRACTOR'S CAMP SITE, POWER SUPPLY AND OTHER SERVICES

The Contractor will be permitted to use the area on or near the site for the establishment of a camp site and office accommodation for his construction personnel. The choice of all sites for the establishment of camps is subject to the approval of the Engineer.

The Contractor shall, however, make his own arrangements concerning the provision of water, electricity and other services for the campsite and office facilities. All Municipal rates shall apply.

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.

3.1.8 CONSTRUCTION IN CONFINED AREAS

It will be necessary for the Contractor to work within confined and restricted areas. The method of construction in these confined areas largely depends on the contractor's constructional plant.

Regardless, 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. It is deemed that the rates tendered in the Pricing Schedule / Priced Bill / Schedule of Quantities 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. **No additional payment will be made nor will any claim for payment be considered for work done in such confined areas, despite indications to the contrary in the Standard Specifications.**

The environment needs to be respected during the construction stage. The footprint must be discussed before the start of construction and no construction or movement of vehicles should take place outside these allocated areas.

3.1.9 WATER FOR CONSTRUCTION PURPOSES

The Contractor must make adequate provision in his tender for all negotiations and procurement of water for construction activities and all related costs will be deemed to be included in his tendered rates.

3.1.10 FEATURES REQUIRING SPECIAL ATTENTION

3.1.10.1 Existing Services

Any work requiring the excavation of existing road pavements, sidewalks and verges will require the necessary wayleaves be obtained from the relevant service authorities (including DFA, Neotel, Telkom, Electrical Department / Eskom, Roads & Stormwater Department, Waterworks Department and Drainage & Sewerage Department etc).

Prior to commencing work, the Contractor shall confer with all Authorities and Departments concerned and obtain the necessary wayleaves for both overhead and underground services affected by the Works and shall satisfy himself that he has obtained all the relevant information required to complete the Contract. The Contractor will be liable for obtaining all the necessary wayleaves and work permits from the relevant service authorities prior to the commencement of work within the road reserve.

The Contractor shall carry out the works with the minimum interference to existing services and it shall be clearly understood that obtaining the necessary wayleaves, will be at his own cost. The cost of repairing any damage to services, due to miscalculations or negligence on the part of the Contractor or his failure to carry out the duties set out in this Clause, shall be borne by the Contractor.

The Contractor shall comply with the requirements of the Project Specifications in Part B of C3.4.

The contractor needs to walk through the erf with the owner or authorised person, take photographs of the condition before work. Upon completion, the erven need to be handed back to the owner or authorised person in a similar or better state.

3.1.10.2 Health and Safety Plan

Prior to commencing work, the Contractor shall submit a Health and Safety Plan, compiled in accordance with the Health and Safety Specifications in Part C of the Works Specifications to the Engineer for approval. The Contractor may not commence construction without the Engineer's approval of the Health and Safety Plan.

3.1.10.3 Standard of Materials, Workmanship, Testing and Performance

The attention of Tenderers is particularly drawn to the high standard of materials, workmanship, testing and performance applicable to his Contract as a whole and he shall convey this requirement to his proposed Sub-Contractors.

The Contractor will carry out control testing of materials and workmanship as required in terms of the specifications. Where necessary, the Engineer may carry out acceptance control testing. The Employer will not pay claims or grant extension of time for delays to the works resulting from the awaiting of test results. Testing as required by the Engineer will be effected as promptly as possible, but it is in the Contractors own interest to submit material samples and other components of workmanship for testing in good time to assist in avoiding or minimising delays.

3.1.10.4 Weatherproof Protection for Workers

All staff required to continue working during rain shall be provided with oilskins and rubber knee boots, or other approved protective clothing and footwear.

3.1.10.5 Night Work and Work on Public Holidays

Where the Contractor requires staff to work overtime, he shall make the necessary arrangements with the Engineer and obtain written approval from the Engineer. The Contractor shall bear the cost of his overtime work.

The following conditions apply:

a) No work allowed after 18:00 on weekdays.
b) Working times for Saturdays are 08:00 - 14:00.
c) No work allowed on Sundays, Public Holidays and year end break as published by SAFCEC.
d) Approval for work outside of normal working hours to be obtained from Employer.

Penalty for the transgression of above conditions is R5 000 per transgression.

3.1.11 ENVIRONMENTAL REQUIREMENTS

The Contractor shall take particular note of the environmental requirements contained in the Works Specifications.

The Contractor shall take every precaution to avoid damage to vegetation within that area which falls outside the designated work area is indicated on the drawings. Any damage caused is to be repaired at the Contractor's expense.

Storage and stockpiling of materials will not be permitted without the written consent of the Engineer. Excess material from excavations and waste material shall be spoiled off site at suitable locations.

3.1.12 MONTHLY STATEMENTS AND PAYMENT CERTIFICATES

The statement to be submitted by the Contractor in terms of Clause 6.10 of the Conditions of Contract shall be prepared by the Contractor at his own cost, strictly in accordance with the standard payment certificate prescribed by the Engineer, in digital electronic computer format.

For the purposes of the Engineer's payment certificate, the Contractor shall subsequently be responsible, at his own cost, for making such adjustments to his statement as may be required by the Engineer for the purposes of accurately reflecting the actual quantities and amounts which the Engineer deems to be due and payable to the Contractor in the payment certificate.

The Contractor shall, at his own cost, make the said adjustments to the statement and return it to the Engineer within three (3) normal workings days from the date on which the Engineer communicated to the Contractor the adjustments required.

Any delay by the Contractor in making the said adjustments and submitting to the Engineer the requisite copies of the adjusted statement for the purposes of the Engineer's payment certificate will be added to the times allowed to the Engineer in terms of Subclause 6.10.4 of the Conditions of Contract to submit the signed payment certificate to the Employer and the Contractor. Any such delay will also be added to the period in which the Employer is required to make payment to the Contractor.

3.1.13 LIMITED FUNDS

Limited funds are available for this project and certain portions of the works as detailed in the scope of works may be omitted depending on the tendered rates and tender amounts received. The Employer reserves the right to amend, limit or omit certain portions / parts of the works without thereby invalidating the contract.

The Contractor shall take cognisance of these additional requirements in the finalisation of his tendered rates and programme of work. No claims will be considered on account of these restrictions.

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REFURBISHMENT OF VARIOUS ROADS AND STORMWATER IN LANGEBERG MUNICIPALITY; FOR A PERIOD OF THREE (3) YEARS

C3.2 Engineering / Design

CONTENTS

3.2.1 DRAWINGS
3.2.2 DESIGN PROCEDURES

3.2.1 DRAWINGS

The drawings listed below are attached in order to give an overview of the project. Additional construction drawings will, in terms of the General Conditions of Contract, be issued to the Contractor by the Engineer/Employer on the commencement date and from time to time as required.

The Works shall be carried out in accordance with the drawings listed in C5 of the tender documents and included in Volume 4 : Drawings and form part of the contract documents.

The reduced drawings that form part of the tender documents shall be used for tender purposes only.

The Contractor will be supplied with 3 unreduced paper prints of each of the drawings required for construction. These copies are issued free of charge and the Contractor shall make any additional copies he may require at his own cost.

Only figured dimensions shall be used and drawings shall not be scaled unless otherwise instructed.

The Contractor shall ensure that accurate as-built records are kept of all infrastructure installed or relocated during the contract. The position of pipe bends, junction boxes, duct ends and all other underground infrastructure shall be given by either co-ordinates, or stake value and offset. Where necessary, levels shall also be given. A marked-up set of drawings shall also be kept and updated by the Contractor. This information shall be supplied to the Engineer's Representative on a regular basis.

All information in the possession of the Contractor, which the Engineer requires to complete his record drawings shall be supplied to the Engineer's Representative before a certificate of completion will be issued.

The drawings prepared by the Employer for the permanent Works are listed. The Employer reserves the right to issue amended and/or additional drawings during the contract.

3.2.2 DESIGN PROCEDURES

The only design responsibility assigned to the Contractor under this contract is for the design work related temporary works and support of excavations. There is no requirement to submit these designs to the Employer or the Employer's agent for approval. Temporary works will however be inspected by the appointed Occupation Health and Safety Client Agent to ensure compliance with recognized industry norms and standards.

It is assumed that all temporary works designed and constructed by the Contractor has been designed and supervised by a competent person with the necessary qualifications and experience. It is also assumed the Contractor has the necessary indemnity insurance in place to cover for any liability that may occur as a result of the failure of such temporary works.

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C3.3 Procurement

CONTENTS

3.3.1 TARGETED CONSTRUCTION PROCUREMENT
3.3.2 SUB-CONTRACTING

3.3.1. TARGETED CONSTRUCTION PROCUREMENT

3.3.1.1 Objective

The Employer promotes the principles of Targeted Construction Procurement. In terms of Employer's current procurement policy this project provides for the following objectives to be actively pursued:
- the provision of opportunities for Small, Medium and Micro- Business Enterprises (SMMEs).
- the provision of work opportunities for local labour.

3.3.1.2 Contract requirements

For this contract, no set minimum contract participation goals will be applied but it is recommended that the Contractor make use of local labour where possible.

3.3.1.3 Labour workforce

On this contract, it is the intention that work is provided during the execution of the works for targeted labour residing in the target area (Langeberg Area) as defined and which would normally be the local or nearest communities. Labourers of the local or nearest communities required by the contractor shall be targeted, recruited and employed for work.

3.3.2. SUBCONTRACTING

3.3.2.1 General

The Contractor may subcontract portions of the Works included in the Contract. Clause 4.4 of the General Conditions of Contract makes provision for subcontracting.

Subcontract work provides opportunities for small or specialist businesses.

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C3.4 Construction

CONTENTS

3.4.1 TRADE NAMES OR PROPRIETARY PRODUCTS
3.4.2 APPLICABLE STANDARDISED SPECIFICATIONS
3.4.3 PARTICULAR / PROJECT SPECIFIC SPECIFICATIONS

3.4.1. TRADE NAMES OR PROPRIETARY PRODUCTS

Bid specifications may not make any reference to any particular trade mark, name, patent, design, type, specific origin or producer, unless there is no other sufficiently precise or intelligible way of describing the characteristics of the work, in which case such reference must be accompanied by the words "or equivalent".

TENDERERS MUST NOTE THAT WHEREVER THIS DOCUMENT REFERS TO ANY PARTICULAR TRADE MARK, NAME, PATENT, DESIGN, TYPE, SPECIFIC ORIGIN OR PRODUCER, SUCH REFERENCE SHALL BE DEEMED TO BE ACCOMPANIED BY THE WORDS 'OR EQUIVALENT"

3.4.2 APPLICABLE STANDARDISED SPECIFICATIONS

SANS 1200A	1986	General
SANS 1200AB	1986	Engineer's Office
SANS 1200C	1982	Site Clearance
SANS 1200D	1990	Earthworks
SANS 1200DM	1981	Earthworks (Road and Subgrade)
SANS 1200DK	1996	Gabions and Pitching
SANS 1200G	1982	Concrete (structural)
SANS 1200GA	1982	Concrete (Small works)
SANS 1200 GE	1984	Precast concrete
SANS 1200LE	1982	Stormwater Drainage
SANS 1200M	1996	Roads (General)
SANS 1200ME	1981	Subbase
SANS 1200MF	1981	Base
SANS 1200MK	1983	Kerbing and Channelling
SANS 1200MJ	1984	Segmented Paving

All work carried out, as well as equipment supplied, must fully meet and be in compliance with the requirements of the Occupational Health and Safety Act (Act 85 of 1993) and the Construction Regulations (2014) issued in terms of Section 43 of the Act.

In addition, the latest revisions of the following statutory regulations, laws and obligations as pertaining specifically to any and all electrical work applicable to this specific project are applicable:

- The regulations of the local Supply Authority

- The regulations of the Client, being either Governmental, Municipal, Parastatal or Private
- Local fire regulations
- SANS 10400-A: 2010 – The application of the national building regulations, Part A: General principles and requirements

All references to "SABS" specifications shall be read as "SANS" in light of the recent changes by the South African Bureau of Standards. Where a SANS Standard does not exist or if not applicable, the relevant IEC or BS Standard shall be applicable. All applicable electrical instrumentation must be IP68.

a) The term project specifications appearing in any of the SANS 1200 standardised specifications must be replaced with the terms scope of work.

b) Departures from and/or additions to specifications listed above are in shown in accordance with the numbering system of the standardised or particular specification. Each clause with the prefix PS shall refer to the congruent clause in the appropriate section of the standardised or particular specification. Such clause shall either substitute, or supplement, or amend the clause with the same number. Where there is no such congruent clause in the standardised or particular specification, the PS clause shall be a new clause in the project specification. Any clause that is referred to in the standardised specification will also include the appropriate project specification and shall adhere to the following:

   (i) In the event of any discrepancy between the project specifications and a part of the standard specifications, the schedule of quantities, or the drawings, the project specifications shall take precedence.

   (ii) The standard specifications, which form part of this contract, may cover items not applicable to this particular contract and should be clarified with the Engineer if discrepancies are obvious.

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.

3.4.3 PARTICULAR / PROJECT SPECIFIC SPECIFICATIONS

In certain instances, the Standard Specifications listed in 3.4.1 above allow a choice to be specified in the Scope of Work between alternative materials or methods of construction. Allowance is also made for additional requirements to be specified to suit each particular contract. Details of such alternatives of additions are contained in this part of the Scope of Works. In addition, it contains some supplementary specifications required for this particular contract. Subclauses referred to are those in the relevant Standardised Specification.

The number of each clause and each payment item in this part of the project specifications consists of the prefix PS 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 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 PS 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.

PROJECT SPECIFICATION

SCOPE

This project specification is set out in two portions. Portion 1 covers a general description of the project, the facilities available and the requirements to be met. Portion 2 covers variations and additions to standardised or particular specifications that are applicable to the contract.

The numbering method in portion 2 of this project specification deviates as follows from the method suggested in the Code of Practice SABS 0120.

Each clause with the prefix PS shall refer to the congruent clause in the appropriate section of the standardised or particular specification. Such clause shall either substitute, or supplement, or amend the clause with the same number. Where there is no such congruent clause in the standardised or particular specification, the PS clause shall be a new clause in the project specification. Any clause that is referred to in the standardised specification will also include the appropriate project specification.

PS 1 **GENERAL DESCRIPTION OF CONTRACT**

The Contract entails the construction of civil engineering services for .....

.....

PS 2 **DESCRIPTION OF THE SITE AND ACCESS**

The construction site is situated .....
The site can be reached via existing streets.

The operation of construction vehicles on existing roads or streets, or on streets which have been completed to the level of subbase or base or bituminous surface treatment, shall be limited to traffic with an axle load not exceeding that allowed by the Road Traffic Ordinance of the authority concerned, or any amendment thereof. Hauling is strictly forbidden on sections of streets that have been completed as described above. The Contractor shall make use of temporary haul roads, or where not practically possible, program his work in such a manner that the haulage of materials shall be restricted to that required for the particular section of street. No additional payment shall be made for the use of temporary haul roads and all relevant costs shall be deemed to be covered by the appropriate rates.

The Contractor must note that no additional payment will be made for the construction of temporary access roads to the construction site, borrow areas or to the spoil sites, except for payment made under payment item A 8.3.2.2 of SABS 1200 A.

If the Contractor does make use of existing streets for the hauling of materials to or from the site, he shall be held responsible to clear any spillage caused by his activities on or near the roads by whatever means necessary, within two (2) days after such spillage has occurred. No additional payment will be made for the clearance of spillage and all relevant costs will be deemed to be covered under the relevant items.

PS 3 **NATURE OF GROUND AND SUBSOIL CONDITIONS ON SITE**

The watertable may be relatively high during the winter months and provision must be made for effective draining of excavations.

It is the Contractor's responsibility to supply and deliver all materials that comply to the minimum standards as well as for the building and maintaining of access roads to the works on site, haul areas or dumping sites. No additional payment will be applicable to the above-mentioned other than the relevant items in the schedule of quantities.

Trial holes were dug in positions as indicated on the drawings. Test results are bound in Part 10 : Soil Survey, of this document. These results and the abovenamed paragraph only serve as a guideline and prospective tenderers shall acquaint themselves with the nature of materials on site.

PS 4 DETAILS OF THE CONTRACT

PS 4.1 MAIN CONTRACT

Work included in this contract involves the construction of the following:

a) Detection and adjustment of existing services;

b) Site clearance and demolition of structures;

c) Streets which include the building of fill, selected layers, subbase, kerbing, basecourse, bituminous surface treatment or interlocking concrete pavers and finishing;

d) Stormwater drainage which includes the construction of a retention dam, concrete and earth channels, stormwater pipes and box culverts for street, road and railway crossings;

e) The removal and relaying of existing services.

PS 4.2 NOMINATED SUBCONTRACTOR

The Contractor will, as main contractor, be responsible for the total execution of the works. If needed, the electrical contractor or any specialized work will be a nominated subcontractor of the civil contractor and a contract agreement will thus have to be concluded between these parties. Refer to GCC 9 in this regard.

It is stressed that although the main contractor and subcontractor may have a mutual agreement to include certain conditions in the subcontract, such conditions will not bind the Employer since only the general and special conditions of contract as described in this contract document will be applicable to the execution of the work.

If the contract cannot be completed in time, even if through the fault of the subcontractor, the main contractor will be held responsible for the payment of penalties as described in the appendix to form of tender.

After the Engineer has examined and approved the subcontractor's payment certificate, the certified amount will be paid out by the Employer to the main contractor. The main contractor must then in return pay the subcontractor without delay.

Provision is made in the bill of quantities for a percentage surcharge on the value of the nominated subcontract. This surcharge will cover all costs for time spent on programming and accommodation of the nominated subcontractor as described above and will be the only payment for the main contractor in this regard.

The nominated subcontractor's rates shall exclude VAT for the main contract. The main contractor must allow for in his surcharge on the nominated subcontractor that the latter is a registered VAT enterprise.

PS 5 CONSTRUCTION PROGRAM AND METHODS

The construction site is situated in a built-up area, therefore the Contractor shall ensure the least possible disruption of movement of the public during construction.

The work will be carried out in two phases:

Phase 1

Phase 2

Construction methods must be of such a nature that no property or life is endangered. The Employer accepts no responsibility for work that is done outside the site boundaries without the Engineer's approval. The Contractor himself is responsible for liaison and arrangements with the Local Authority in connection with the finalisation and approval of the construction program.

An electrical contractor will be on site during the contract period to lay electric cables. All excavations, bedding and back filling for cable trenches will be done by the civil contractor and his attention is drawn to the fact that he will not receive additional payment for re-programming of the works and/or any delays that may be caused by bad co-ordination, unless otherwise agreed by the Engineer.

All costs associated with liaison with the electrical contractor and the accommodation of the main contractor's activities on the site must be allowed for in the schedule of quantities.

The Contractor himself is responsible for liaison and the necessary arrangements with Transnet, the garage owner, the relevant road authorities and the authority responsible for the abattoir, in respect of the finalisation and approval of the works program.

The Contractor himself is responsible for liaison with house owners in respect of programming of construction through private erven and the crossing of driveways to erven. No additional payment will be made in this regard and it shall be deemed to be covered by the relevant items.

Sufficient photos of existing structures, walls and areas that have to be crossed must be taken by the Contractor and handed over to the Engineer before such operations commence. No payment will be made in this regard and it shall be deemed to be covered in the preliminary and general items.

The Contractor must program his work in such a way that no construction is to be done in and around the existing caravan park during the holiday season and Easter weekend.

The compilation of the construction program and any amendments thereto during the course of construction shall be at the cost of the Contractor and shall not be measured elsewhere in this contract.

PS 6 SITE FACILITIES AVAILABLE

PS 6.1 SOURCES OF WATER SUPPLY AND POWER SUPPLY

Water and electrical power supplies are available from the existing reticulations. The Contractor shall make his own arrangement for any water or power he may require. Any extension of time due to delays resulting from these facilities will not be granted.

PS 6.2 LOCATION OF CAMP AND DEPOT

A site for the Contractor's camp and depot will be pointed out during the site inspection.

PS 6.3 HOUSING FOR CONTRACTOR'S EMPLOYEES

No housing is available for the Contractor's employees, and the Contractor shall make his own arrangements for housing his employees or transporting them to and from the site. The Contractor is in all respects responsible for the housing and transporting of his employees, and for the arrangement thereof, and no extension of time due to any delays resulting from this, will be granted.

PS 6.4 RAIL FACILITIES

Not applicable.

PS 7 SITE FACILITIES REQUIRED

No housing is required for the Engineer. Other facilities such as an office, telephone, nameboard, survey equipment, etc. required for the Engineer, are described under the relevant sections.

PS 8 FEATURES REQUIRING SPECIAL ATTENTION

PS 8.1 SAFETY REGULATIONS

Both the "Factories, Machinery and Building Work Act (Act 22 of 1941) and the "Machinery and Occupational Safety Act (Act 6 of 1983)" must, wherever they appear in the SABS 1200 standardised specifications, be substituted by the "Occupational Health and Safety Act (Act 85 of 1993)".

PS 8.2 SURVEY BEACONS

Survey pegs along the street reserve boundaries will be indicated to the Contractor. The Contractor shall be solely responsible for the protection of survey pegs. The Contractor's attention is specifically drawn to the requirements of SABS specification 1200 A : General, clause 5.1 survey, in this respect.

PS 8.3 **"AS BUILT" DRAWINGS**

As the work progresses, the Contractor shall keep full records of all amendments to and deviations from the drawings as issued to the Contractor at the start of the contract. This information must be submitted monthly by the Contractor with his payment certificate, to the Engineer. The true positions, invert levels and ground levels of all services shall be indicated on the drawings, for which purpose the Contractor shall receive a separate complete set of drawings from the Engineer, at no cost.

The completion certificate shall only be issued after the Engineer has received a properly completed set of "**as built**" drawings from the Contractor. No separate payment shall be made for this service as all costs related thereto shall be deemed to be included in the related items.

PS 8.4 **FINISHING AND TIDYING**

Progressive and systematic finishing and tidying will form an essential part of this contract. Under no circumstances shall spoil, rubble, materials, equipment or unfinished operations be allowed to accumulate unnecessarily and in the event of this occurring the Engineer shall have the right to withhold payment for as long as necessary in respect of the relevant works in the area(s) concerned.

PS 9 **EXTENSION OF TIME RESULTING FROM ABNORMAL CLIMATIC CONDITIONS**

The Contractor shall make allowance for the average rainfall and windy conditions that may exist during the contract period. All necessary steps shall be taken to proceed with the works despite inclement weather. The Contractor shall however record all rainy and windy periods which adversely affect the contract extension of time in terms of clause 45(2, 3, 4) of the general conditions of contract, arising from abnormal climatic conditions, shall be applied as follows:

Delays on working days only (based on a five-day working week) will be taken into account for the extension of time, but the Contractor shall make provision in his programme of work for an expected delay of "n" working days caused by normal inclement weather, for which he will not receive any extension of time. The value of "n" for this contract shall be based on the loss of thirty (30) working days per annum due to inclement weather.

Extension of time during working days will be granted to the degree to which actual delays, as defined above, exceed the number of "n" working days as mentioned above.

When considering extension of time for abnormal climatic conditions, the effect of the loss of thirty one (31) working days per annum due to normal inclement weather shall be taken cumulatively over the whole contract period.

For portions of less than one year the appropriate number of days of normal inclement weather will be determined on a pro rata basis based on the following table:

MONTH	NUMBER OF NORMAL INCLEMENT WEATHER DAYS EXPECTED
January	2
February	3
April	2
March	2
May	3
June	3
July	4
August	3
September	2
October	3
November	3
December	1
TOTAL	**31**

Should the Contractor wish to submit a claim for extension of time for the completion of the works due to the works being delayed by reason of abnormal climatic conditions he shall do so in writing and with the following details:

1. The times work was stopped and recommenced.

2. A motivation for the reasons construction could not continue, with reference to the agreed construction programme activities.

3. A report on active resources on site at the time of the disruption, which shall be certified by the Engineer's site representative or Clerk-of-Works.

4. The circumstances surrounding any instruction by a third party to stop work due to inclement weather (i.e. Industrial Council/Safety Officer, etc.).

The Contractor shall submit to the Engineer claims for all time lost due to inclement weather within 1 working day of the claim day, duly certified by the Engineer's representative or Clerk-of-Works, as the case may be. A record of inclement weather will be kept and recorded at site meetings on a regular basis. Only when all parts of the contract have been handed over will claims, if any, be considered for exceptionally inclement weather. The onus is on the Contractor to prove these claims.

The delays granted, in terms of this clause, shall not automatically result in an overall extension of time being granted for completion of the works unless the effect is clearly applicable to the critical path of the agreed construction programme.

PS 10 **APPLICABLE STANDARDISED SPECIFICATIONS**

Although not bound in nor issued with this document, the following standardised specifications shall form part of the contract and, notwithstanding the provisions of subclause 2.2 of SABS 1200 A, the editions specified below shall apply:

SABS 1200 A	-	1986 GENERAL
SABS 1200 AA	-	1986 GENERAL (SMALL WORKS)
SABS 1200 AB	-	1986 ENGINEER'S OFFICE
SABS 1200 AD	-	1986 GENERAL (SMALL DAMS)
SABS 1200 C	-	1980 SITE CLEARANCE (AMENDMENT 1, 1982)
SABS 1200 D	-	1988 EARTHWORKS (AMENDMENT 1, 1990)
SABS 1200 DA	-	1988 EARTHWORKS (SMALL WORKS) (AMENDMENT 1, 1990)
SABS 1200 DB	-	1989 EARTHWORKS (PIPE TRENCHES)
SABS 1200 DE	-	1984 SMALL EARTH DAMS
SABS 1200 DK	-	1996 GABIONS AND PITCHING
SABS 1200 DM	-	1981 EARTHWORKS (ROADS, SUBGRADE)
SABS 1200 G	-	1982 CONCRETE (STRUCTURAL)
SABS 1200 GA	-	1982 CONCRETE (SMALL WORKS)
SABS 1200 H	-	1990 STRUCTURAL STEELWORK
SABS 1200 HA	-	1990 STRUCTURAL STEELWORK (SUNDRY ITEMS)
SABS 1200 HC	-	1988 CORROSION PROTECTION OF STRUCTURAL STEEL
SABS 1200 L	-	1983 MEDIUM-PRESSURE PIPELINES
SABS 1200 LB	-	1983 BEDDING (PIPES)
SABS 1200 LC	-	1981 CABLE DUCTS
SABS 1200 LD	-	1982 SEWERS
SABS 1200 LE	-	1982 STORMWATER DRAINAGE
SABS 1200 LF	-	1983 ERF CONNECTIONS (WATER)

SABS 1200 LG	-	1983	PIPE JACKING
SABS 1200 M	-	1996	ROADS (GENERAL)
SABS 1200 ME	-	1981	SUBBASE
SABS 1200 MF	-	1981	BASE
SABS 1200 MFL	-	1996	BASE (LIGHT PAVEMENT STRUCTURES)
SABS 1200 MG	-	1996	BITUMINOUS SURFACE TREATMENT
SABS 1200 MH	-	1996	ASPHALT BASE AND SURFACING
SABS 1200 MJ	-	1984	SEGMENTED PAVING
SABS 1200 MK	-	1983	KERBING AND CHANNELLING
SABS 1200 MM	-	1984	ANCILLARY ROADWORKS

In addition the following particular specifications that are bound into this document shall apply:

Specification PA	-	FENCING

PORTION 2 : VARIATIONS AND ADDITIONS

Departures from and/or additions to specifications listed in portion 1 are set out on the following pages in accordance with the numbering system of the standardised or particular specification.

PROJECT SPECIFICATION : PORTION 2

SABS 1200 A : GENERAL

A 3 **MATERIALS**

PS A 3.1 **QUALITY**

Substitute the second sentence of the first paragraph of A 3.1 with the following:

All materials shall bear the official mark of the appropriate standard and marking must be permanent. Markings must include the following information: batch, class and date of manufacture and may not be older than 1 year.

Substitute the second paragraph with the following:

Samples on which laboratory testing is required, shall be delivered free of charge to an approved laboratory, which is capable to carry out the necessary tests. The Contractor is responsible for the cost of all testing to ascertain that the materials do comply with the specified minimum requirements of the relative materials and no additional payment will be made for such testing.

The Contractor shall inform the Engineer of any control testing to be done at least 48 hours before such tests are required and must allow in his program for the time necessary for the tests and the processing of the results thereof.

PS A 3.3 STORAGE OF MATERIALS

Large items not normally stored in a building shall be neatly stacked or laid out on suitable cleared areas on the Site. Grass or vegetation shall not be allowed to grow long in the storage areas and the material shall be kept free of dust and mud, and be protected from stormwater. Pipes shall be handled and stacked in accordance with the manufacturer's recommendations, special care being taken to avoid stacking to excessive heights and placing over hard objects. PVC pipes shall be protected from direct sunlight by suitable covers.

Every precaution shall be taken to keep cement dry and prevent access of moisture to it from the time it leaves the place of manufacture until it is required for use on the Site. Bags of cement which show any degree of hydration and setting, shall be removed from the Site of the Works and replaced at the Contractor's own expense.

PS A 3.4 HANDLING OF MATERIALS

Materials should be handled with proper care at all times. Under no circumstances may materials be dropped from vehicles.

The Engineer shall have authority to forbid the transporting or handling of materials in a manner which, in his opinion, could cause damage.

PS A 4.1 SILENCING OF CONSTRUCTION EQUIPEMENT

Substitute A4.1 with the following:

The Contractors attention is drawn to the applicable regulations pertaining to noise and hearing conservation, framed under the Occupational Health and Safety Act, 1993 (Act No 85 of 1993) as amended.

The Contractor shall at all times and at his own cost, be responsible for implementing all necessary steps to ensure full compliance with such regulations, including but not restricted to the provision and use of suitable and effective silencing devices for pneumatic tools and other plant which would otherwise cause a noise level in excess of that specified in the said regulations.

Where appropriate, the Contractor shall further, by means of temporary barriers, effectively isolate the source of such noise in order to comply with the said regulations.

PS A 4.2 CONTRACTOR'S OFFICES, STORES AND SERVICES

Add the following paragraph before the existing first paragraph in A4.2:

The Contractors buildings, sheds and other facilities erected or utilised on the Site for purposes of the Contract shall be fenced off and shall contain all offices, stores, workshops, testing laboratories, toilet facilities, etc. as may be required by the Contractor. The facilities shall always be kept in a neat and orderly condition.

No personnel may reside on the Site. Only night-watchmen may be on the Site after hours."

Delete "and first-aid services" in the second paragraph of A4.2 and add the following:

The Contractor shall provide on the Site and in close proximity to the actual locations where the work is being executed, one toilet per 10 workmen, which toilets shall be effectively screened from public view and their use enforced. Such toilets shall be relocated from time to time as the location of the work being executed changes, so as to ensure that easy access to the toilets is maintained.

PS A 4.3 SITE SECURITY

The area to be used by the Contractor, for the execution of the works, may be subject to a security risk. The Contractor must assess the potential risks and make his own provision for additional protection.

No separate payment will be made for these additional security measures and the cost thereof will be deemed to be included in the rates tendered for items PS A 8.3 and PS A 8.4. These rates shall also include additional insurance if required.

A 5 **CONSTRUCTION**

A 5.1 **SURVEY**

PS A 5.1.1 **Setting Out Of The Works**

Substitute the first sentence in A 5.1.1 with the following:

Setting out of the works is the sole responsibility of the Contractor and shall be done from survey pegs along the street reserve boundaries and from bench marks as indicated on the drawings. The Contractor shall, within two (2) weeks after the site has been handed over to him, ascertain himself of the correctness of all pegs and bench marks. Any discrepancy shall immediately be reported in writing to the Engineer. Any costs or subsequent costs arising from discrepancies which had not been reported to the Engineer within the aforementioned period, shall be the sole responsibility of the Contractor.

PS A 5.1.2 Preservation and Replacement of Survey Beacons and Pegs Subject to the Land Survey Act

Delete the words "in the vicinity of boundaries" in the second sentence of A 5.1.2 and replace the words "under the direction of" in the same sentence with "in consultation and liaison with".

Add the following after the second sentence of A 5.1.2:

The Contractor and the Engineer shall record on the said list, their concurrence or disagreement (as the case may be) regarding the completeness and accuracy of the details recorded therein.

Substitute the third sentence of A 5.1.2 with the following:

"At the completion of the Contract, the Contractor shall expose all pegs that were listed at the commencement of the construction as being in order and the Contractor shall arrange with a registered Land Surveyor for the checking of the positions of all such pegs and the replacement of those that the Land Surveyors check reveals have become disturbed or damaged. The Contractor shall, as precedent to the issue of the Certificate of Completion, provide to the Engineer, a certificate from the registered land surveyor, certifying that all pegs listed at the commencement of construction in accordance with the provision of this clause, have been checked and that those found to have been disturbed, damaged or destroyed have been replaced in their correct positions, all in accordance with the provisions of the said Act.

The costs of all checking, replacement and certification as aforesaid shall be entirely for the Contractors account. This, with the provision always that the Contractor shall not be held liable for the cost of replacement of pegs which:

(a) cannot reasonably be re-established in their original positions by reason of the finished

dimensions of the permanent works, and

(b)The Contractor can prove beyond reasonable doubt to the satisfaction of the Engineer,

were disturbed, damaged or destroyed by others beyond his control."

PS A 5.2 **WATCHING, BARRICADING, LIGHTING AND TRAFFIC CROSSINGS**

Add the following to A 5.2:

The crossing of with services must be done in half widths and for the crossing of , the north and south bound lanes must be closed separately while the total traffic is accommodated on the other lane.

PS A 5.3 PROTECTION OF EXISTING STRUCTURES

Substitute "Machinery and Occupational Safety Act, 1983 (Act No 6 of 1983)" with "Occupational Health and Safety Act, 1993 (Act No 85 of 1993), as amended," and insert "as amended" after "(Act No. 27 of 1956)":

PS A 5.4 **PROTECTION OF OVERHEAD AND UNDERGROUND SERVICES**

Add the following to A 5.4:

The Contractor shall as soon as possible after handing over of the site, commence with the detection to existing services, continue with it without interruption and finalise it at least seven (7) days before excavation starts at that particular section.

PS A 5.4.1 Location of existing services

Before commencing with any work in an area, the Contractor shall ascertain the presence and actual position of all services which can reasonably be expected by a competent contractor to be present on, under, over or within the Site.

All services indicated on all wayleaves (obtained by Contractor, the RE to oversee the process and must be informed at all times of the progress by the Contractor), additional scanning as allowed for and pointed out on site by the local authority will be opened up and surveyed (level, invert, diameter and coordinates). These services include sewer, water, stormwater, electrical ducts, telecommunications ducts etc. These services will be reported to the Engineer 5 working days before these services will delay the Contractor.

The Contractor must therefore open all existing services and report them to the Engineer, 5 working days before the Practical Completion date and/or the Due Completion date, is affected. No claim will be considered for any delays if the Contractor did not follow protocol. This protocol must be clearly indicated on the initial and all adjusted construction programmes together with the time required by the Contractor to open all existing services. The Contractor must allow for at least 10 working days to open and expose the existing services. Any financial and time implications due to failure to timeously report to the Engineer will be for the Contractors account. Therefore, the protocol that must be indicated on the programme is as follows:

SEQUENCE OF PROTOCOL OF EXISTING SERVICES		
1	**2**	**3**
Open and Locating Existing Services	**Report All existing services to the Engineer**	**Time before Practical Completion date and/or Completion date is affected**
At Least 10 working days	1 working day	5 working days

The 5 working days, as per sequence number 3, is identified as float in terms of Clause 5.6.2.4 of the GCC 2015 (3rd Edition) and may only be used on prior approval by the Engineer. These 5 days must be programmed as a single bar item/activity, in the initial programme and subsequent adjusted programmes, as the immediate predecessor to normal climatic conditions and on the critical path of the programme.

Without in any way limiting his liability in terms of the Conditions of Contract in relation to damage to property and interference with services, the Contractor shall obtain the most up-to-date plans as are available, showing the positions of services existing in the area where he intends to work. Neither the Employer nor the Engineer offers any warranty as to the accuracy or completeness of such plans and because services can often not be reliably located from plans, the Contractor shall ascertain the actual location of services depicted on such plans by means of careful inspection of the Site.

Thereafter, the Contractor shall, by the use of appropriate methodologies, carefully expose the services at such positions as are agreed to by the Engineer, for the purposes of verifying the exact location and position of the services. Where the exposure of existing services involves excavation to expose underground services, the further requirements of subclauses 4.4 and 5.12.2 of SANS 1200 D (as amended) shall apply.

All services, the positions of which have been determined as aforesaid at the critical points, shall henceforth be designated as 'know services' and their positions shall be indicated by the Contractor on a separate set of drawings, a copy of which shall be furnished to the Engineer without delay and within the time period stated above.

As soon as any service which has not been identified and located as described above is encountered on, under, over or within the site, it shall henceforth be deemed to be a known service and the aforesaid provisions pertaining to locating, verifying and recording its position on the balance of the site shall apply. The Contractor shall notify the Engineer immediately when any such service is encountered or discovered on the Site.

Whilst he is in possession of the Site, the Contractor shall be liable for all loss of or damage as may occur to

(a) known services, anywhere along the entire lengths of their routes, as may reasonably be deduced from the actual locations at which their positions were verified as aforesaid, due cognizance being taken of such deviations in line and level which may reasonably be anticipated, and
(b) any other service which ought reasonably to have been a known service in accordance with the provisions of this clause,

The Contractor shall also be liable for consequential damage in regard to (a) and (b), whether caused directly by the Contractors operations or by the lack of proper protection.

No separate payment will be made to the Contractor in respect of this costs of providing, holding available on the Site and utilising the said detecting and testing equipment, nor for any costs incurred in preparing and submitting to the Engineer the Drawings as aforesaid. These costs shall be deemed included in the Contractors other tendered rates and prices included in the Contract.

Payment to the Contractor in respect of exposing services at the positions agreed by the Engineer and as described above will be made under the payment items (if any) as may be provided for in the respective sections of the specifications pertaining to the type of work involved.

PS A 5.4.2 Protection during construction

The Contractor shall take all reasonable precautions and arrange its operations in such a manner as to prevent damage occurring to all known services during the period which the Contractor has occupation and/or possession of the Site.

Services left exposed shall be suitably protected from damage and in such a manner as will eliminate any danger arising therefrom to the public and/or workmen, all in accordance with the requirements of the prevailing legislation and related regulations.

Unless otherwise instructed by the Engineer, no services shall be left exposed after its exact position has been determined and all excavations carried out for the purpose of exposing underground services shall be promptly backfilled and compacted. In roadways, the requirements of subclause 5.9 of SANS 1200 DB should be observed. In other areas compaction is to be to 90% modified AASHTO density.

PS A 5.4.3 Alterations and repairs to existing services

Unless the contrary is clearly in the Contract or ordered by the Engineer, the Contractor shall not carry out alterations to existing services. When any such alteration become necessary, the Contractor shall promptly inform the Engineer, who will either make arrangements for such work to be executed by the owner of the services, or instruct the Contractor to make such arrangements himself.

Should damage occur to any existing services, the Contractor shall immediately inform the Engineer and the relevant authorities should be repaired by the applicable authority and not by the Contractor. In urgent cases, the Contractor shall take appropriate steps to minimise damage to and interruption of the service. No repairs of telecommunication cables or electric power lines and cables shall be attempted by the Contractor.

The contractor shall allow for the time and cost thereof to drain and refill existing water supply/reticulation pipelines for purpose of connecting onto the existing pipelines.

The contractor shall be billed for the time spent by the Client to make alterations and/or repairs on existing infrastructure and the Contractor shall make provision for this in his tender rates.

A list of important telephone numbers for use when services are damage will be provided at the commencement of the contract."

PS A 5.5 **DEALING WITH WATER ON WORKS**

Add the following to A 5.5:

Special treatment of water on site shall where necessary, be specified separately.

PS A 5.6 POLLUTION

The Contractor's attention is drawn specifically to dust disturbance (See PS D 5.1.4.1).

PS A 5.7 SAFETY

Substitute A 5.7 with the following:

Pursuant to be provisions of the Conditions of Contract, and without in any way limiting the Contractors obligations thereunder, the Contractor shall at his own expense (except only where specific provision (if any) is made in the Contract for the reimbursement to the Contractor in respect of particular items), provide the following:

a) Provide to its Employees on the site of works, all safety materials, clothing and equipment necessary to ensure full compliance with the provisions of the Occupational Health and Safety Act, 1993 (Act No 85 of 1993) as amended (hereinafter referred to as the Act) at all times, and shall institute appropriate and effective measures to ensure the proper usage of such safety materials, clothing and equipment at all times;

b) Provide, install and maintain all barricades, safety signage and other measures to ensure the safety of workmen and all persons in, on and around the site, as well as the general public;

c) Implement on the site of the works, such procedures and systems and keep all records as may be required to ensure compliance with the requirements of the Act at all times;

d) Implement all necessary measures so as to ensure compliance with the Act by all subcontractors engaged by the Contractor and their employees engaged on the works;

e) Full compliance with all other requirements pertaining to safety as may be specified in the Contract.

The Employer and the Engineer shall be entitled, although not obliged, to make such inspections on the site as they shall deem appropriate, for the purpose of verifying the Contractors compliance with the requirements of the Act. For this purpose, the Contractor shall grant full access to the site of all parts of the site and shall co-operate fully in such inspections and shall make available for inspection all such documents and records as the Employers and/or Engineers representative may reasonably require.

Where any such investigation reveal, or where it comes to the Engineers attention that the Contractor is in any way in breach of the requirements of the Act or is failing to comply with the provisions of this clause, the Engineer shall, in accordance with the provisions of Clause 5.11 (GCC 2015), be entitled to suspend progress on the works or any part thereof until such time as the Contractor has demonstrated to the satisfaction of the Engineer, that such breach has been rectified.

The Contractor shall have no grounds for a claim against the Employer for extension of time and/or additional costs if the progress on the works or any part thereof is suspended by the Engineer in terms of this clause, and the Contractor shall remain fully liable in respect of the payment of penalties for late completion in accordance with the provisions of Clause 5.13 (GCC 2015) should the Contractor fail to complete the Works on or before the specified due completion date in consequence of the suspension.

Persistent and repeated breach by the Contractor of the requirements of the Act and/or this clause shall constitute grounds for the Engineer to act in terms of Clause 9.2.1.3.5 (GCC 2015) and for the Employer to cancel the Contract in accordance with the further provisions of the said Clause 9.2 (GCC 2015).

PS A 5.9 SITE MEETINGS

The Contractor or his authorised agent will be required to attend regular site meetings, which shall normally be held once a month on dates and at times determined by the Engineer, but in any case whenever reasonably required by the Engineer. Unless otherwise indicated in the Contract or instructed by the Engineer, such meetings shall be held at the Contractors offices on the site. At such monthly meetings, matters such as general progress on the works , quality of work, problems, claims, payments, and safety shall be discussed, but not matters concerning the day-to-day running of the Contract."

A 6 TOLERANCES

PS A 6.4 USE OF TOLERANCES

No guarantee is given that the full specified tolerances will be available independently of each other and the Contractor is cautioned that the liberal or full use of any one or more of the tolerances may deprive him of the full or any use of tolerances relating to other aspects of the work.

Except where the contrary is specified, or when clearly not applicable, all quantities for measurement and payment shall be determined from the 'authorised' dimensions. These are specified dimensions or those shown on the Drawings or, if changed, as finally prescribed by the Engineer, without any allowance for the payment will be based on the 'authorised' dimensions.

If the work is constructed in accordance with the 'authorised' dimensions plus or minus the tolerance allowed, the calculation of quantities will be based on the 'authorised' dimensions, regardless of the actual dimensions to which the work has been constructed.

When the work is not constructed in accordance with the 'authorised' dimensions plus or minus the tolerances allowed, the Engineer may nevertheless, at his sole discretion, accept the work for payment. In such cases no payment shall be made for quantities of work or material in excess of those calculated for the 'authorised' dimensions, and where the actual dimensions are less than the 'authorised' dimensions minus the tolerance allowed, quantities for payment shall be calculated based on the actual dimensions as constructed."

A 7 **TESTING**

A 7.1 PRINCIPELS

PS A 7.1.1 Checking

Substitute the last sentence in A 7.1.1 with the following:

The Contractor shall obtain the services of an independent testing laboratory at his own expense to carry out such checks as are prescribed in the various standardised specifications.

PS A 7.1.2 Standard of Finished Work not to Specification

Insert the words "or checks by an approved laboratory" after the words "Where the Engineer's checks" in the first sentence of A 7.1.2.

PS A 7.2 APPROVED LABORATORIES

Substitute A 7.2 with the following:

"Unless otherwise specified in the relevant specifications or elsewhere in the Project Specification, the following shall be deemed to be approved laboratories in which design work, or testing required in terms of a specification for the purposes of acceptance by the Engineer of the quality of materials used and/or workmanship achieved, may be carried out:

a) Any testing laboratory certified by the South African National Accreditation System (SANAS) in respect of the nature and type of testing to be undertaken for the purposes of the Contract;

b) Any testing laboratory owned, managed or operated by the Employer or the Engineer;

c) Any testing laboratory established and operated on the Site by or on behalf of the Employer or the Engineer.

d) Any other laboratory that the Engineer approves in his absolute discretion."

PS A 7.4 **STATISTICAL ANALYSIS OF CONTROL TESTS**

Substitute A 7.4 with the following:

Test results shall not be evaluated by statistical methods. All results shall comply with the specified minimum requirements of the materials concerned.

A 8 **MEASUREMENT AND PAYMENT**

A 8.2 **PAYMENT**

PS A 8.2.1 Fixed-charge and Value-related Items

Substitute A 8.2.1 with the following:

Payment of fixed charges in respect of item 8.3.1 will be made as follows:

Eighty per cent (80%) of the sum tendered will be paid when the facilities have been provided and approved. The remaining twenty per cent (20%) will be paid when the works have been completed, the facilities have been removed and the site of the Contractors establishment has been cleared and cleaned to the satisfaction of the Engineer.

No adjustment will be made to the sums tendered in respect of item 8.3.1 should the value of the works finally executed or the time for completion vary in any way from that specified in the tender.

Payment for the sum tendered under item 8.3.2 will be made in three separate instalments as follow:

a) The first installment, which is 40% of the sum, will be paid when the Contractor has fulfilled all his obligations to date under this specification, the General Conditions of Contract and the Special Conditions of Contract (GCC 2015), and when the value of work certified for payment, excluding materials on site and payments for preliminary and general items, is equal to not less than 5% of the total value of works listed in the Schedule of Quantities.

b) The second instalment, which is 40% of the sum, will be made when the amount certified for payment, including retention moneys but excluding this second instalment, exceeds 50% of the tender sum.

c) The final payment, which is 20% of the sum, will be made when the works have been certified as complete and the Contractor has fulfilled all his obligations to date under this Specifications, the General Conditions of Contract and the Special Conditions of Contract (GCC 2015).

Should the value of the measured work finally complete be more or less than the tender sum, the sum tendered under items 8.3.2 will be adjusted up or down in accordance with the provisions of Clause 6.11 (GCC 2015) and this adjustment will be applied to the third instalment.

PS A 8.2.2 Time-related Items

Substitute A 8.2.2 with the following:

Subject to the provisions of PS A 8.2.3 and PS A 8.2.4, payment under item PS A 8.4.1 (time-related item) will be made monthly in equal amounts, calculated by dividing the sum tendered for the item by the tendered Contract period in months, provided always that the total of the monthly amounts so paid for the items is not out of proportion to the value of the progress of the Works as a whole.

PS A 8.2.5 **Adjusted Payment For Time-related Items**

The payment to the Contractor for time-related items shall be adjusted in accordance with the following formula in the event of the contract being extended by means of a variation order:

$$\text{Sum of Tendered amounts for time-related items} \times \frac{\text{Extended contract period as authorised by variation order}}{\text{Tendered contract period}}$$

The above-mentioned adjustment of the payment for time-related items shall be made in the Completion Payment Certificate and shall be the only payment for additional time-related costs.

PS A 8.3 SCHEDULED FIXED-CHARGE AND VALUE-RELATED ITEMS

Substitute A 8.3 with following:

PS A 8.3.1 Fixed Preliminary and General Charges ..... Unit : Sum

PS A 8.3.2 Value-related Preliminary and General Charges ..... Unit : Sum

The sums tendered shall include full compensation for all fixed-charge preliminary and general charges as describe in PS A 8.1.2.2. Payment will be made as described in PS A 8.2.1.

PS A 8.4 SCHEDULED TIME-RELATED ITEMS

Substitute A 8.4 with following:

PS A 8.4.1 Time-related Preliminary and General Charges ..... Unit : Sum

The sums tendered shall include full compensation for all time-related preliminary and general charges as describe in PS A 8.1.2.2. Payment will be made as described in PS A 8.2.2.

PS A 8.4.6 **Standing Time Costs**

a) plant ..... Unit : Sum per working day

b) labour ..... Unit : Sum per working day

c) other resources (to be specified by Contractor) ..... Unit : Sum per working day

The tendered sum for each item shall include full compensation for all standing time costs of the specified resource of whatever nature and approved by the Engineer, which are not recoverable by way of the provision made in PS A 8.2.5 for the adjusted payment of time-related items.

For the purposes of calculating the total standing time cost, a working week shall be held to consist of five working days and a working day of 9 hours.

Payment for the partial standing of any of the scheduled resources for a day or part thereof, or the standing of a complete resource for a part day, will be made pro rata in proportion to an appropriate factor assessed by the Engineer.

The amount by which the standing time costs is adjusted shall be subject to the contract price adjustment formula as defined in the conditions of contract.

The Contractor shall take note that this payment item shall only apply to delays, which **in the opinion of the Engineer**, are incurred as a result of riot, commotion, politically motivated sabotage and acts of terrorism or disorder outside the Contractor's control. This item shall also apply to standing time incurred as a result of labour boycotts, except that only sub-items (a) and (c), as applicable, will be paid where the Contractor did not pay his labour for the time boycotted. Costs for delays incurred for all other circumstances shall be treated as provided for in the conditions of contract.

The provision of this clause shall in no way prejudice the right of either the Employer or the Contractor to determine the contract in terms of the provisions of clause 57 of the general conditions of contract.

The Contractor shall take note that no payment will be considered for additional cost or time lost for any daily removal of plant and equipment from the site, any additional costs incurred in protecting his plant and site establishment, or loss incurred in respect of damage to construction plant, equipment and materials supplied and the works.

In the event that GCC 46(1) becomes applicable, the time on which such penalties are calculated shall be reduced by the total standing time approved by the Engineer.

PS A 8.5 SUMS STATED PROVISIONALLY BY THE ENGINEER

Substitute A 8.5 with following:

PS A 8.5.1 Works Executed by the Contractor .....Unit : Prov Sum

The Contractor will be reimbursed in substitution of the Provisional Sums (if any) allowed in the Schedule of Quantities for work to be executed by the Contractor, in the amounts determined in accordance with the provisions of Clause 6.6 (GCC 2015) of Conditions of Contract.

PS A 8.5.2 Works Executed by Nominated Subcontractors

a) Work to be Executed by a Nominated Subcontractor.....Unit : Prov Sum

b) Overheads, Charges and Profit on Item (a) above .....Unit : %

Subitems (a) and (b) will be provided in the Schedule of Quantities for each different Nominated Subcontractor included in the Contract.

The Contractor shall be reimbursed under subitem (a), in substitution of the respective Provisional Sums (if any) allowed in the Schedule of Quantities, the amounts actually paid or payable by the Contractor to the respective Nominated Subcontractors, in accordance with the provisions of Clause 6.6 (GCC 2015) of the Conditions of Contract.

The Contractor shall be paid under subitem (b), either

a) where the unit of measurement for subitem (b) was specified as being a percentage, the respective percentage, as stated by the Contractor in is tender, of the amount certified by the Engineer for payment under the related subitem (a), all in accordance with the provisions of Sub/Clause 6.6.1.2.1 (GCC 2015) of the Conditions of Contract, or

b) where the unit of measurement for subitem (b) was specified as being a lump sum, an amount which is in the same proportion to the amount certified for payment under subitem (a) and the tendered lump sum is to the amount of the Provisional Sum stated under subitem (a) in accordance with the provisions of Clause 6.61.2.2. (GCC 2015):

The percentage or sum (as applicable) paid under subitem (b) as aforesaid, shall be deemed to include for full and final compensation to the Contractor for all costs as may be incurred and all charges and profits associated with the engagement, supervision, administration and management of the Nominated Subcontractor required of him in fulfilling its obligations under the Contract as the Principal Contractor."

PS A 8.6 PRIME COST ITEMS

Substitute A 8.6 with following:

PS A 8.6 PRIME COST SUMS

a) Description of Items to which Prime Sums Applies.....Unit : Prov Sum

b) Charges required by Contractor on Item (a) above.....Unit : %

Subitems (a) and (b) will be provided in the Schedule of Quantities for each different item to which a Prime Cost Sum applies.

The Contractor shall be reimbursed under subitem(s) (a) in substitution of the respective Prime Cost Sums included in the Contract, the actual price(s) paid or payable by him in respect of the goods, materials or services supplied, but excluding any charges for the Contractors labour, profit , carriage, establishment or other charges related to such goods, services or materials.

The Contractor shall be paid under subitem (b), the respective percentage, as stated by the Contractor in his tender, of the amount certified by the Engineer for payment under the related subitem (a). The percentages tendered by the Contractor for each respective subitem (b) included in the Schedule of Quantities shall be deemed to be in full and final compensation to the Contractor in respect of any charge by the Contractor for labour, carriage profit, establishment and for any other charges related to the goods, services or materials supplied under the related subitem (a).

If the Contractor shall have omitted within his tender to insert a tendered percentage under subitem (b), or tendered a zero percentage, the Contractors tendered rate for subitem (b) shall be deemed to be zero and the Contractor shall not be entitled to any payment under subitem (b).

Note in correction with additional tests required by the Engineer:
When a PC sum is included in the Schedule of Quantities for additional tests required by the Engineer, the Contractor shall be responsible for both the costs of normal testing as described in the Project Specifications and for the cost of any additional test that indicates that the specifications have not been complied with."

Where work is to be done by a sub-contractor, such as DFA and/or Telkom, the Contractor is to take cognisance of the works to be completed and must ensure that the Date of Practical Completion and/or Due Completion date is not delayed. Should the Contractor fail to programme of the said works, any delay will be for the Contractors account.

The Contractor must liaise with the relevant authority (DFA: Mr Paul Roos – 082 658 5695 & Telkom: Mr. Eben de Koker 081 406 1007) and Clause 2.1 of the GCC 2015 (3rd Edition) applies in this regard. This work must therefore be effectively programmed for each section of the works to be completed by the sub-contractor and Clause 4.4 of the GCC 2015 (3rd Edition) shall apply in this regard. All costs pertaining to this is deemed to be included in the overhead costs (of the rates tendered).

The amounts specified in the bill of quantities are provisional and preliminary amounts and may be reduced and/or removed completely at the discretion of the Employer.

PS A 8.7 **DAYWORK**

Replace A 8.7 with the following:

Daywork will be paid according to the percentage allowance method. For calculating the total remuneration the general conditions of contract for the construction of civil engineering work, sixth edition (1990) shall apply, with the amendments as in the appropriate special conditions of contract which is bound into this document. A daywork schedule will be provided for filling in the necessary information.

A 8.8 **TEMPORARY WORKS**

PS A 8.8.2 **Accommodation Of Traffic ..... Unit : Sum**

Add the following to A 8.8.2:

The rate shall cover all costs pertaining to the provision, erection, moving, re-erection and maintenance of all temporary barricades, road signs, lights, flagmen, etc. as required, for the guarding and protection of the works, for the construction, gravelling and maintenance of access roads and detours to the site of the works, borrow pits or spoil sites, as well as for the later removal or the cleaning and tidying up thereof, for making the necessary traffic arrangements and arrangements with regard to the moving and/or re-erection of existing traffic signs, as well as all other costs to accommodate the traffic during construction.

(Specify separate items under A for large crossings.

Remember removal of road markings and sandblasting where necessary and painting of new road markings. Supply the necessary drawings of road signing necessary for each crossing.)

PS A 8.8.2.1 **Accommodation of Traffic ..... Unit: Sum**

Add the following to A 8.8.2:

The rate shall include all costs pertaining to:

- the planning, submitting and obtaining of approval for the traffic accommodation plans required,
- the maintenance, **replacement and storage** of all temporary barricades, road signs, lights, traffic signals etc. as required,
- for the guarding and protection of the works,
- for the construction, gravelling and maintenance of access roads and detours to the site of the works, borrow pits or spoil sites,
- as well as for the later removal or the cleaning and tidying up thereof.
- **All according to the latest South African Development Community Road Traffic Signs Manual, Chapter 13**.

PS A 8.8.2.2 Temporary Traffic Control Facilities **..... Unit: No. or Man-day**

Add the following to A 8.8.2:

The rate shall cover all costs pertaining to the provision (inclusive of the posts where required), erection and final removal from work at completion of all temporary barricades, road signs, lights, flagmen, etc. as required, **all according to the latest South African Development Community Road Traffic Signs Manual and SANS 1200 MM**. Notwithstanding the provisions of SANS 1200 MM sub clause 3.2 sign faces shall have a painted background and symbols/characters of Engineering Grade (Grade 1) and High Intensity Grade retro reflective material respectively with signboards constructed from 12.7mm weather resistant particle board. Upon removal from the works these items shall become the property of the contractor.

The unit of measurement for a flagmen shall be a day worked by a flagmen. The tendered rate shall cover fully all costs for a flagmen who is required to control traffic by way of flags or portable Stop/Go-Ry signs and shall include the provision of safety jackets.

No separate payment will be made for the provision of watchmen, flagmen, flags etc. required under this section; any additional costs will have been deemed to be covered under sub clause PS A 8.8.2.1 above.

PS A 8.8.2.3 **Relocate Temporary Traffic Control Facilities as per approved Traffic Accommodation Plans Unit: No**

Add the following to A 8.8.2:

The unit: No refers to the number of signs to be relocated. The rate shall cover all costs pertaining to the moving and re-erection of all temporary barricades, road signs, lights, etc. as required as per approved Traffic Accommodation Plans **all according to the latest South African Development Community Road Traffic Signs Manual – Chapter 13**.

PS A 8.8.2.4 **Removal of Road Markings ..... Unit: m²**

Add the following to A 8.8.2:

The unit of measurement shall be square metres of broken or unbroken white of yellow lines, word markings or symbols removed. Spaces between markings in broken lines will not be included in the in overall area measured. The tendered rate shall include all costs associated with the removal of road markings by sandblasting. The repainting of road markings and the painting of temporary road markings will be provided for separately elsewhere in the schedule.

PS A 8.8.4 **Existing Services**

Add the following to A 8.8.4:

Where the Contractor is responsible for the cost of repairs carried out by the Employer or others, the costs will be recovered by means of a deduction from the Contractor's monthly payment certificate. The Employer will attend to the payment of monies due to others.

PS A 8.8.4.2 Hand excavation to locate and expose existing services in all materials .....Unit : m³

The rate shall cover the cost of excavating by means of hand tools within authorised dimensions, for all precautionary measures necessary to protect the service from damage during excavation and backfilling and for subsequent backfilling and compaction. Compaction of material in all areas expect in roadways shall be to 93% of MAASHTO density (100% for sand).

The tendered rate shall also include for keeping the excavations safe, for dealing with surface and subsurface water and for the removal and spoil of surplus material.

Only quantities that can be reasonably verified by the Employers Agent will be certified for payment. The onus is on the Contractor to ensure that each excavated pit/existing service to verified by the Employers Agent before closing up and Clause 7.5.1 of the GCC 2015 applies in this regard.

PS A 8.8.5 **Cost Of Survey In Terms Of The Land Survey Act ..... Unit : Sum**

Substitute A 8.8.5 with the following:

The sum shall cover the cost of all labour, plant and material required for the searching and compilation of a list, all in accordance with the requirements as set out in clause A 5.1.2.

PS A 8.8.6 **Special Water Control In Terms Of Project Specification ..... Unit : Sum**

(Describe abnormal circumstances separately such as rivers, marshes, high ground watertable, etc., see also DB 8.3.4(b).)

PS A 8.8.7 Dealing with Water

a) Dealing with subsurface water..... Unit : Sum

b) Dealing with surface water..... Unit : Sum

The sum shall cover the cost for the provision, operation, maintaining and removal of all plant and materials required to deal with any water anywhere on the Site as required in terms of Subclause 5.1.3 of SANS 1200 D and Subclause 5.1.2 of SANS DB. No additional payment will be made for “Special water hazards”.

The sum shall cover the cost of providing the necessary plant or materials, or both, fully erected and operative on the Site, the cost of operating and maintaining pumps, well points, sheeting, close timbering, and other equipment, as applicable, for 24 hours a day, 7 days a week, throughout the period during which the facilities are required, and cost of removing such goods and restoring the Site to its original condition on completion of that part of the project for which the temporary works were erected.

Equal monthly payments will be made calculated by dividing the sum tendered for the item by the tendered contract period in months. The sum of the equal monthly payments shall not exceed the sum tendered for this item, except where an extension of the contract period is approved by the Engineer in which case the monthly payments will be made pro-rata to the extension of time only if dealing with water is required.

PS A 8.9 WAYLEAVES

The tendered sum shall include full compensation to the Contractor for all the costs involved in obtaining the way leave as specified in the Scope of Works.

The time required for obtaining way leaves from all authorities and effected parties, including (but not limited to) DFA, Neotel, Telkom, Eskom etc shall be included in the programme of the works and no construction activities shall commence before the way leaves has been obtained by the Contractor and approved by the Engineer.

The location of all existing services indicated on the drawings are approximate and must be confirmed by the Contractor prior to construction and ordering of materials.

The Employers Agent must be informed timeously of all correspondence with all authorities and affected parties, with specific reference to the outcome and/or progress of said correspondence. Failure to timeously inform the Employers Agent will be for the Contractor account.

PS A 8.10 COMPLYING WITH THE HEALTH AND SAFETY REQUITEMENTS

The sum tendered shall include full compensation for all costs, of whatever nature, for complying with the Occupational Health and Safety Act 1993, Construction Regulations 2014, the Occupational Health and Safety Specification as described in C3.4 Part D.

This sum will be paid to the Contractor in equal monthly amounts over the construction period, subject to proper/substantial compliance.

Rate to include PS A 5.7.

PS A 8.12 CONTRACT NAMEBOARDS

The amount tendered for this item shall allow for full compensation for all costs incurred in procuring and erecting contract name boards as shown on the drawings and at the positions indicated by the Engineer on site and for removing the boards at the end of the contract.

PROJECT SPECIFICATION : PORTION 2

SABS 1200 AB : ENGINEER'S OFFICE

AB 3 **MATERIALS**

PS AB 3.1 **NAMEBOARDS**

Substitute "South African Institution of Civil Engineers" in the first paragraph of AB 3.1 with "South African Association of Consulting Engineers".

PS AB 3.2 **OFFICE BUILDINGS**

Add the following to AB 3.2:

The office must have an adjacent carport with minimum dimensions of 6 m x 3 m with a free draining, wearing course floor. The roof must be built in such a way that a vehicle will always be shielded against the sun throughout the day. An approved shade net may be used for the sides to comply with above-mentioned requirement.

Substitute sub-paragraph (j) in AB 3.2 with the following:

j) provision of an approved 16 000 BTU air-conditioner.

AB 4 **PLANT**

PS AB 4.1 **TELEPHONE**

Substitute AB 4.1 with the following:

The Contractor shall supply a telephone for the exclusive use of the Engineer for official purposes.

Should a telephone service not be available from the relevant authority, an alternative means of communication, approved by the Engineer, must be provided.

A cellular phone may be provided for the exclusive use of the Engineer for official purposes.

Should the Clerk-of-Works have his own cellular phone and if so, provided for in the bill of quantities, the appropriate amount will be payable to the consulting engineer.

AB 5 **CONSTRUCTION**

PS AB 5.1 **NAMEBOARDS**

Add the following to AB 5.1:

The nameboards shall be erected within one month after receipt of the letter of acceptance and shall be placed at the position indicated by the Engineer, and kept in good repair for the duration of the contract and the defects liability period. Any damage to these boards shall be repaired within fourteen days of a written instruction issued by the Engineer. No payment shall be made in terms of the contract prior to the erection of the nameboards.

The Contractor will be permitted to erect a maximum of two of his own nameboards, in positions approved by the Engineer. The Engineer reserves the right to order the removal of these boards if they are not kept in good repair.

PS AB 5.5 **SURVEY ASSISTANTS**

Substitute "two or more suitably educated survey labourers" in the first sentence of AB 5.5 with "two semi-skilled labourers."

PS AB 5.6 **SURVEY EQUIPMENT**

The Contractor shall provide the following tested and approved survey equipment on site for the duration of the contract and for the use of the Engineer whenever needed:

a) one tacheometer capable of reading to minimum 20 seconds and maximum 6 seconds of arc, plus tripod;

b) one automatic level plus tripod;

c) two tacheometer staffs and one level staff, all graduated metrically; and

d) one 5 m and one 100 m tape measure.

The above-mentioned equipment may by arrangement be shared between the Contractor and the Engineer's representative.

The Contractor shall keep the equipment continuously insured against any loss, damage or breakage, and he shall indemnify the Engineer and the Employer against any claims in this regard.

The Contractor shall maintain the equipment in good working order and keep it clean throughout the contract period.

AB 8 **MEASUREMENT AND PAYMENT**

AB 8.2 **PAYMENT**

PS AB 8.2.2 **Telephone, Survey Assistants And Survey Equipment**

No payment shall be made for the telephone, survey assistants or survey equipment and all costs shall be deemed to be covered by the rates tendered for the Contractor's facilities.

PROJECT SPECIFICATION : PORTION 2

SABS 1200 C : SITE CLEARANCE

C 3 **MATERIAL**

PS C 3.1 **DISPOSAL OF MATERIAL**

Substitute the first sentence of C 3.1 with the following:

Material obtained from clearing and grubbing and demolition structures shall be disposed of at the dump site.

C 5 **CONSTRUCTION**

PS C 5.1 **AREAS TO BE CLEARED AND GRUBBED**

Substitute the first sentence of C 5.1 with the following:

Unless otherwise indicated by the Engineer, clearing and grubbing are limited to the street reserves or such wider area as is necessitated by the street prism, borrow pits, the area of the retention dam, a 10 m wide strip for concrete and/or earth channels, a 3 m wide strip for pipelines not in street reserves and if requested by the Engineer the spoil areas. The Contractor may proceed with clearing and grubbing after the handing over of the site. Measurement and payment for clearing and grubbing shall only occur for areas as required in writing by the Engineer.

Substitute the last paragraph with the following:

The Contractor shall program his work in such a manner that reclearing will not be necessary. The cost of reclearing shall be borne by the Contractor.

C 5.2 **CUTTING OF TREES**

C 5.2.3 **Preservation Of Trees**

PS C 5.2.3.2 **Individual trees**

Add the following to C 5.2.3.2:

Trees outside street, channel and pipeline routes must be left standing and undamaged, except where otherwise ordered, in writing, by the Engineer.

A penalty of R1500-00 per tree for trees damaged and/or removed will be charged.

PS C 5.3 CLEANING

Add the following to C 5.3:

The removal of existing fences will only be allowed on written approval of the Engineer. The Contractor shall on his own cost immediately repair any damage done to existing fences due to construction work, if the fences are not to be removed.

PS C 5.8 **DEMOLITION OF STRUCTURES**

Add the following to C 5.8:

The existing building must be demolished after the new pump station is in operation. The roof tiles, roof trusses, gutters, windows and doors, etc must be removed with caution to ensure that all building material be recovered, cleaned and delivered to the Employer in good order.

PS C 5.9 **EXISTING FENCING**

The existing fences inside the site must be removed. The fence around the site must not be removed and must be repaired immediately after damage to it has occurred.

C 8 **MEASUREMENT AND PAYMENT**

C 8.2 **SCHEDULED ITEMS**

PS C 8.2.3 **Remove And Grub All Trees And Tree Stumps Regardless The Girth Unit : ha**

Add the following to C 8.2.3:

The number of trees and/or stumps in the areas indicated on the drawings, is such that individual measurement is impractical. Individual trees that fall outside the indicated area, will be measured and paid for under C 8.2.2.

PS C 8.2.7 **Dismantle And Remove Pipelines, Electricity Transmission Lines, Cables etc. ..... Unit : m**

Add the following to C 8.2.7:

Existing pipelines, cables, etc shall only be dismantled subject to written instruction by the Engineer. Excavation and backfilling shall be measured in the appropriate items of SABS 1200 DB : Earthworks (pipe trenches).

PS C 8.2.8 **Demolish And Remove Structures/Buildings And Dismantle Steelwork, Etc ..... Unit : Sum**

Replace C 8.2.8 with the following:

The rate shall cover the cost of the removal of all structures on the site, channel- and/or sewer mainline routes, the disposal thereof at the dumping site, the levelling and shaping of the site and the backfilling of any holes with material of at least the same quality as that of the in situ material. The rate shall also cover the cost of removing cleaning and handing over of all usable material to the Employer.

Payment for the removal of individual structures will be made pro rata in the relation of the area thereof to the total area of structures that has to be demolished and removed.

PS C 8.2.11 **Removal Of Existing Walls, Kerbs, Etc ..... Unit : m**

Separate items will be listed for each type. The rate shall cover the cost of excavation, removal, backfill and shaping of the site, loading, transport, spoil levelling and shaping thereof on the spoil site.

PS C 8.2.12 **Remove And Re-erect Existing Fences ..... Unit : m**

The rate shall cover the cost of removal and stacking of existing fencing material, including all gates, as well as of the re-erection thereof with the existing material. No additional payment will be made for the replacement of fencing material that has been damaged by the Contractor.

Material that is unsuitable for re-erection must be viewed by the Engineer before it is removed after which the Engineer must give written approval for the replacement thereof and for payment therefore.

(This item must be omitted if Particular Specification PA : Fencing is used.)

PS C 8.2.13 **Remove Material From Existing Filters**

a) Media ..... Unit : m^3

b) Pipes and floor drains ..... Unit : m

c) Columns supporting feed pipes ..... Unit : m

The rate shall cover the cost of removing and disposing of the material and of cleaning the filters.

PS C 8.2.14 Remove and reinstate existing:

Paving .....Unit: m²

The tendered rate shall include full compensation for the careful removal of interlocking paving, the temporary stockpiling and cleaning thereof and the reinstatement once the work has been completed, including all necessary excavation, backfilling and placing of paver on 20mm crusher dust blinding layer. In the event of the Contractor damaging any of the paving, he will replace it at his own cost.

PS C 8.2.15 Remove and reinstate existing:

Paving / Kerb / Edging.....Unit: m

The tendered rate shall include full compensation for the careful removal of kerbs or edging, the temporary stockpiling and cleaning thereof and the reinstatement once the work has been completed, including all necessary excavation, backfilling and concrete bedding and backfilling using 15 MPa concrete. In the event of the Contractor damaging any of the kerbs, he will replace it at his own cost.

PS C 8.2.16 Raise or Lower Existing Manholes / Valve Chambers.....Unit: No

The rate shall cover the cost to raise or lower the existing manhole valve chambers by a maximum of 300mm, including all excavations, finishings and spoiling of surplus material.

PROJECT SPECIFICATION : PORTION 2

SABS 1200 D : EARTHWORKS

D 2 **INTERPRETATIONS**

PS D 2.3 **DEFINITIONS**

Add the following to D 2.3:

Sand (cohesionless and non-cohesive)

For the purposes of the compaction requirements, a non-plastic material of which not less than 95 % by mass passes a sieve of nominal aperture size 4,75 mm, and not more than 10 % passes a sieve of nominal aperture size 0,075 mm.

D 3 **MATERIALS**

D 3.3 **SELECTION**

D3.1 CLASSIFICATION FOR EXCAVATION PURPOSES

PS D3.1.1 Method of Classifying

Add the following to D3.1.1:

The classification of material other than “soft excavation” shall be agreed upon before excavation may commence.

The Contractor shall immediately inform the Engineer if and when the nature of the material being excavated changes to such an extent that a new classification is warranted for further excavation. Failure on the part of the Contractor to advise the Engineer in good time shall entitle the Engineer to reclassify, at his discretion, such excavated material.

PS D3.1.2 Classes of Excavation

Substitute paragraphs D3.1.2b), d) and e) with the following:

No intermediate excavation shall be measured and paid for. Excavation in intermediate materials shall be classified/measured as excavation in soft materials.

PS D 3.3.1 **General**

Substitute the second paragraph of D 3.3.1 with the following:

The Contractor shall deal selectively with material from general excavation. Any imported material in road reserves that do not comply with the minimum requirements for the respective layers, shall be removed and replaced with suitable material, all at the Contractor's expense.

The Contractor shall deal in such a way with materials from all excavations for streets, channels or pipe trenches to ensure that usable material is not contaminated with unsuitable material. If usable material is contaminated, such contaminated material shall be removed and replaced with suitable material, all at the Contractor's expense. No additional payment shall be made in respect of this and all relevant costs shall be deemed to be included in the tendered rates.

All unsuitable material shall be removed prior to importing fill material to such areas.

PS D 3.4 **MATERIAL FOR SUBSOIL DRAINAGE**

PS D 3.4.1 **Pipes**

Pipes for subsoil drainage shall be uPVC pipes complying with the requirements of SABS 791, but shall be perforated or slotted.

The size of perforations in perforated pipes shall in all cases be 8 mm in diameter ± 1,5 mm and the number of perforations per metre shall be not less than 26 for 110 mm pipes and 52 for 160 mm pipes. Perforations shall be spaced in two rows for 110 mm pipes and in three rows for 160 mm pipes.

Slotted pipes shall have a slot width of 8 mm ± 1,5 mm. The arrangement of slots shall be subject to the Engineer's approval, but the total slot area shall be not less than that presented for perforations.

Pipes without slots or perforations required for conveying ground water from the subsoil drainage proper to the point of discharge, shall be uPVC pipes as specified above.

PS D 3.4.2 Crushed-stone

Crushed-stone in subsoil drains shall be 19 mm single-sized stone complying with the grading requirements of stone for concrete in SABS 1083.

PS D 3.4.3 Geotextile Blanket

The geotextile blanket around subsoil drains shall comply with the requirements of PS DK 3.1.4.

PS D 3.4.4 Sand

Sand in subsoil drains shall comply with the requirements of PS D 2.3.

D 4 PLANT

PS D 4.5 AVOIDING QUAGMIRE CONDITIONS

In order to prevent quagmire conditions occurring in the excavations, relatively static plant such as back-actors shall be used combined with hand trimming to complete the excavation to final level. Should the Contractor allow quagmire conditions to develop, he shall, at his own expense, take such steps to rectify the conditions as the Engineer may order.

D 5 CONSTRUCTION

D 5.1 PRECAUTIONS

PS D 5.1.1 Safety

PS D 5.1.1.1 Barricading and lighting

Substitute “Machinery and Occupational Safety Act, 1983 (Act 6 of 1983)” with “Occupational Health and Safety Act, 1993 (Act 85 of 1993)”.

PS D 5.1.1.2 Safeguarding of excavations

Substitute “Machinery and Occupational Safety Act, 1983 (Act 6 of 1983)” with “Occupational Health and Safety Act, 1993 (Act 85 of 1993)”.

PS D 5.1.2 Existing Services

PS D 5.1.2.2 Detection, location and exposure

Add the following to D 5.1.2.2:

If existing services are not shown on the drawings but the existence thereof can be reasonably expected, the Contractor shall, in conjunction with all relevant authorities, determine the exact depth and location of such services before the commencement of construction. After locating the exact position of services, whether indicated on the drawings or not, such services shall be deemed to be known services and the Contractor shall be liable for all costs and subsequent costs arising from the damage thereof as a result of the Contractor's activities. These services must also be indicated on the "as built" drawings.

PS D 5.1.2.3 **Protection of cables**

Substitute "estimated position" in the second sentence of D 5.1.2.3 with "actual or exposed position".

PS D 5.1.2.4 Negligence

Substitute D 5.1.2.4 with the following:

Where a service is damaged because of the contractor's negligence, any costs arising from such damaged service will be payable by the contractor.

PS D 5.1.4 **Nuisance**

PS D 5.1.4.1 **Dust nuisance**

Add the following to D 5.1.4.1:

The Contractor is responsible for dust control and is liable for all claims that may result from dust nuisance on all parts of the site and at all times from the date of handing over of the site to the completion date of the contract. No payment regarding the above-mentioned will be made and all costs shall be deemed to be covered by the tendered rates.

PS D 5.1.6 **Road Traffic Control**

Add the following to D 5.1.6:

a) Sufficient road signs must be erected in such a way that motorists will be warned in time of works, e.g. at the closing of a street sufficient signs to direct traffic must be erected at the preceding intersection.

b) Bypasses and/or road signs shall be provided and/or erected at all locations where the free flow of traffic is obstructed and shall be approved by the Engineer before the commencement of construction. Where main roads are crossed, detours and temporary traffic signs must be provided as shown on the attached drawings.

c) Where a trench crosses a street or any place where a trench crosses the direction of traffic flow, drums must be placed in the street and not just along the sides of the street with danger tape in between.

d) Danger tape must be put up between drums and tied around the drums.

e) Drums may not be filled with stones. The spacing of drums must be in such a way (maximum 5 m) that they are visible from all directions.

f) Sufficient safety measures must be utilised for pedestrians.

D 5.2 **METHODS AND PROCEDURES**

D 5.2.1 **Site Preparation**

PS D 5.2.1.1 Clearing or Clearing and Stripping of Site

Delete subclause D 5.2.1.1b)

PS D 5.2.1.2 **Conservation of topsoil**

Add the following to D 5.2.1.2:

Removal of topsoil shall only occur in areas as approved, in writing, by the Engineer. The topsoil shall be conserved for use elsewhere.

D 5.2.2 **Excavation**

PS D 5.2.2.1 **Excavations for general earthworks and for structures**

Add the following to D 5.2.2.1:

Strip foundations and encasement of pipes shall be cast directly against excavated surfaces.

Materials under foundations and floors of structures which are regarded by the Engineer as unsuitable for the bearing of such structures shall be removed to the depths and widths ordered. The excavated voids shall then be filled with sand compacted to 100 % of MAASHTO density, to the underside of such foundation or floors, unless a soil cement mixture in terms of PS D 5.2.3.2 is ordered by the Engineer.

PS D 5.2.2.3 **Disposal**

Substitute the second sentence of D 5.2.2.3 with the following:

All surplus and unsuitable material shall be disposed of at the dump site.

PS D 5.2.2.4 **Excavation by hand around existing services**

Where hand excavation is required around existing services it shall be done within 3,0 m above and on both sides of cables and within 300 mm above and on both sides of pipes, as well as underneath the services.

PS D 5.2.3.1 **Embankments**

Add the following to D 5.2.3.1:

Embankments of sludge stabilisation ponds and terraces shall be constructed of approved material from excavations and shall be compacted to 95 % of the standard Proctor density, in layers not exceeding 150 mm in depth.

PS D 5.2.3.2 **Backfilling of trenches and backfilling against structures**

Add the following to D 5.2.3.2:

Backfilling around structures shall be compacted to 95 % (100 % for sand) of MAASHTO density.

When specified or ordered by the Engineer the backfilling against structures shall be done using a mixture of soil cement. The mixture shall contain 5 % cement and just sufficient water for it to be placed and compacted like ordinary backfilling material.

PS D 5.2.3.3 **Filling under floors**

Filling under the floors of the chemical dosing building shall be done with sand from commercial sources, compacted to 100 % of MAASHTO density.

PS D 5.2.3.4 Backfilling of over-excavations

Where the Engineer approved the backfilling of over-excavation with suitable material, the backfilling material must be compacted to the greater of 95% of the MAASHTO density or the density of the insitu material.

D 5.2.4 **Finishing**

PS D 5.2.4.1 **Final grading**

Add the following to D 5.2.4.1:

Embankments of sludge ponds shall be trimmed to an even grade of 1 in 2, and all other terraces to an even grade on 1 in 1,5.

PS D 5.2.4.2 **Top soiling**

Add the following to D 5.2.4.2:

Topsoil shall be placed on the sides and on the tops of embankments and other terraces where no paving is specified, or in areas where directed by the Engineer.

PS D 5.2.4.3 **Grass or other vegetation**

Add the following D 5.2.4.3:

Planting shall be carried out at the earliest convenient stage of the construction and shall be arranged to suit the seasonal weather conditions. The Contractor shall arrange for the topsoil to be tested for fertiliser requirements and he shall submit the test reports to the Engineer who will, after that, issue instructions on the fertiliser to be used. The cost of any such tests together with the cost of supplying fertiliser will be dealt with as daywork. Undue humps and hollows shall be smoothed out before planting is commenced.

The areas to be planted shall be covered with a 50 mm depth of well rotted compost or manure from a source to be approved by the Engineer, scarified, harrowed, raked or otherwise worked until the compost or manure has been well worked into the soil.

Grassing

Stools or runners of "Kikuyu" or other grass approved by the Engineer shall be planted by forming trenches 75 mm deep at 300 mm intervals along lines at right angles to the direction of maximum slope, laying the stools or runners at intervals not exceeding 150 mm along the trenches and closing the trenches in such a way to cover the grass entirely. After planting the surface shall be lightly rolled with a hand roller with a maximum mass of 150 kg.

a) **Sour fig (Carpobrotus edulis)**

Sour fig shall be planted on sloping sides of terraces and elsewhere, as indicated by the Engineer, at a rate 10 plants per square metre.

b) **Rose of Sharon (Hypericum calycinum), Alpine Phlox (Phlox Subulata) and Knotweed (Polygonum Capitatum)**

Rose of Sharon shall be planted on sloping sides of terraces and elsewhere, as indicated by the Engineer, at a rate of 4 plants per square metre.

D 5.2.5 Transport for Earthworks

PS D 5.2.5.2 Overhaul

Replace D 5.2.5.2 with the following:

The transport of all excavated materials, irrespective of the distance and source, shall be deemed to be free-haul, the cost of which is included in the Contractor's tendered rates and prices for the excavation of the materials. No separate compensation shall be made for the transportation of excavated materials.

D 8 **MEASUREMENT AND PAYMENT**

D 8.3 **SCHEDULED ITEMS**

PS D 8.3.2 **Bulk Excavation**

a) Excavate in all materials and use for embankment or backfill or dispose, as ordered ..... Unit : m^3

Add the following to D 8.3.2(a):

There will also be distinguished between the different types of fill and backfill as well as the different densities to which each will be compacted.

PS D 8.3.2 **c) Hand excavation in all materials and use for embankment or backfill or dispose, as ordered ..... Unit : m^3**

The provisions of D 8.3.2(a) shall apply mutatis mutandis.

PS D 8.3.2 **d) Extra-over for hand excavation in**

1) Intermediate excavation ..... Unit : m^3

2) Hard rock excavation ..... Unit : m^3

3) Boulder excavation, Class A ..... Unit : m^3

4) Boulder excavation, Class B ..... Unit : m^3

The provisions of D 8.3.2(b) shall apply mutatis mutandis.

PS D 8.3.7 **Additional Lateral Support ..... Unit : Sum**

Add the following to D 8.3.7:

The depth of shoring will be measured from the bottom of excavation to the top of excavation that requires support. Additional lateral support shall be measured in depth increments where necessary.

D 8.3.8 **Existing Services**

PS D 8.3.8.1 **Location**

D 8.3.8.2 **Dealing with services that are at risk because of the construction of earthworks**

PS 8.3.8.1 **b) The use or hire of specialist equipment for detection ..... Unit : Hour ..... (normal working) or Sum**

Add the following to D 8.3.8.1(b):

The rate shall cover the cost of lease of equipment, supply and deliver of all material and labour necessary for the detection of the existing services as well as for operating the equipment.

(This is especially for cables - make sure what equipment is needed for detection of pipes and specify.)

(Allow at least for 2 weeks full days work at beginning as well as enough hours during the contract in the bill.)

PS D 8.3.8.1 **c) Excavate by hand in soft material to expose service ..... Unit : m^3 or day work**

Add the following to D 8.3.8.1(c):

Measurement will be done in depth increments of 1 m.

PS D 8.3.8.1 **c) Excavate by hand in soft material to expose service ..... Unit : m^3 or day work**

Where hand excavation around existing services do occur it shall be measured within 3 m above and on both sides of cables, and within 500 mm above and on both sides of pipes, as well as all excavations underneath the services.

Measurement shall occur in depth increments of 1 m.

(Schedule various cables and pipes separately.)

PS D 8.3.8.1 **d) Extra-over PS D 8.3.8.1(c) for excavation in ..... Unit : m^3**

The provisions of PS D 8.3.2(d) shall apply mutatis mutandis.

PS D 8.3.8.2 **d) Services crossing a channel ..... Unit : No**

Add the following to D 8.3.8.2:

The provisions of SABS 1200 DB : Earthworks (Pipe trenches) and the relevant project specification shall apply mutatis mutandis and payment will be made according to the applicable item of SABS 1200 DB.

PS D 8.3.8.2 **e) Services that adjoin a channel ..... Unit : m**

Add the following to D 8.3.8.2:

The provisions of SABS 1200 DB : Earthworks (Pipe trenches) and the relevant project specification shall apply mutatis mutandis and payment will be made according to the applicable item of SABS 1200 DB.

PS D 8.3.11 **Grassing Or Other Vegetation Cover ..... Unit : m^2**

Add the following D 8.3.11:

Payment for grassing and covering with other vegetation of designated areas will be made in stages as follows:

First payment

When the area has been prepared and planted, 60 % of the rate tendered per square metre shall be paid.

Second payment

When the area has been initially accepted by the Engineer, a further 30 % of the rate tendered per square metre shall be paid in respect of the remeasured area which is accepted.

Third payment

At the end of the maintenance period the outstanding amount will be paid in respect of the actual remeasured area of grass and other vegetation finally accepted by the Engineer for payment.

The rate tendered and paid for shall include full compensation for trimming of existing slopes, supply and spreading of compost and/or manure, preparation of the soil, watering, supply and planting of grass and other vegetation and maintenance of the covered areas, including all labour, supervision, specialist advice, materials, transport, plant, equipment and incidentals necessary to complete the work and bring the covered areas into the condition required for final acceptance, and shall include for any loss due to vegetation failing to establish a satisfactory cover of living vegetation in which gaps larger than 150 mm do not occur.

PS D 8.3.14 **Stone For Protection Of Stormwater Channel ..... Unit : m^2**

The rate shall cover the cost of locating a suitable source, loading, transport, unloading, surface preparation and placing of stones (according to table 4 of SABS 1200 DK) at positions as required by the Engineer or as indicated on the drawings. There will be distinguished between commercial sources or on site sources.

PS D 8.3.15 **Geotextile Blanket ..... Unit : m^2**

The rate shall cover the cost of supplying, transport, unloading and placing of the material, including the cutting, waste, jointing, overlapping and securing of the materials where applicable.

PS D 8.3.16 **Filter Stone ..... Unit : m^3**

The volume measured for payment is the net volume according to the dimensions as shown on the drawings or as requested by the Engineer.

The rate shall cover the cost of obtaining, delivery and placing as indicated on the drawing.

PS D 8.3.17 **Modification Agent ..... Unit : t**

Measurement is based on the quantity requested by the Engineer or the actual quantity incorporated into the layer, whichever may be the lowest. The rate shall cover the cost of supplying the modification agent, placing, spreading and mixing, notwithstanding the specified application rate, as well as any other additional costs involved in the modification process.

PS D 8.3.18 **Shaping Of Channel Slopes ..... Unit : m^2**

The area measured for payment is the unpaved area from the concrete up to finished ground level.

The rate shall cover the cost of the shaping of the channel slopes according to the specified slopes, heights and widths (as shown on the drawings), for the re-compaction of any disturbed material to the same density as that of the adjacent in situ material and for any extra work involved in the proper completion of the slopes.

PS D 8.3.19 **Shaping In Erven ..... Unit : m^2**

The rate shall cover the cost of the finishing off of erven after mass earthworks have been completed and includes all labour and plant necessary to shape the surface to the erf boundary in order to obtain a uniform surface that can drain to the streets.

PROJECT SPECIFICATION : PORTION 2

SABS 1200 DB : EARTHWORKS (PIPE TRENCHES)

DB 1 **SCOPE**

Add the following to DB 1.1:

This specification additionally covers the excavation for cable trenches.

PS DB 2.2 **APPLICATION**

Substitute "pipe trenches" with "pipe and cable trenches" in DB 2.2.

DB 3 **MATERIALS**

PS DB 3.5 **BACKFILL MATERIALS**

a) Substitute "from trenches" in DB 3.5(a) with "from trenches, channel or street excavations".

Add the following to DB 3.5(b):

c) All pipe trenches in street reserves shall be classified as areas subject to loads from road traffic.

d) All pipe trenches underlying or adjacent to the carriageway shall be backfilled with sand complying with the requirements for A3 materials, as specified in PS D 3.4.

DB 3.6 **MATERIALS FOR REINSTATEMENT OF ROADS AND PAVED AREAS**

PS DB 3.6.1 **Subbase And Base**

Substitute DB 3.6.1 with the following:

Where trenches cross or run adjacent to surfaced roads and paved areas of which the surfaces are scheduled to be reinstated, the material excavated from the existing base and/or subbase pavement layer(s) shall be set aside and used in the reconstruction of the subbase layer. Where, applicable new material complying with the requirements of SABS 1200 MF shall be used in the reconstruction of the base layer. Any shortfall in material for the reconstruction of the subbase layer shall be made up by the use of material complying with the requirements of SABS 1200 ME.

PS DB 3.6.5 **Concrete Pavement**

The concrete pavement shall be of the same thickness as that of the existing pavement or be at least 100 mm thick grade 20 MPa/19 mm concrete, cast in panels with maximum dimensions of 2 m x 2 m.

PS DB 3.6.6 **Brick Pavement**

The existing brick paving shall be re-used and damaged bricks shall be replaced with bricks of the same grade, texture and colour.

DB 4 **PLANT**

PS DB 4.1 **EXCAVATION EQUIPMENT**

Add the following to DB 4.1:

All excavations exceeding the specified widths, shall be backfilled with approved selected material. No payment shall be made for this and all relevant costs shall be deemed to be included in the tendered rates.

PS DB 4.4 **DEWATERING EQUIPMENT**

One set of dewatering equipment shall consist of pumps, pipes, well points and other equipment necessary for keeping the trenches sufficiently free from water for dewatering of excavations up to 4 m depth and a trench length of 45 m for both sides or 70 m on one side.

DB 5 **CONSTRUCTION**

DB 5.1 **PRECAUTIONS**

PS DB 5.1.4.1 **Crossing of the N2 National Route with gravity line in a 600 mm duct**

The following will apply for the crossing of the N2:

a) direct liaison and negotiation, at least 2 (two) weeks before construction commences, with the relevant authorities with regard to the programming of the work;

b) construction must be done in half widths, backfilled completely and the surface reinstated before the next half is done in order to accommodate the traffic flow;

c) detours and temporary traffic signs shall be supplied as indicated on the drawings;

d) the bituminous surface must be cut in a straight line to ensure a neat finish;

e) usable material from the excavation of the crossing is to be selected and stockpiled for re-use;

f) dewatering of excavations to be done before and during crossing if necessary;

g) a 600 mm dia 75 D-load spigot and socket concrete duct shall be laid on a class C bedding;

h) the sewer pipe shall be laid according to the levels indicated on the relevant drawing;

i) the sewer pipe to be secured in the duct by means of pipe anchors before testing commences;

j) the pipe anchors are to be installed in such a way to prevent the pipe from floating, and it shall be hot-dip galvanised after manufacturing. The ends of the duct shall be sealed with brick walls;

k) sand compacted to 100 % of MAASHTO density shall be used to backfill the trenches up to the pavement layers;

l) the subbase and base materials shall be approved imported materials of the same quality and thickness as that of the existing material;

m) the tar surface must be reinstated with 30 mm thick asphalt.

PS DB 5.1.4.2 **Crossing of filling station premises with box culvert, sewer pipe and electrical cable services**

The following will apply for the crossing of the filling station premises:

a) direct liaison and negotiation, at least two (2) weeks before construction commences, with the owner of the filling station with regard to the programming of the crossing;

b) construction of all services in the crossing must be done simultaneously in sections of maximum 5 m, backfilled and compacted completely to accommodate traffic over that section;

c) temporary access shall be provided over the existing traffic island when the existing entrances are crossed;

d) hand excavation to be done in advance to determine the exact positions of existing services and concrete footings;

e) the existing stormwater pipes on the site shall be recovered and relaid;

f) the existing concrete slab and brick paving shall be removed and/or relaid.

PS DB 5.1.4.3 **Crossing of Jan van Riebeeck Road with box culvert, sewer pipe and electrical cable services**

The following will apply for the crossing of Jan van Riebeeck Road:

a) direct liaison and negotiation, at least two (2) weeks before construction commences, with the relevant authorities with regard to the programming of the work.

b) construction must be done in half widths backfilled completely and the surface reinstated before the next half is done in order to accommodate the traffic flow;

c) the following existing services shall be re-laid or moved:

   i) 3 x 11 kV and 2 x 66 kV electrical cables. These services are to be re-laid by the municipality. The Contractor will make the necessary arrangements in advance;

   ii) 1 x 150 mm dia and 1 x 375 mm dia water main that has to be re-laid in this contract to pass underneath the new box culvert;

   iii) the moving of an electrical pole. This pole will be moved by the municipality and the Contractor shall make the necessary arrangements in advance;

   iv) the same will apply for a Telkom pole. Arrangements have to be made with Telkom;

   v) 8 x Telkom ducts and cables. These pipes will be supplied by Telkom.

d) hand excavation to be done in advance to determine the exact depth and positions of existing services;

e) existing fences to be removed and re-erected;

f) the bituminous surface must be cut in a straight line to ensure a neat finish;

g) usable material from the crossing's excavation to be selected and stockpiled for re-use;

h) although some of the services are to be re-laid by the relevant authorities, it will remain the sole responsibility of the Contractor to protect the services during the crossing process.

PS DB 5.1.4.4 **Crossing of entrance to abattoir with box culvert and sewer pipe**

The following will apply for the crossing of the entrance to the abattoir:

a) direct liaison and negotiation, at least 2 (two) weeks before construction commences, with the relevant authorities with regard to the programming of the work;

b) an alternative entrance shall be supplied from Van der Stel Street during the crossing of the existing entrance;

c) the box culvert and sewer pipe shall be laid simultaneously, backfilled and compacted in order to re-open the entrance immediately;

d) relaying a 150 mm dia sewer pipe.

PS DB 5.1.4.5 **Crossing of railway lines with stormwater channel and sewer main**

Two main railway lines and one branch line are to be crossed with the stormwater channel and sewer main.

Due to the extent of the stormwater channel, existing of four (4) box culverts with dimensions 2,4 x 1,5 m, alongside each other, the railway crossing will be handled as follows:

a) Transnet will arrange occupation time to do the work in the following phases:

i) an occupation time of about 4 (four) hours to install the shuttering between the two mainlines;

ii) Immediately after that, an occupation time of 7 (seven) hours to cross the one mainline;

iii) After that an occupation time of 7 (seven) hours to cross the other main line.

b) The occupation times will follow directly after each other and will most probably run from a Saturday night until a Sunday evening;

c) The Contractor must allow for the fact that most of the work will have to be done overnight and in a specific period of time and shall, if necessary, allow for working with more than one team simultaneously;

d) The Contractor must apply in writing for occupation time at the District Engineer, Maintenance, Transnet, Bellville, as soon as he has finished his construction program. It is the sole responsibility of the Contractor to make the necessary arrangements in this regard;

PS DB 5.2 **MINIMUM BASE WIDTHS SPECIFIED**

Substitute DB 5.2(a) with the following:

The base widths for combined pipe trenches are as shown on the drawings and the excavation depth is determined by the deepest pipe in the trench. The depth increment of a combined trench will be determined by the sewer or alternatively by the water pipe. The electrical ducts will determine the depth increment where they are laid together with house water connections. The total excavation, backfilling, bedding, etc form a specific trench and is measured in the bill of quantities under the service that determines the depth.

Substitute paragraph (b) of DB 5.2 with the following:

The minimum base width for all pipes with a diameter less than 125 mm shall be 600 mm plus the outside diameter of the pipes, irrespective of the depth at which they are laid, except for subsurface drains where the width shall be 400 mm and for house water connections where the width shall be 300 mm.

The base width of box culverts shall be the net width of the in situ cast bottom slab or the net width of the precast bottom slab plus 100 mm.

A bedding is required for all pipes with a diameter less than 125 mm, except for subsurface drains.

The minimum base width for Telkom ducts shall be 500 mm.

The minimum base width for electric cable trenches shall be 500 mm. Where more than one cable is installed in the same trench, the base width shall become 300 mm plus the distances specified between the centre lines of the cables (50 mm minimum).

PS DB 5.4 **EXCAVATION**

Add the following to DB 5.4:

Excavation and backfilling of pipe trenches on sidewalks in the residential area shall be done in such a way as to ensure the least possible disruption to the public and entrances to properties. No additional payment shall be made for this and all relevant costs shall be deemed to be included in the tendered rates. Electric cable trenches shall be dug in lengths as requested by the electrical contractor.

The provisions of PS D 5.2.2.4 shall apply mutatis mutandis for hand excavation.

DB 5.6 **BACKFILLING**

PS DB 5.6.2 **Material For Backfilling**

Substitute "from trench excavations" in the first paragraph of DB 5.6.2 with "from trench, channel or street excavations".

PS DB 5.6.3 **Disposal Of Soft Excavation Material**

Add the following to DB 5.6.3:

All surplus and unsuitable material as described in DB 5.6.3 shall be disposed of at the spoil site, (as described in PS D 5.2.2.3) and levelled.

DB 5.7 **COMPACTION**

PS DB 5.7.2 **Areas Subject To Traffic Loads**

Add the following to DB 5.7.2:

All pipe trenches that fall in the street reserves, will be regarded as areas subject to traffic loads.

Sand backfilling shall be compacted to 100 % of MAASHTO density.

DB 5.9 **REINSTATEMENT OF SURFACE**

PS DB 5.9.2 **Private Property And Commonage**

Add the following to DB 5.9.2:

Gardens and lawns shall be repaired to the original standard where they were crossed. Grass and plants shall be taken out of the ground, temporarily planted, watered during construction and replanted after backfilling.

PS DB 5.9.4 **Bitumen Roads : Subbase And Base**

Add the following to DB 5.9.4:

Any additional imported material required for the reinstatement of selected layers, subbase or base shall comply with the requirements of the relevant standardised and/or project specifications.

PS DB 5.9.5.1 **Bitumen roads : Surfacing**

Add the following to DB 5.9.5.1:

The thickness of the asphalt shall be 30 mm for all streets except if specified otherwise.

DB 8 **MEASUREMENT AND PAYMENT**

PS DB 8.1 **BASIC PRINCIPLES**

Add the following to DB 8.1.2(b):

The depth of electric cable trenches is as indicated on the relevant drawings.

DB 8.2 **COMPUTATION OF QUANTITIES**

PS DB 8.2.4 **Shoring**

Add the following to DB 8.2.4:

Shoring will only be measured and paid for if written approval is given by the Engineer before it is installed.

Excavations must be shored in accordance with the applicable regulations and acts if the ground conditions require shoring. The Contractor must acquaint himself with the requirements of the applicable regulations and acts regarding shoring, as well as the ground conditions. No payment will be made in respect of this and all costs will be deemed as covered by the rate of the excavation, unless measured specifically.

DB 8.3 **SCHEDULED ITEMS**

PS DB 8.3.2 **Excavation**

PS DB 8.3.2 **a) Excavate in all materials for trenches, backfill, compact and dispose of surplus material ..... Unit : m**

In 8.3.2 replace "*within freehaul distance*" with "*at spoil site provided by the Contractor or municipal dump site*".

The rate will include PS DB 5.7.1, PS DB 3.6.1, PS DB 4.1, PS DB 8.2.4, PS DB 8.3.4 and all other relevant amendments in the project specifications. No excavations will be allowed to be left opened over non-working days/times.

No boulder excavation will be measured separately. Should boulders be present in trench excavations, the Contractor will break the boulders with pneumatic tools and measurement will be under "hard rock material". Therefore, for trench excavations, boulders will be classified/measured as "hard rock material".

Intermediate material will be classified/measured as "soft material" and this is deemed included in the rate tendered.

PS DB 8.3.2 b) Extra over item (a) above for:

2) Intermediate material..... m^3

3) Hard rock material ..... m^3

The tendered rate shall include full compensation for the additional cost, effort and time resulting from excavating in the respective materials using hand methods only.

The unit of measurement shall be cubic metre of material, measured in place according to the authorised dimensions, which was excavated by hand on the specific prior written instructions of the Engineer, provided always that the Engineer's said instruction shall have stated that measurement and payment for such hand excavation shall be in accordance with this item.

For hard rock material, no blasting is allowed and material will be removed by means including pneumatic tools/breakers.

PS DB 8.3.2 c) Excavate and dispose of unsuitable material from trench bottom ..... m^3

Replace "*ordered*" with "*instructed by the Engineer*" and "*within freehaul distance*" with "*to an approved dumping site*".

PS DB 8.3.2 **c) Excavate unsuitable material from trench bottom ..... Unit : m^3**

Delete "and the disposal" in the heading of DB 8.3.2(c) and in the last paragraph.

PS DB 8.3.2 **d) Hand excavation and backfill ..... Unit : m^3**

The provisions of PS DB 8.3.2(a), DB 8.3.2(b) and PS DB 8.3.2(c) shall apply mutatis mutandis for hand excavation.

Payment shall only be made if so ordered by the Engineer.

PS DB 8.3.2 **e) Extra-over PS DB 8.3.2(a) for temporary stockpiling of material ..... Unit : m^3**

Temporary stockpiling of material will only be measured and paid for if ordered so in writing by the Engineer and if it is not contaminated with unsuitable material.

The rate shall provide for the handling and stockpiling of the material within the free haul distance.

DB 8.3.3 **Excavation Ancillaries**

PS DB 8.3.3.1 **Make up deficiency in backfill material (provisional) ..... Unit : m^3**

Add the following to DB 8.3.3.1:

d) Stockpile ..... Unit : m^3

Add the following to the last paragraph of DB 8.3.3.1:

No payment will be made for the transport of material from commercial sources or sources outside the site that the Contractor has selected.

Add the following to DB 8.3.3.1 (c):

The material from a commercial source will be at least the quality specified and will only be done upon receiving written instruction from the Engineer or in areas of traffic loads. Rate will include PS DB 4.1 and also all relevant amendments in the project specifications.

Quantities will be calculated and measured in terms of the minimum trench widths and in accordance with PS DB 4.1 and DB 5.2 and the Contractor is deemed to allow for any additional widths and side slopes in the rate tendered.

PS DB 8.3.3.3 **Compaction in road reserves ..... Unit : m^3**

Add the following to DB 8.3.3.3:

This item is only applicable to the backfill above the bedding and fill blanket.

PS DB 8.3.3.3 Compaction under road surfaces

Add the following to DB 8.3.3.3:

This item is only applicable to the backfill above the bedding and fill blanket and will only be measured for areas under road surfaces. Rate will include all relevant amendments in the project specifications. Rate to include PS DB 5.7.2.

PS DB 8.3.3.4 Overhaul

Replace DB 8.3.3.4 with the following:

The transport of all excavated materials, irrespective of the distance and source, shall be deemed to be free-haul, the cost of which is included in the Contractor's tendered rates and prices for the excavation of the materials. No separate compensation shall be made for the transportation of excavated materials.

PS DB 8.3.3.5 **Backfilling of culverts with 1:3:6 concrete mixture ..... Unit : m^3**

Backfilling of box culverts with 1:3:6 concrete mixture shall be measured to the neat dimensions as shown on the drawings. Backfilling as above shall only be done with the written permission of the Engineer.

The rate shall provide for the supply, delivery, mixing and placing of all the necessary materials as well as for labour and supervision.

PS DB 8.3.4 **Particular Items**

a) **Shore trench opposite structure or service ..... Unit : m**

Add the following to DB 8.3.4(a):

PS DB 8.3.4 **a) Shore a trench opposite structure or service ..... Unit : m**

Add the following to DB 8.3.4(a):

Separate items shall be provided for shoring on both sides and on one side of trenches.

The tendered rate shall allow for additional excavation for shoring as well as for the design of effective shoring.

(Specify where shoring is needed. See also SABS 0120 Part 5 item A.1.1.)

PS DB 8.3.4 **b) Temporary works : Control water inflow**

Substitute DB 8.3.4(b) with the following:

1) Provide equipment ..... Unit : Set

2) Operate and maintain ..... Unit : Set days

3) Remove equipment ..... Unit : Set

4) Remove, move and reinstall existing sets of equipment ..... Unit : Set

The rate for (1) above shall cover the cost of providing the necessary plant and materials, fully erected and operative on site for a set of equipment as described in PS DB 4.4.

(All sets shall be estimated by the designer at tender stage depending on the amount of teams estimated to be working on site simultaneously.)

The rate for (2) above shall cover the cost of operating and maintaining the pumps, well points sheeting, close lumbering and other equipment, as applicable, for 24 hour a day. The amount of days allowed for shall be the accumulated amount of set days of all sets. Pro rata set days will be measured where a set is not used and maintained for a full 24 hour day. The set shall be in operation 24 hours a day from installation till removal to be measured and payed for otherwise no payment shall be made.

DB 8.3.5 **Existing Services That Intersect Or Adjoin A Pipe Trench**

PS DB 8.3.5 **a) Services that intersect a trench ..... Unit : No**

Add the following to DB 8.3.5(a):

Existing services with a depth of cover exceeding 300 mm, measured from the bottom of excavation to the top of the existing service shall not be measured and paid for. There will be distinguished between existing trunk services and existing erf connection.

Protection and maintenance must be to the satisfaction of the Engineer and the Contractor may be instructed to remedy, at the discretion of the Engineer, should it be found that the works are at risk. Any remedial work will be for the Contractors account. All services must at all times, or reasonably as determined by the Engineer, operate/function

as intended. Should a service fail, due to improper protection and maintenance of the existing services (whether the Engineer has approved the method and/or protection or not), a penalty will be imposed for the Contractors account, to the amount of R 10 000 per transgression/failure, in addition to all subsequent damage (if any) and any emergency remedial works required.

The rate shall also allow for the following costs:

i) Sufficient photos have to be taken of existing services and handed over to the Engineer before they are being crossed, if there is a possibility of a difference in opinion over the condition of those services, especially on private property.

ii) If such a service is damaged, it has to be repaired to its original condition or if possible, to a standard agreed to in writing with the relevant owner. This agreement has to be approved by the Engineer.

iii) If such a service is removed, it has to be replaced as per original.

PS DB 8.3.5 **b) Services that adjoin a trench ..... Unit : No or m**

Add the following to DB 8.3.5 (b):

The unit "number" will only be used for services such as poles and trees.

No payment will be made for overhead services that do not rest directly on the ground except where allowance is made for this in the schedule of quantities.

Existing services that rest directly on the ground e.g. poles, trees, walls and structures are handled in the same way as underground services, but the axis of the service will be determined as follows:

The vertical axis is defined as the nearest side or corner of the existing structure to the excavation, measured at the point where the structure and natural ground level intersect.

The horizontal axis will be at the point where the structure and the natural ground level intersects. In this instance, where the excavation falls above the 45° line but within 1,0 meter horizontally from the structure, the service will also be measured as adjoining.

If the structure, according to the above-mentioned, does not qualify as an adjoining service but the foundation of the structure is such that if a 45° line drawn from the nearest bottom corner thereof cuts through the excavation, the structure will be measured as an adjoining service **if approved by the Engineer**.

There will be distinguished between existing trunk services and existing erf connection.

PS DB 8.3.5.1 **Crossing of National Route with gravity line in a 600 mm duct ..... Unit : Sum**

The rate shall include all additional costs of labour and material for the crossing and will be all inclusive as specified in PS DB 5.1.4.1, as well as for the excavation for the duct and additional costs to lay the sewer pipe in the duct. The sewer pipe, rock excavation and imported bedding material will be billed separately in the schedule of quantities.

PS DB 8.3.5.2 **Crossing of filling station premises with box culvert, sewer pipe and electric cable services ..... Unit : Sum**

The rate shall include all additional costs as specified and will be all inclusive, with the exception of specific items that are billed separately in the schedule of quantities.

PS DB 8.3.5.3 **Crossing of railway lines with stormwater channel and sewer main**

The rate shall be all inclusive except for the material of the box culvert and sewer pipe, which will be scheduled separately.

The rate shall also include the following:

a) liaison with Spoornet;

b) dewatering of excavations before and during the crossing;

c) installation of shoring between the two main railway lines, which will also include the steel sheets and the equipment to install the sheets;

d) the fact that the one railway line must be crossed and backfilled completely to allow for its operation before occupation time on the next line will be granted;

e) for the excavation over and next to existing above- and below ground services.

All costs due to work done by Transnet will be for the employers account and the Contractor must not allow for this, except if additional costs are caused by negligence on the Contractor's side. The removal and replacement back of the railway line will be done by Transnet.

PS DB 8.3.5.4 **Removal and replacement of bollards ..... Unit : No**

The rate shall include the cost of removal, loading, transport to the municipal dumping site, the supply and installation of the same type of bollards with a finish similar to that of the existing.

PS DB 8.3.5.5 **Removal and relaying of existing brick paving ..... Unit : m^2**

The rate shall include the cost of the removal of the existing brick paving, stacking on site and the relaying thereof, after completion of the services, on a 25 mm layer of sand from commercial sources placed on a 300 µm (0,3 mm) polyethylene sheet. No payment will be made for the buying of additional brick paving due to damage, and it will be deemed as covered in the relevant items. Payment for excavation and backfilling up to the level of the polyethylene sheet will be made in the relevant items in the schedule of quantities.

PS DB 8.3.5.6 **Removal and replacement of concrete paving ..... Unit : m^2**

The rate shall include the cost of cutting the concrete, breaking, loading, transport and spoiling thereof on the municipal dumping site, preparation of the backfill directly beneath the concrete, placement of a 100 mm thick class 20/19 concrete in panels of maximum 2 m x 2 m including the necessary shuttering, expansion joints and wood-floated finish to match the level of the existing surfaces.

A maximum of 10 % of the tendered amount will be payable after completion of the breaking up and removal of the concrete.

PS DB 8.3.5.7 **Removal and reinstatement of existing grass areas ..... Unit : m^2**

The rate for the reinstatement of lawns, where it was crossed by pipe trenches, will include the following:

i) the removal of grass sods in the strip needed for excavating the trench;

ii) maintenance of the grass sods during the construction period;

iii) reinstating the grass to its original level and watering it after backfilling the trench.

Payment will only be made for the specified trench width and on approval of the Engineer.

PS DB 8.3.5.8 **Reinstatement of gardens ..... Unit : m^2**

Shrubs, bushes, plants and small trees will all be regarded as shrubs for the purpose of measuring. Annuals will not be regarded as shrubs.

The rate for the reinstating of gardens, where pipe trenches have crossed the gardens, will include the following:

i) the removal of shrubs with minimum damage thereto;

ii) maintenance of these shrubs during the construction period;

iii) replanting and watering of shrubs in their original positions.

Payment will only be made for the specified trench width and if approved by the Engineer.

DB 8.3.6 **Finishing**

PS DB 8.3.6.1 **Re-instatement of road layers**

Add the following to DB 8.3.6.1:

The rate shall include for the selective excavation of existing subbase and base material where this material is going to be re-used.

(See blue pages DB 3.2.2.)

(Differentiate between material types and layer thickness from site or stockpile. All excavated base and subbase material must be measured for subbase. Import material for base.)

Add the following to DB 8.3.6.1:

Rate to include PS DB 3.6.1, PS DB 4.1, PS DB 5.9.1 and also prime and via seal. Prime and via seal to comply with the specification contained in SANS 1200 MH. The Asphalt will comply with MH 5.5.2. Testing of the asphalt to be done in accordance with SANS 1200 MH as amended in the project specifications and must comply with PS M 7.3.

Quantities will be calculated and measured in terms of the minimum trench widths and in accordance with PS DB 4.1 and DB 5.2 and the Contractor is deemed to allow for any additional widths and side slopes in the rate tendered.

Rate will include all relevant amendments in the project specifications.

Where existing paving is to be reinstated, in addition to the above, the rate will include transport from the stockpile, placing on sand bedding and laying of the pavers in accordance with SANS 1200 MJ and as amended in the project specifications.

PS DB 8.3.6.2 **Extra-over DB 8.3.6.1 for imported material ..... Unit : m^3**

Rate to include the following:

The rate is an "extra-over" Item DB 8.3.6.1 and include all costs of supplying and placing of imported material in the final position with material from commercial sources.

The material for subbase will comply with SANS 1200 ME and as amended in the project specifications. The material for base will comply with SANS 1200 MF and as amended in the project specifications.

Quantities will be calculated and measured in terms of the minimum trench widths and in accordance with PS DB 4.1 and DB 5.2 and the Contractor is deemed to allow for any additional widths and side slopes in the rate tendered.

PS DB 8.3.9 Saw-cutting of existing premix Unit: m

The rate shall include all equipment and labour necessary for the cutting of the premix to a neat edge and will include removal of the area of premix to be spoiled in terms of clause PS C 3.1. The rate will include the full width of the premix to be removed as indicated on the typical detail drawing and is deemed to include all over break.

PROJECT SPECIFICATION : PORTION 2

SABS 1200 DE : SMALL EARTH DAMS

DE 1 **SCOPE**

PS DE 1 **SCOPE**

Add the following to DE 1.1:

This specification also covers the cladding of the dam with a geo-membrane.

DE 3 **MATERIALS**

DE 3.2 **CLASSIFICATION FOR PLACING PURPOSES**

PS DE 3.2.1 **Earth fill Material**

Substitute paragraph (b) of DE 3.2.1 with the following:

b) shall comply with the requirements for the various embankment zones, as shown on the drawings.

Material for the retention dam shall be obtained from borrow pits or street and trench excavations, as indicated by the Engineer on site.

DE 3.3 **SELECTION**

PS DE 3.3.1 **General**

Replace DE 3.3.1 with the following:

Material to be used for the construction of the retention dam shall be of a homogeneous nature and only underlaying clay from the site in positions as indicated by the Engineer, shall be used.

The Contractor shall in all excavations be selective in order to prevent contamination of usable material with unsuitable material. No extra payment will be made in this regard and all costs related to this shall be deemed to be covered in the rates for the relevant items. The Contractor shall remove all contaminated material, unsuitable for further use on the site of works, and replace it with material of the same quality as that of the usable in situ material, all at his own cost.

PS DE 3.3.3 **Fill Materials**

Add the following at the end of the first sentence of DE 3.3.3:

"and from designated borrow pits"

PS DE 3.4 **GEOTEXTILE MEMBRANE**

The geotextile membrane shall consist of a high density polyethylene copolymer (Hi-driline or similar approved) on rolls of at least 6,5 mm wide and a thickness of 500, 750 or 1 000 micrometers. The cladding material shall be welded together on site by using a continuous extrusion/fusion method to ensure an integrated and homogeneous joint that will withstand a shear test.

DE 5 **CONSTRUCTION**

DE 5.2 **METHODS AND PROCEDURES**

DE 5.2.2 **Excavation**

PS DE 5.2.2.3 **Borrow pits**

Add the following to DE 5.2.2.3:

The position of the designated borrow pit will be indicated during the site inspection.

PS DE 5.2.2.4 **Disposal**

Add the following to DE 5.2.2.4:

Surplus and unsuitable material shall be disposed of at the dumping site.

DE 5.2.3 **Placing And Compacting**

PS DE 5.2.3.1 **Lines and grades**

Substitute the second sentence of DE 5.2.3.1 with the following:

The Contractor shall allow for settling during construction to ensure that the final crown level is the same as that shown on the drawings. (See DE 8.2.1).

PS DE 5.2.3.2 **Embankment**

Add the following to DE 5.2.3.2(d):

Fill shall be compacted to a minimum density of 98 % of the Proctor density at a minimum moisture content of 2 % above the optimum moisture content.

DE 5.2.5 **Transport For Earthworks**

PS DE 5.2.5.1 **Free-haul**

Substitute DE 5.2.5.1 with the following:

The provisions of D 5.2.5.1 shall apply mutatis mutandis.

PS DE 5.2.5.2 **Overhaul**

Substitute DE 5.2.5.2 with the following:

The provisions of D 5.2.5.2 shall apply mutatis mutandis.

PS DE 5.2.6 **Anchoring And Sealing**

Anchoring and sealing of watertight membranes to pipes and concrete structures shall be done according to the manufacturer's approved prescriptions.

The manufacturer shall inspect and approve the surface of the structure before the membrane is laid. The surface shall be level and firm.

DE 5.3 **MODIFICATION**

PS DE 5.3.1 **Application Rate**

Gypsum shall be applied at a rate of 2 % of the maximum Proctor density, except where otherwise ordered by the Engineer.

PS DE 5.3.2 **Preparation Of Layer**

The material to be modified shall be spread out on the designated line and level.

PS DE 5.3.3 **Application Of Gypsum**

The stabilising agent shall be applied at the specified application rate to the full width of the layer.

PS DE 5.3.4 **Mixing Of Gypsum, Watering And Compacting**

After the gypsum has been applied to the full width of the layer, it shall be mixed into the full depth of the material that has to be stabilised. Care must be taken to prevent the mixing the gypsum with the underlying compacted layers. The mixing process shall be continued as long as necessary to achieve a uniform mixture.

The moisture content of the mixture shall be determined after the gypsum has been mixed in and water shall be added if necessary, to give the material a moisture content of 2 % above optimum moisture content. The layer shall then be compacted to the specified standard and the loss of moisture due to evaporation shall be supplemented with a light water spray.

Modification shall not be done in wet weather or when the wind speed is high enough to negatively affect the work.

DE 8 **MEASUREMENT AND PAYMENT**

DE 8.3 **SCHEDULED ITEMS**

PS DE 8.3.3 **Excavation**

a) Material unsuitable for embankment ..... Unit : m^3

Substitute "in the dam basin" in DE 8.3.3(a) with "or to spoil site".

PS DE 8.3.8 **Overhaul**

Substitute DE 8.3.8 with the following:

The provisions of D 8.3.6 shall apply mutatis mutandis.

PS DE 8.3.11 **Outlet Channel On Bottom ..... Unit : No**

The rate shall include the costs of labour and material for shaping the outlet channel on the bottom of the dam, as shown on the drawings.

PS DE 8.3.12 **Shaping And Finishing Of Surfaces That Have To Be Covered By A Watertight Membrane ..... Unit : m^2**

The rate shall include the costs of labour and material necessary to shape the surfaces to be covered by a watertight membrane, in accordance with the standard set by the manufacturer.

PS DE 8.3.13 **Watertight Membrane ..... Unit : m^2**

The rate shall include the costs of supplying, transport and placing of the material, including the cut, wastage, joint, overlapping and securing of material where applicable. There will be differentiated between the various thicknesses.

PS DE 8.3.14 **Fixing Watertight Membrane On Crest ..... Unit : m**

The rate shall include the cost of the excavation of the anchor trench on the crest of the embankment, the temporary stockpiling of the excavation material, maintenance of the trench, the placing of the watertight membrane in the trench, backfilling and re-compaction of the trench to the same density as that of the adjacent material, and any additional work required to complete the backfilled trench, as shown on the drawings.

PS DE 8.3.15 **Fixing Of Watertight Membrane At Inlet, Outlet And Overflow Structures ..... Unit : No**

The rate shall include the cost to fix the watertight membrane at the inlet, outlet and overflow structures as specified on the drawings. The rate shall be all inclusive for the extra labour and material needed to fix it as specified.

PS DE 8.3.16 **Screen At Raw Water Storage Dam ..... Unit : No**

The rate shall cover the cost of the supply and installation of the screen at the raw water storage dam, complete as shown on the drawings.

PS DE 8.3.17 **Channels At Embankment ..... Unit : No**

The rate shall cover the cost of everything as specified on the drawings and will be measured per number.

PS DE 8.3.18 **Geotextile Blanket ..... Unit : m^2**

The rate shall cover the cost of supplying, transport, off-loading and placing of the material, including the cut, wastage, joint, overlapping and securing of the material where applicable.

PS DE 8.3.19 **Modification Agent ..... Unit : Ton**

Measurement is based on the quantity as ordered by the Engineer or the actual amount incorporated into the layer, whichever may be the least. The rate shall cover the cost of supplying the modification agent, placing, spreading and mixing thereof, regardless of the application rate, as well as any other additional costs involved in the modification process.

SABS 1200 DK : GABIONS AND PITCHING

DK 3 **MATERIALS**

DK 3.1 **GABIONS**

PS DK 3.1.4 **Geotextile**

Substitute DK 3.1.4 with the following:

a) **Composition and manufacture**

The geotextile shall be manufactured from a synthetic polymer processed into a permeable, homogeneous sheet. Due to the temperature and moisture susceptibility of polyamide, this synthetic product is not considered acceptable.

b) **Classification**

Geotextiles are classified in three grades according to the mechanical properties and the minimum required water-percolation rate. The mechanical properties are specified in terms of its penetration load and puncture resistance.

The geotextile for subsurface drainage shall comply to grade 2 or grade 3 as specified in the schedule of quantities or shown on the drawings. Only non-woven geotextiles complying to the requirements of grade 1 and with a minimum mass of 320 gram per square metre, as determined in accordance with test method 3.4 of SABS 0221, shall be considered for river protection works or filter backing for the protection of earthworks against erosion.

The standard atmosphere for testing and the preconditioning atmosphere for all geotextile tests (SABS tests and others) shall have a relative humidity in the range of 0 to 80 per cent and a temperature in the range of 15 °C to 35 °C.

c) **Penetration load**

The penetration load at rupture shall be measured in accordance with test method 3.5 of SABS 0221. The penetration load of the geotextile at rupture shall comply with the following specification:

GRADE	PENETRATION MINIMUM
1	3 800 N
2	2 400 N
3	1 600 N

d) **Puncture resistance**

The resistance of a geotextile to puncture is the average diameter of the hole formed when a 45° cone with a mass of 1 kg is dropped through 500 mm onto the geotextile fixed in the holding device and shall be determined in accordance with the test method given in the CPA : Roads and Traffic Administration Branch's March 1990 edition of Standard Project Specification, Volume 4, Section 8100. A copy of the test method for scrutiny is also available at the Engineer's office. The puncture resistance of the geotextile shall comply with the following specification:

GRADE	PUNCTURE RESISTANCE MAXIMUM
1	14 mm
2	26 mm
3	32 mm

e) **Water percolation**

The water percolation shall be measured in accordance with the permeability test method 3.7 of SABS 0221. The water percolation of the geotextile shall comply with the following specification:

GRADE	WATER PERCOLATION MINIMUM
1	20 $\ell/m^2/s$
2	20 $\ell/m^2/s$
3	20 $\ell/m^2/s$

f) **Durability**

The geotextile is required to comply with the following specification:

i) **Resistance to chemical attack**

The geotextile shall withstand the level of aggressiveness of the soil and ground water given below without any significant loss of its strength and hydraulic properties during its design life of 25 years.

Soil and ground water with a pH in the range of 4 to 12 (pH to be determined by method A20, TMH1, 1990).

Soil (as paste) and ground water containing salts with a conductance of up to 1,0 S/m (conductivity to be determined by method A21T, TMH1, 1990).

ii) **Resistance to ultra violet light**

The geotextile shall maintain at least 80 % of its original strength after direct exposure of 1 500 hours of sunlight.

iii) **Resistance to rot**

The geotextile shall be totally rot-proof and shall not support the growth of algae.

g) **Functional evaluation**

Functional evaluation of a geotextile which complies with the classification specification shall be done on the basis of the permeability test in accordance with the test method given in CPA : Roads and Traffic Administration Branch's March 1990 edition of Standard Project Specification, Volume 4, clause B 8117. A copy of the test method for scrutiny is also available at the Engineer's office. The test is conducted on the geotextile in combination with the soil sample obtained from the site where the geotextile is required. The permeability coefficient K_{400} of the geotextile-soil system shall be classified according to the following specification:

SOIL	P (%)	$P \leq 1,0$	$1,0 < P \leq 7,0$	$7,0 < P \leq 50$	$P > 50$
	D_{10}(mm)	$D_{10} \geq 0,150$	$0,095 \leq D_{10} < 0,150$	$0,007 \leq D_{10} < 0,095$	$D_{10} < 0,007$
K_{400}	HIGH	$K_{400} \geq 46$	$K_{400} \geq 19$	$K_{400} \geq 9$	$K_{400} \geq 6$
	MEDIUM	$15 \leq K_{400} < 46$	$6 \leq K_{400} < 19$	$3 \leq K_{400} < 9$	$2 \leq K_{400} < 6$

K_{400} = permeability coefficient after 400 hours of testing expressed as a percentage of the permeability coefficient at the start of the test.

P = percentage passing through the 0,075 mm sieve.

D_{10} = the diameter of the grain size, such that 10 per cent by mass is smaller.

The geotextile-soil system shall fall in either the medium or high range of K_{400}. In general, the geotextile with the highest value of K_{400} will be specified for use with the particular geotextile-soil combination. However, if more than one geotextile-soil combination fall in the high range of K_{400}, then the cheaper geotextile shall be specified unless actual performance in the field indicates otherwise. (**NOTE:** Transportation must also be included in the cost, if applicable.)

In the case where several geotextiles fall in the medium or high ranges and no one geotextile has the highest value of K_{400} for all the geotextile-soil combinations tested for the particular site or group of sites, then it may be expedient to use one geotextile for all or most of the sites. In the latter case the cheapest geotextile shall be selected which meets all the specified requirements unless actual performance in the field indicates otherwise.

In addition to the above specification, the following requirement to prevent excessive piping shall also apply: discolouration of the water shall not be visually discernible for longer than eight hours after the start of the test.

All test results shall be submitted to the engineer for final approval of the geotextile or geotextiles selected for a site or several sites.

DK 8 **MEASUREMENT AND PAYMENT**

DK 8.2 **SCHEDULED ITEMS**

PS DK 8.2.5 **Pitching**

Add the following to DK 8.2.5:

The pitching for channels, as shown on the drawings, shall be grouted light stone pitching.

PROJECT SPECIFICATION : PORTION 2

SABS 1200 DM : EARTHWORKS (ROADS, SUBGRADE)

DM 3 **MATERIALS**

PS DM 3.1 **CLASSIFICATION FOR EXCAVATION PURPOSES**

Add the following to DM 3.1:

All in situ pavement material shall be classified as soft material for excavation purposes.

DM 3.2 **CLASSIFICATION FOR PLACING PURPOSES**

PS DM 3.2.3 **Selected Layers**

Substitute DM 3.2.3 with the following:

Materials used for selected layers shall comply with the requirements of standard specification 1200 M.

All imported material underlying the subbase or base of the final road prism, whichever may be applicable, that does not comply with the requirements for lower selected layer or upper selected layer in the respective depth categories, shall be removed and replaced with material complying with the requirements of selected layers, all at the Contractor's expense.

Materials used for selected layers shall comply with the following:

DESCRIPTION	**LOWER SELECTED LAYER (G9 – TRH14)**	**UPPER SELECTED LAYER (G7-TRH 14)**
Minimum CBR at 93 % MAASHTO density (100 % for sand)	7	15
Maximum CBR swell at 100 % MAASHTO density	1,5 %	1,5 %
Maximum size of aggregate after compaction	100 mm	100 mm
Minimum Grading Modulus (GM)	0,5	0,75
Maximum Plasticity Index (PI)	12	12
Maximum Group Index	-	1

All imported material underlying the subbase or base of the final road prism, whichever may be applicable, that does not comply with the requirements for lower selected layer or upper selected layer in the respective depth categories, shall be removed and replaced with material complying with the requirements of selected layers, all at the Contractor's expense.

DM 4 **PLANT**

PS DM 4.2 **PLANT FOR TREATMENT BELOW SELECTED LAYER**

PS DM 4.2.1 **Pneumatic-Tyred Roller**

Pneumatic-tyred rollers shall be of the self-propelled type that is equipped with smooth pneumatic-tyred wheels of the same diameter. The mass of the roller shall be at least 10 tons. All wheels must bear the same mass.

The rollers must be equipped with devices that will be able to keep the wheels wet and clean during operation.

The wheels of the roller shall be arranged in such a way that one pass with the roller will cover the whole width of the machine. The roller must be able to take a tyre pressure of 600 kPa and the minimum allowed working tyre pressure shall be 450 kPa. The maximum difference in pressure between any two wheels shall not be greater than 35 kPa.

DM 5 **CONSTRUCTION**

DM 5.1 **PRECAUTIONS**

PS DM 5.1.2 **Accommodation Of Traffic**

Add the following to DM 5.1.2:

Bypasses shall be constructed and road signs erected where the free flow of public traffic is restricted. Such bypasses and road signs shall be in accordance with the "CSRA-CUTA : Road Traffic Signs Sub-committee; Road Signs Note no 13, the SA Road Traffic Signs Manual" and shall be approved by the Engineer before the commencement of construction.

DM 5.2 **METHODS AND PROCEDURES**

DM 5.2.2 **Cut And Borrow**

PS DM 5.2.2.2 **Dimensions of cuts**

Substitute "subbase" in the second paragraph of DM 5.2.2.2 with "subbase or selected layer, whichever may be applicable", and

Substitute "CBR of at least 7" with "CBR as applicable according to the provisions of PS DM 3.2.3".

PS DM 5.2.2.3 **b) Cut to spoil**

Substitute DM 5.2.2.3(b) with the following:

All surplus and/or unsuitable material shall be removed from the site and disposed of at the spoil site (as described in PS D 5.2.2.3) and shall be shaped to establish a free draining surface.

PS DM 5.2.2.4 **Temporary stockpiling of materials**

Add the following to DM 5.2.2.4:

The Contractor shall program the works in such a manner that suitable excavated material shall, if practically possible, be placed directly in the appropriate position to ensure that temporary stockpiling is limited to an absolute minimum. No payment shall be made for the temporary stockpiling of material where such material is to be used for backfilling of pipe trenches, except when so ordered in writing by the Engineer.

DM 5.2.3 **Treatment Of Road bed**

PS DM 5.2.3.3 **Treatment of road bed**

a) Preparation and compaction of road bed

Substitute the first paragraph of DM 5.2.3.3(a) with the following:

The road bed shall be scarified to a depth of 150 mm, watered, shaped and compacted to 90 % of MAASHTO density (100 % for sand), except where otherwise ordered by the Engineer.

In clay areas only excavation and shaping to the correct level will be necessary.

The road bed shall be prepared with a ionic stabiliser at a rate of 0,03 ℓ /m^2 in layers of 150 mm and 0,02 ℓ /m^2 in layers of 100 mm before compaction if ordered by the Engineer.

The stabiliser must be thoroughly mixed with water.

Measurement and payment shall be made under item PS ME 8.3.8(g).

Add the following subclause:

c) In situ preparation of road bed with eight roller passes

Any part of the road bed that lies within the selected layer and which, regardless of its density, is suitable according to the Engineers opinion, can be used in situ if so instructed by the Engineer.

If due to the nature of material, the degree of compaction cannot be controlled by means of in situ density tests, the Engineer may instruct compaction to be done by eight roller passes as specified in PS DM 4.2. The Engineer may further request that the compaction effort be altered by increasing or reducing the number of passes and that payment be amended accordingly.

The surface of the road bed shall be shaped true in respect of line and level within the tolerances as specified in clause 6. During the shaping of the road bed, all material that has to be removed and cannot be re-used, shall be disposed of and will be paid for under item PS DM 8.3.7. If necessary, additional material that has been approved by the Engineer shall be imported to meet the required levels.

No strict measurements in connection with soil moisture content will be applied by the Engineer during compaction. The Contractor must however convince the Engineer that all possible efforts have been made to utilise favourable soil moisture conditions. Compaction must be done during periods when the road bed is not to wet or to dry. The Engineer has full authority to decide whenever conditions are favourable for compaction, and may at any stage instruct the Contractor to water the road bed at the Contractors expense if he, in the Engineer's opinion, neglected to satisfy the above-mentioned requirements.

PS DM 5.2.5 **Selected Layer**

Add the following to DM 5.2.5:

The Engineer may, depending on the quality of the in situ material, order the omission of one or both of the selected layers. To determine the amount of selected layers, if any, the Engineer may order the Contractor to dig test holes with maximum dimensions of 1,5 m x 1,5 m and 1,0 m deep at positions indicated by the Engineer, before construction commences.

The Contractor shall backfill all test holes with selected material and compact it to 95 % of MAASHTO density, after the Engineer has taken samples and profiled the holes.

PS DM 5.2.9 **Shaping And Compacting Below Selected Layer**

Each portion of the road bed below the selected layer which, by virtue of its inadequate natural density, is directed by the Engineer to be compacted by means of a pneumatic-tyred roller, shall be prepared by shaping where necessary, and each such portion shall be compacted by means of at least eight complete passes by a pneumatic-tyred roller. One pass shall consist of the complete area being systematically passed in the longitudinal direction so that each pass overlaps the previous by half.

DM 6 **TOLERANCES**

PS DM 6.5 **DIMENSIONS AND LEVEL CONTROL**

The Contractor shall submit to the Engineer, in a form acceptable to the Engineer, records of dimension and level control, prior to requesting the Engineer to carry out any routine inspections.

DM 7 **TESTING**

PS DM 7.2 **PROCESS CONTROL**

Amend table 1 of DM 7.2 as follows:

Substitute "2 000 m^2" with "1 500 m^2", "1 500 m^2" with "1 200 m^2 and "5 000 m^2" with "3 000 m^2".

DM 7.3 **ROUTINE INSPECTION AND TESTING**

Substitute DM 7.3.2 with the following:

No density shall be less than the specified minimum density for the relevant layer.

The cost of all routine testing done by the Engineer, and of which the results do not comply with the specified minimum requirement for the material, shall be borne by the Contractor and will be subtracted from the monthly payment certificates.

DM 8 **MEASUREMENT AND PAYMENT**

DM 8.3 **SCHEDULED ITEMS**

PS DM 8.3.3 **Preparation Of Road Bed**

Substitute DM 8.3.3(b)(1) and (2) with the following:

b) Preparation of in situ road bed in:

1) Intermediate material ..... Unit : m^3

2) Hard rock material ..... Unit : m^3

Add the following subclauses:

(c) In situ preparation of road bed with eight roller passes (pneumatic roller) ..... Unit : m^2

The unit of measurement is in square metres of road bed which has been treated with eight roller passes.

The rate shall cover the costs of shaping, watering and compacting all as specified in PS DM 5.2.3.3(c). The removal, disposal, transport and replacing of materials will be paid under the appropriate items.

(d) Variations in compaction effort (pneumatic roller) ..... Unit : m^2.pass

The unit of measurement is the surface on which the variation is applicable multiplied by the amount with which the compaction effort was reduced or increased as instructed by the Engineer.

If there is a change in compaction effort, as instructed by the Engineer, the Contractor will be paid as for the standard effort, except that the amount as calculated above will be subtracted or added in the appropriate item.

This rate shall include full compensation for supervision, labour, machines, construction equipment, fuel, material and additional costs necessary for the completion of the process.

PS DM 8.3.4 **Cut To Fill, Borrow To Fill ..... Unit : m^3**

Substitute "90 %" in DB 8.3.4 with "90 % (100 % for sand)" and "road prism" with "road prism and borrow pits".

Add the following:

Separate items will be scheduled for fill in the road prism, fill on spoil areas and fill on erven (where a minimum density for such spoil material is required by the Engineer) and fill from the road prism, fill from the site and fill from commercial sources.

The rate for fill from commercial sources shall, in addition to the requirements of DM 8.3.4, cover the cost of the location of the source, complying with all the applicable precaution as set out in DM 5.1, obtaining the material, selection and transport from the source to the point on the road where it is to be used.

(*for hand excavation see SABS 1200 D*.)

PS DM 8.3.5 **Selected Layer Compacted To 93 % Of MAASHTO Density ..... Unit : m^3**

Substitute "93 % of MAASHTO density" in the heading of DM 8.3.5 with "93 % (100 % for sand) of MAASHTO density".

Add the following to DM 8.3.5:

Separate items will be scheduled for lower and upper selected layers as well as for material from the site of works and from commercial sources. The rate for selected layers from commercial sources shall, in addition to the provisions of DM 8.3.5, allow for locating the source, complying with all the applicable precautions as set out in DM 5.1, obtaining the material, selection and transport from the source to the point on the road where it is going to be used. No payment shall be made for the removal and replacement of unsuitable imported material.

PS DM 8.3.7 **Cut To Spoil Or Stockpile From ..... Unit : m^3**

Add the following to DM 8.3.7:

Payment for temporary stockpiling shall be made under DM 8.3.11, only if so instructed in writing by the Engineer.

(*For hand excavation see SABS 1200 D*.)

PS DM 8.3.12 **Overhaul ..... Unit : m^3 or m^3.km**

Substitute DM 8.3.12 with the following:

The provisions of clause D 8.3.6 shall apply mutatis mutandis.

PS DM 8.3.17 **Trim, Shape And Compact Sidewalks ..... Unit : m^2**

The area to be trimmed is the unsurfaced area from the back side of the kerbs to the boundary of the road reserve, or such wider area necessitated by the road prism.

Measurement and payment for the above shall be restricted to areas ordered in writing by the Engineer.

The rate shall cover the cost of trimming and shaping the sidewalks to the lines, levels and dimensions as shown on the drawings, of acquiring additional material to compensate for any material lost due to weather or other reasons, and of the compaction of any loose or disturbed material to 90 % of MAASHTO density (100 % for sand).

PS DM 8.3.18 **Trial Holes ..... Unit : No**

The unit of measurement is the number of trial holes made at positions indicated by the Engineer.

The rate shall cover the cost of excavating to a depth of 1 m, as well as for backfilling with the excavated material, compacted to 93 % of MAASHTO density (100 % for sand). The rate shall also include the survey and booking to determine the position of existing services.

PS DM 8.3.19 **Removal Of Unsuitable Material ..... Unit : m^3**

The volume measured for payment is the volume of unsuitable material, removed on written instruction of the Engineer in accordance with clause DM 5.2.3.2, below the level of the initial road bed.

The rate is extra-over Item PS DM 8.3.7 and covers all additional costs in respect of the removal and spoil of unsuitable material, as well as all additional costs in respect of the backfilling thereof. Payment for backfilling shall be made either under PS DM 8.3.4 or PS DM 8.3.5, whichever may be applicable.

Payment shall differentiate between the areas of the unsuitable material, as measured on the initial road bed, in increments as scheduled.

PS DM 8.3.20 **Installation Of Reference Marks ..... Unit : No**

The quantity is the number of reference marks installed in streets on positions indicated by the Engineer.

The rate shall cover the cost of supplying, excavation, removal of surplus material, installation to the standards as shown on the drawings, backfilling with material that comply with the requirements of the relevant pavement layers, compacting to the specified minimum density for the relevant pavement layers and for the reinstatement of the bituminous surface with 30 mm asphalt.

PS DM 8.3.21 **Existing Services That Adjoin Excavation For Streets ..... Unit : m**

The provision of items DB 8.3.5(a) and DB 8.3.5(b) shall apply mutatis mutandis.

PS DM 8.3.22 **Existing Services Intersecting Excavation For Streets ..... Unit : No**

The quantity is the number of each service, as indicated in the schedule of quantities that intersect the excavation for streets.

Separate items will be provided for the depth increments as scheduled.

The rate for the crossing of services below the level of the road bed, measured to the top of the service, covers all additional costs in respect of excavation, irrespective of the method, the protection and ensuring of the continuous functioning thereof and the cost of all repair work and/or subsequent costs arising from damage to the service.

The rate for services that are not fully covered by the road bed shall, in addition to the above-mentioned requirements, cover all additional costs in respect of excavation and backfilling with material as required for the relevant pavement layer as well as for compacting to the specified minimum density of the relevant pavement layer.

Services with a depth of cover of more than 500 mm shall not be measured and paid for.

PS DM 8.3.23 **Shaping Of Stormwater Channels Adjoining Streets ..... Unit : m**

The rate is an extra-over item PS DM 8.3.4 and shall be all inclusive for labour, material and equipment to shape stormwater channels according to the dimensions and grades as shown on the drawings and to compact to 90 % of MAASHTO density (100 % for sand). The placing of the gravel layer shall be measured in item PS DM 8.3.24.

PS DM 8.3.24 **Construction Of Gravel Layer In Stormwater Channels ..... Unit : m^3**

There will be differentiated between material from the stockpile and that from the borrow pits. The rate shall be all inclusive for labour, material and equipment necessary for construction, selection, transport, off-loading and placement according to the specified slopes and dimensions as shown on the plans, as well as for compaction to 93 % of MAASHTO density.

PROJECT SPECIFICATION : PORTION 2

SABS 1200 G : CONCRETE (STRUCTURAL)

G 3 **MATERIAL**

PS G 3.2.1 **Applicable Specifications**

Substitute G 3.2.1 with the following:

All cement types shall comply with the requirements of SANS EN 197-1.

For this contract CEM I portland cement shall be used.

Where Malmesbury hornfels (shale) is used as aggregate in concrete, a blend (by mass) of 50 % CEM I 42,5 or CEM I 42,5R and 50 % milled granulated blast-furnace slag shall be used in the concrete mix.

PS G 3.2.3 **Storage Of Cement**

Add the following to G 3.2.3:

Consignments of cement shall be used in the same sequence as that in which they are delivered to site. No cement shall be used which has been stored on site for a longer period than six (6) weeks. All cement so stored for a longer period than six (6) weeks, all cement damaged in any way, and all cement which does not comply with the specification, shall be removed immediately and permanently from the site.

PS G 3.5.2 **Air-entraining Agents**

Substitute G 3.5.2 with the following:

Air-entraining agents shall not be used in concrete.

G 4 **PLANT**

PS G 4.5.3 **Ties**

Add the following to G 4.5.3:

Permanent metal ties shall have a minimum concrete cover of 40 mm after formwork has been removed.

Tie holes shall be filled with an approved expansive cementitious grout similar to "Durabed" of ABE. The product shall be prepared to a non-slump consistency, but where no cracking occurs when pressed into a firm ball. Trial mixes shall be made to arrive at the required working consistency.

G 5 **CONSTRUCTION**

G 5.1 **REINFORCEMENT**

PS G 5.1.3 **Cover**

Substitute G 5.1.3 with the following:

The cover of concrete over reinforcement, unless otherwise indicated on the drawings, shall in no case be less than 40 mm.

PS G 5.2.1 **Classification Of Finishes**

Add the following to G 5.2.1:

The following surface conditions are required on the various portions of the finished concrete:

(a) **Rough**

Concealed surfaces and surfaces more than 100 mm below final ground level.

(b) **Smooth**

All surface finishes not classified as "rough" in paragraph (a) shall be classified as "smooth". All exposed arrises (i.e. where the angle between adjacent sides is 110° or less) unless otherwise indicated on the drawings, shall be chamfered 20 mm x 20 mm by means of triangular fillets fixed to the formwork.

PS G 5.2.5 **Removal of formwork**

In Table 2 of G 5.2.5.2, substitute “portland cement and portland cement 15” in columns 2, 3 and 4 with “CEM 1 portland cement, delete columns 5, 6 and 7 and substitute “portland blast-furnace cement” in columns 8, 9 and 10 with “CEM III blast-furnace cement or blends of CEM I portland cement with milled granulated blast-furnace slag”.

PS G 5.4 **PIPES AND CONDUITS**

Add the following to G 5.4:

All pipes and specials which must be installed in the floors and walls of structures shall be embedded in the concrete during the casting of such concrete. No holes shall be left for the later installation of pipes and specials, without the written approval of the Engineer.

Where such holes have been approved by the Engineer, the Contractor shall be responsible for the grouting-in of such pipes or specials with an approved expansive cementitious grout as specified in PS G 4.5.3, regardless of whether or not these have been supplied by himself. The Contractor shall provide a smooth, dense and waterproof finish around the pipes or specials.

The clear space between pipes of any kind embedded in reinforced concrete and the clear space between such pipes and reinforcement shall at any point be not less than -

(a) 40 mm, or

(b) 5 mm plus the maximum size of coarse aggregate,

whichever is the greater.

G 5.5 **CONCRETE**

PS G 5.5.1.5 **Durability**

Substitute G 5.5.1.5 with the following:

Concrete shall be so proportioned to ensure that the water/cement ratio does not exceed 0,5 and, to ensure workability, water-reducing admixtures of approved manufacture shall be used in preference to increasing the cement content.

PS G 5.5.1.7 **Strength concrete**

Add the following to G 5.5.1.7:

The grade of strength concrete and the maximum nominal size of coarse aggregate for each portion of the works, unless otherwise indicated on the drawings, shall be as follows:

(a) Mass concrete under floors and foundations ..... 20 MPa/19 mm

(b) Blinding layers ..... 20 MPa/19 mm

(c) Encasing of pipes ..... 20 MPa/19 mm

(d) Strip foundations ..... 20 MPa/19 mm

(e) Benching and screeds ..... 20 MPa/10 mm

(f) All reinforced concrete ..... 30 MPa/19 mm

PS G 5.5.7 **Construction Joints**

Add the following to G 5.5.7.1:

Construction joints shall be limited to the minimum and shall only be made in positions as shown on the drawings or in positions as specifically approved by the Engineer. Construction joints between tank bottoms, floors, or wall bases, and the walls standing on them shall not be made flush with the supporting surface, but shall be made in the wall 150 mm above the base. The 150 mm high riser wall shall be cast as an integral part of the bottom, floor or base, i.e. the concrete in the riser shall be deposited simultaneously with the concrete in the bottom, floor or base adjacent to it. Where there is a fillet at the bottom of a wall, the construction joint shall be made 150 mm above the fillet.

A PVC waterstop without centre bulb shall be installed at all construction joints in walls of water-retaining structures. The size of the waterstops shall be 150 mm in walls thinner than 200 mm and 200 mm in walls of 200 mm thickness and more.

PS G 5.5.7.4 **Expansion joints**

Expansion joints shall be formed in positions and in accordance with details as shown on the drawings. All expansion joints shall be formed with an approved closed cell polyethylene fill material similar to "SPV 120" as supplied by Sondor, with a single part polyurethane sealant similar to Silkaflex – PRO 2HP as supplied by Sika. Rearguard S-type PVC waterstops with centre bulbs shall be installed under floors and Hydrofoil PVC waterstops with centre bulbs in walls, as shown on the drawings.

All sealants, fill material and waterstops shall be installed strictly in accordance with the specification of the manufacturers and to the satisfaction of the Engineer. The sealant shall be installed in one operation and jointing to already hardened sealant will not be permitted.

(This clause is applicable to all water containing structures)

PS G 5.5.7.6 **Bond breaker under floor**

A 500 micrometre polyethylene bond breaker shall be installed between the blinding layer and the floor of the reservoir, as indicated on the drawings.

PS G 5.5.9 **Adverse Weather Conditions**

Add the following to G 5.5.9.1:

No material having a temperature of below 5 °C shall be used for concrete, and no concrete shall be deposited when the ground or air temperature is below 2 °C. Furthermore, if the air or ground temperature is likely to fall below 2 °C within twelve (12) hours after depositing of concrete, no concreting shall be done without the written consent of the Engineer. If such consent is given the Contractor shall heat the aggregate stockpiles and mixing water, and defrost the formwork and reinforcement.

PS G 5.5.10 **Concrete Surfaces**

Add the following to G 5.5.10.1:

Concrete surfaces under screeds, granolithic floor finishes or benching, and surfaces of strip foundations and footings shall be brought up to a plane, uniform surface with a suitable screed board.

PS G 5.5.10.4 **Wood-floated finish**

Where wood floating is specified or scheduled, the surface shall first be given a finish as specified in G 5.5.10.1 and after the concrete has hardened sufficiently, it shall be floated to a uniform surface free from trowel marks. The screeded surface shall be wood-floated, either by hand or machine, only sufficiently to produce a uniform surface free from screed marks.

PS G 5.5.10.5 **Steel-floated finish**

Where steel floating is specified or scheduled, the surface shall be treated as specified in PS G 5.5.10.4 except that, when the moisture film has disappeared and the concrete has hardened sufficiently to prevent laitance from being worked to the surface, the screeded surface shall be steel-trowelled under firm pressure to produce a dense, smooth, uniform surface free from trowel marks.

PS G 5.5.11 **Watertight Concrete**

Substitute G 5.5.11 with the following:

PS G 5.5.11.1 **General**

All structures that are designed to retain water or to keep water out, shall be regarded as watertight structures.

PS G 5.5.11.2 **Requirements and tests for watertightness of structures**

The completed structure shall be watertight, and the quality and finish of the work shall be such that no after-treatment of the work such as plastering or cement wash is necessary to ensure compliance with this requirement.

The works will not be certified complete until the structures enumerated in PS G 5.5.11 has been proved by testing to be watertight.

Upon completion of construction and when so agreed by the Engineer, the structure shall be filled by the gradual admission of water until, the water level reaches the designed maximum level. The water level shall then be carefully noted and recorded by the Engineer in relation to a fixed bench mark, and the structure shall be allowed to remain filled for a period of two (2) weeks or such longer time as may be required to permit complete saturation of the concrete. During this period, readings will be taken by the Engineer and the results so obtained will be available for the information of the Contractor.

At the end of this period more water shall be added, if necessary, to bring the water level back to the designed maximum level and the water shall be left undisturbed for a period of at least four (4) days during which time the level shall again be recorded by the Engineer at regular intervals. The structure shall be considered to be watertight if the drop in water level does not exceed 6 mm in 96 (ninety six) hours in the case of a roofed structure and if no leakage is apparent.

The acceptable drop in level in the case of an unroofed structure shall be such that it allows for normal evaporation during the time of the test.

If appreciable leakage is evident at any stage of the filling or testing or if, in the opinion of the Engineer, the degree of watertightness is unsatisfactory, the Contractor shall, when so ordered by the Engineer, discontinue the test immediately and at his own expense take approved steps to rectify the work. The work of rectification shall be continued assiduously until, on repetition of the test procedure, a satisfactory test result is obtained and the degree of watertightness is acceptable.

The Engineer shall have the right to retest the structure before the expiry of the period of maintenance and the results of these tests will be made available to the Contractor. If these tests indicate to the Engineer that the degree of watertightness is unsatisfactory, the Engineer (before issuing the final certificate) will be entitled to order the Contractor to rectify the work at his own expense in such a manner as will cause least interruption to the running of the works and will ensure that the degree of watertightness of the structure is satisfactory.

Backfilling around structures shall not commence until a satisfactory test result has been obtained.

The watertightness of the dry well of the pump station shall be monitored visually until the end of the defects liability period. If any damp penetration from the outside is noticed, the Contractor shall take immediate remedial steps.

(The above paragraph is applicable where dry wells of pump stations, etc. are below ground level.)

The Engineer shall have the right to retest the structure before the expiry of the period of maintenance, and the results of these tests will be made available to the Contractor. If these tests indicate to the Engineer that the degree of watertightness is unsatisfactory, the Engineer (before issuing the final certificate) will be entitled to order the Contractor to rectify the work at his own expense in such a manner as will cause least interruption of the water supply to consumers and will ensure that the degree of watertightness of the structure is satisfactory.

PS G 5.6 **STERILISATION OF STRUCTURES HOLDING POTABLE WATER**

The structures shall be sterilised before testing, and before retesting, for watertightness.

The walls, floors and soffits of roof slabs shall be hosed down and brushed until clean and free from loose material.

The structures shall then be filled with clean water containing 150 g/m^3 of calcium hypochlorite, to a water depth of 150 mm. The walls shall be thoroughly washed down after which all dirty water shall be flushed out.

Staff doing the washing down with the chlorine solution shall wear rubber boots.

PS G 5.7 **SUBSOIL DRAIN UNDER RESERVOIR FLOOR**

A subsoil drain consisting of 110 mm diameter perforated or slotted uPVC pipes in a 300 mm x 400 mm bed of 19 mm stone, all as specified in PS D 3.4, shall be installed on the inside of the wall footing and under the reservoir floor. The pipes shall be connected with approved couplings and a gradient of 1 in 200 must be maintained towards the discharge point.

PS G 5.9 **JOINING NEW CONCRETE TO EXISTING**

Where partial demolition is required for extension work to existing structures, the contact face shall be cut to predetermined line and level, and any loose and fragmented material shall be removed, and projecting steel cleaned and bent as directed by the Engineer. Where partial demolition is not required but extension work only, the contact surface shall be scabbled and cleaned of all dirt and loose particles.

If dowels are required, they shall be installed in holes drilled into the existing structure, in accordance with the details shown on the drawings, and secured by means of an approved type of epoxy bonding compound such as Epidermix 372 or similar.

Fresh concrete shall be bonded to the old concrete with an approved type of epoxy bonding compound, such as Epidermix 344 or similar.

PS G 5.11 **MOULD FOR PARSHALL FLUME**

A mould of glass reinforced polyester (GRP) shall be used as permanent formwork for the construction of the Parshall flume. The mould shall be manufactured by a firm specialising in such work and approved by the Engineer before manufacture.

All resins used shall be high quality isophaltic polyester resins specially formulated for use in flumes for sewage.

The rate at which resins are applied shall be adjusted for conditions during manufacture, such as temperature and humidity, in order to limit shrinkage.

The dimensions shown on the drawings are internal dimensions and the departure from these dimensions shall nowhere be more than 0,5 %.

The GRP lay-up shall consist of the following:

a) One gel-coat of resin, pre-mixed at the factory with silvery grey pigment paste, at a rate of not less than 600 g/m^2 (i.e. the coat that will be in contact with the sewage).

b) One C-glass tissue layer impregnated with resin at a rate of 1:1, Resin:C-glass.

c) One layer 300 g/m^2 chopped strand mat (CSM) impregnated with resin at a minimum rate of 2:1; Resin:CSM.

d) Five layers of 450 g/m^2 each of CSM impregnated with resin at a minimum rate of 2:1; Resin:CSM.

e) One flow-coat at a rate of not less than 600 g/m^2.

The resin for the mechanical layers and the flow-coat shall be pre-mixed with 3 % silvery grey pigment paste.

For improvement of adhesion to the concrete, sand, as specified for concrete, shall be sprinkled over the flow-coat whilst still wet.

Anchors of 50 mm x 2 mm galvanised hoop iron, with the last 50 mm of both ends split in two halves and bent back 90° in opposite directions, shall be moulded into the mould in positions as detailed on the drawings. The anchors shall enter the concrete by at least 100 mm.

If, after manufacture, cutting of the mould is required to obtain final dimensions, the cut ends shall be treated with a top coat as specified in paragraph (a).

The struts for the mould, used during manufacture, shall be kept in place until the casting of concrete underneath and on the sides of the flume has been completed, in order to act as support during casting of the concrete.

G 8 **MEASUREMENT AND PAYMENT**

G 8.1 **MEASUREMENT AND RATES**

PS G 8.1.1 **Formwork**

Delete the following in G 8.1.1.3(c):

"and for different prop heights for beams and slabs".

PS G 8.1.3 **Concrete**

Add the following to PS G 8.1.3.1(d):

Strip foundations and encasement of pipes shall be cast directly against the sides and bottoms of excavations. No payment shall be made for additional concrete in overbreak.

Delete the full stop at the end of G 8.1.3.3(a) and add the following:

"and special steps necessary before depositing concrete during cold weather, as prescribed in PS G 5.5.9".

G 8.2 **SCHEDULED FORMWORK ITEMS**

PS G 8.2.7 **Mould For Parshall Flume ..... Unit : Sum**

The rate covers the cost of the supply of all materials, including anchors and temporary struts, labour, equipment, manufacturing, process control, loading, transporting to site, off-loading, installing and of removing temporary struts after installation.

G 8.4 **SCHEDULED CONCRETE ITEMS**

PS G 8.4.4 **Unformed Surface Finishes ..... Unit : m^2**

Add the following to G 8.4.4:

The concrete surface finishes under screeds, granolithic finishes or benching as prescribed in PS G 5.5.10 shall not be measured separately. The rates for the related concrete items shall also cover the cost of these surface finishes.

PS G 8.4.7 **Scour Canal In Reservoir Floor ..... Unit : Sum**

The rate shall cover the cost of additional material and labour required for forming and finishing the scour canal, as well as the bell mouth, as indicated on the drawings.

PS G 8.4.8 **Concrete complete with formwork and/or trowel finish ..... Sum or m^3**

The rate shall cover the cost of the provision of concrete (made from ordinary Portland cement, unless otherwise scheduled), mixing, testing, placing, compacting, the forming of stop-ends and unforeseen construction joints, striking-off or levelling as applicable, trowelling and curing and repairing where necessary, together with the cost of all parts of formwork in contact with the concrete and the necessary bearers, struts, and other supports, plus the layout and plant necessary to erect and strike such formwork.

PS G 8.5 **JOINTS ..... Unit : m**

Add the following to G 8.5:

Only construction joints with PVC waterstops shall be measured separately. The cost of all other construction joints shall be deemed to be included in the rates for the relevant concrete items.

PS G 8.9 **TESTING STRUCTURES FOR WATERTIGHTNESS ..... Unit : Sum**

The rate shall cover the cost of all equipment and labour necessary to test the structure for watertightness as described in PS G 5.5.11.1, including the supply of water and filling such structure.

No additional payment will be made for re-testing the structure for watertightness after the repair of leaks.

PS G 8.10 **STERILISATION ..... Unit : Sum**

The rate shall cover the cost of all equipment, water, chemicals and labour necessary to sterilise the structure.

No additional payment will be made for re-sterilising the structure before re-testing for watertightness.

PS G 8.11 **SUBSOIL DRAIN UNDER RESERVOIR FLOOR ..... Unit : m**

The rate shall cover the cost of the supply and installation of pipes and stone in the subsoil drain under the floor of the reservoir. Excavation will be measured and paid for separately under earthworks.

PS G 8.13 **GROUT PIPES INSTALLED BY THE MECHANICAL CONTRACTOR ..... Unit : No**

The rate shall cover the cost of scabbling, cleaning and preparing the concrete surface, providing an approved non-shrink epoxy grout, placing and ramming of it solidly into all voids, formwork and finishing to a smooth watertight surface.

PS G 8.14 **JOIN NEW CONCRETE TO EXISTING**

a) Partial demolition (describe) ..... Unit : Sum

b) Scabbling of existing surface ..... Unit : m^2

c) Steel dowels ..... Unit : No

The rate for (a) shall cover the cost of partial demolition as described, and of exposing, cleaning, cutting and bending the existing reinforcement, as well as repairing the concrete surface that is to be retained and disposing of waste material.

The rate for (b) shall cover the cost of scabbling the existing surface, as well as the cost of supplying and applying the epoxy bonding compound.

The rate for (c) shall cover the cost of drilling for and supplying and installing the steel dowels, as well as the cost of supplying and applying the epoxy bonding compound.

PS G 8.15 **BOND BREAKER UNDER FLOOR ..... Unit : m^2**

The rate shall cover the cost of the supply and installation of the polyethylene bond breaker under the floor as specified in PS G 5.5.7.6..

PS G 8.16 **WEEP-HOLES IN WING WALLS ..... Unit: No**

The rate shall cover the cost of the supply and installation of weep-holes as shown on the drawings.

PROJECT SPECIFICATION : PORTION 2

SABS 1200 GA : CONCRETE (SMALL WORKS)

GA 5 **CONSTRUCTION**

GA 5.2 **FORMWORK**

PS GA 5.2.1 **Classification Of Finishes**

Add the following to GA 5.2.1:

The following surface conditions are required on the finished concrete:

a) **Rough**

Concealed surfaces and surfaces lower than 100 mm below finished ground level.

b) **Smooth**

All surface finishes not classified as rough in paragraph a) shall be classified as smooth. All exposed arrises unless otherwise indicated on the drawings, shall be chamfered 20 mm x 20 mm by means of triangular fillets fixed to the formwork.

GA 8 **MEASUREMENT AND PAYMENT**

GA 8.1 **MEASUREMENT AND RATES**

PS GA 8.1.2 **Reinforcement**

Substitute GA 8.1.2 with the following:

Reinforcement shall be measured and payed for by mass. Valuation of variations shall not be applicable.

No allowance shall be made for individual reinforcement bar sizes.

GA 8.2 **SCHEDULED FORMWORK ITEMS**

PS GA 8.2.3 **Narrow Widths ..... Unit : m**

Substitute GA 8.2.3 with the following:

No payment shall be made for narrow widths.

GA 8.3 **SCHEDULED REINFORCEMENT ITEMS**

PS GA 8.3.2 **High-tensile Welded Mesh ..... Unit : kg**

Substitute GA 8.3.2 with the following:

Welded mesh shall be measured and payed for by mass.

GA 8.4 **SCHEDULED CONCRETE ITEMS**

PS GA 8.4.1 **Prescribed Mix Concrete ..... Unit : m^3**

Add the following to GA 8.4.1:

The rate for installation of concrete slabs shall include for the compaction of the in situ material to 90 % of MAASHTO density.

PS GA 8.9 **WEEP-HOLES ..... Unit : No**

The rate for installation of weep-holes as shown on the drawings shall include all material, plant and labour.

PS GA 8.10 **HANDRAILS AT PEDESTRIAN BRIDGE ..... Unit : m**

The rate shall cover the cost for supplying of all material, plant and labour for the installation of the handrails as shown on the drawings.

PS GA 8.11 **PRE-CAST CONCRETE BEAMS ..... Unit : No**

The rate shall cover the cost for the supply, delivery and installation of grade 25 MPa/19 mm concrete beams complete with reinforcement, formwork concrete and finishing as shown on the drawings.

PROJECT SPECIFICATION : PORTION 2

SABS 1200 HA : STRUCTURAL STEELWORK (SUNDRY ITEMS)

HA 5 **CONSTRUCTION**

PS HA 5.2.6 **Handrails**

Substitute the first sentence of HA 5.2.6 with the following:

Handrails shall be of the tube and sphere type and shall be manufactured by an approved firm specialising in such works.

Handrails shall be 900 mm high and shall consist of a handrail and a knee-rail, both manufactured of steel tubing of nominal thickness 2,6 mm and of nominal outside diameter of at least 34 mm.

Stanchions shall be manufactured preformed in one piece and shall be of steel tubing of nominal thickness of 2,6 mm and of nominal outside diameter of at least 42 mm. The bases of the stanchions shall be manufactured of 150 mm x 75 mm x 12,5 mm flat bars and shall be preformed to suit the situation in which they are to be installed (i.e. for platform- or side-mounting, and for horizontal- or sloped-mounting on concrete or steel), and the stanchion spheres shall be preformed to suit right angled or other angled intersections), all as shown on the drawings.

Stanchions shall be spaced at intervals not exceeding 1,5 m and shall be fixed with two M16 galvanised bolts, washers and nuts each. All joints shall be welded.

Handrails shall be hot-dip galvanised after manufacture.

PS HA 5.2.11 **Ladders**

Add the following to HA 5.2.11:

Ladders shall be hot-dipped galvanised after manufacturing.

PS HA 5.2.12 **Prefabricated Open Grid Floors**

Substitute the second sentence of HA 5.2.8.1 with the following:

This shall be similar to the "U"-grid type grid floors manufactured by Armco Superlite and hot-dipped galvanised.

PS HA 5.2.13 **Floor plate Floors**

Substitute HA 5.2.13 with the following:

Floor plate floors shall consist of 8 mm thick raised pattern plates as shown on the drawings. Floor plate floors shall be hot-dipped galvanised after manufacturing.

HA 8 **MEASUREMENT AND PAYMENT**

PS HA 8.3.6 **Corrosion Protection**

Substitute HA 8.3.6 with the following:

Corrosion protection shall not be measured separately. The cost thereof shall be included in the rate for the related item.

PS HA 8.3.7 **Stantions ..... Unit : No**

The rates shall cover the cost for the supply of all material, manufacturing, galvanising, handle, deliver to site, off loading, erection and grouting. The rate shall also cover the cost for all bolts and nuts, washers, cutting to size, etc.

PS HA 8.3.8 **Steel Basket ..... Unit : No**

The rate shall cover the cost of manufacturing, supply of all materials (stainless steel) delivery on site and installation. The rate shall cover the cost of all bolts and nuts, washers, cutting to size, etc.

PROJECT SPECIFICATION : PORTION 2

SABS 1200 L : MEDIUM PRESSURE PIPELINES

L 3 **MATERIAL**

PS L 3.1 **GENERAL**

Substitute the first sentence of L 3.1 with the following:

Types and classes of pipes shall be as scheduled.

PS L 3.2 **AC PIPES AND SPECIALS**

Substitute the last sentence in the first paragraph of L 3.2 with the following:

All AC pipes shall be double bitumen-dipped and all fittings except couplings shall be plain ended cast iron fittings suitable for AC COD joints.

PS L 3.8 **JOINTING MATERIALS**

PS L 3.8.1 **AC Pipes**

Add the following to L 3.8.1:

Cast iron fittings, except valves, may be jointed to AC pipes with AC 3-ring sleeve-type couplings. If the pipe differs from the class of the Cast iron fittings, class to class adaptors shall be used and the cost shall be included in the cost of the fitting.

PS L 3.8.4 **Loose Flanges**

Substitute the first sentence of the last paragraph of L 3.8.4 with the following:

Bolts and nuts shall comply with the requirements of SABS 135.

PS L 3.9.5 **Joints, Bolts, Nuts And Washers**

Substitute L 3.9.5 with the following:

All joints, bolts, nuts and washers shall be stainless steel.

PS L 3.10 **VALVES**

PS L 3.10.1 **Gate Valves**

All gate valves shall comply with the requirements of SABS 664 and shall be suitable for a working pressure of 1,6 MPa. All gate valves must be supplied with a square spindle nut, suitable to be used with a valve key.

Gate valves shall have spigot ends unless shown differently on the drawings and shall open clockwise. The direction for opening and closing shall be permanently displayed on the valves. Valves shall have non-rising spindles.

Compression shut-off valves with rubber protected gate and smooth finish without recess inside, may be used.

All flanged gate valves shall be drilled according to SABS 1123 Table 1600/3. Pipes shall not be tested against a closed valve. Thrust blocks for test sections shall be approved by the Engineer prior to testing of pipes.

PS L 3.10.2 **Butterfly Valves**

Butterfly valves shall be of the wafer pattern to be installed between two flanges in the water main with either short collar repair couplings or Viking Johnson couplings.

The valves shall be fitted with a gearbox with a stainless steel shaft. The body shall be clad with rubber.

Valves shall be similar to the "Compact" type with a working pressure of 1,6 MPa. Pipes shall not be tested against closed butterfly valves.

PS L 3.10.3 **Fire Hydrants**

Fire hydrants shall be of the screw-down underground type and shall be suitable for a working pressure of 1,6 MPa with a 65 mm inlet. The outlet shall be 63 mm dia gun-metal with London Vee screw thread with cap top and chain. It shall open clockwise with a square spindle nut of the same size that is specified for the gate valves.

The fire hydrant shall be bolted to the flanged branch of a cast iron hydrant tee.

PS L 3.10.4 **Air Valves**

Air valves for potable water shall be suitable for a working pressure of 1,6 MPa. All air valves shall be double action air valves of Vent-o-mat series RB. On a 500 mm dia or smaller main a 50 mm air valve shall be fitted and a 80 mm air valve on diameters larger than 500 mm.

The branch of the tee on the main pipe shall be minimum 0,67 ($^2/_3$) of the diameter of the main pipe.

All air valve installations shall be supplied with an isolating valve and distance piece between the air valve and the branch of the tee, and other fittings shown on the drawings.

Double-acting air valves shall have large as well as small orifices. The large orifice shall have a rubber bed, and the small orifice a brass bed on which the balls can shut. Double-acting air valves shall be flanged and supplied with flanged isolating valves. Air valves shall be designed to remain open until all the air has escaped and shall not close due to the speed of the escaping air.

T-pieces for air valves shall be as follows:

Main pipe mm dia	**Branch mm dia**
250	200
300	200
350	250
400	300
450	300
500	350
600	400
700	500
800	600
900	600
1 000	700

Air valves for sewers shall be RSC figure valves of stainless steel as supplied by Premier Valves. These valves shall be flanged and supplied with a separate flanged gate valve.

PS L 3.10.5 **Scour valves**

Scour valves shall be suitable for a working pressure of 1,6 MPa.

Scour valves shall consist of a flanged gate valve of 100 mm dia coupled horizontally to a flanged cast iron scour valve tee. The outlet pipe shall be a 100 mm nominal diameter galvanised steel pipe with 4 mm wall thickness. The outlet shall discharge above ground level in the direction of the fall of the natural ground surface, perpendicular to the main pipe. The outlet end of the pipe shall be cut diagonally and supplied with a cover that is hinged and that will remain closed unless it is forced open by the water. The hinge shall be non-removable.

Scour valves on 75 mm dia pipes shall be the same as above except that a 75 x 75 mm dia fire hydrant tee shall be used and that the gate valve and outlet pipe shall both be 75 mm diameter.

PS L 3.10.6 **Bulk Water Meter**

New bulk water meters shall be installed as shown on the drawings.

Functional Requirement Of Bulk Water Meters

DESCRIPTION	METER 1	METER 2	METER 3
1. Detail op pipeline	250 FC Class 30	300 FC Class D	250 FC Class D
2. End connections	Flanged, SABS 1123 class 1600/3	Flanged, SABS 1123 class 1600/3	Flanged, SABS 1123 class 1600/3
3. Maximum working pressure	130 m	20 m	20 m
4. Maximum flow rate	75 ℓ/s	65 ℓ/s	45 ℓ/s

Technical requirements for the meters

The bulk water meters shall be of the free-flow type manufactured from corrosion resistant material in a cast iron casing. A distance of 10 times the diameter of the pipe before and 5 times the diameter after the water meter must be kept free of any obstructions such as bends, valves, reducers, etc.

The flow reading shall be given on a dial face and totalising shall occur by means of a roller counter and shall be accurate within ± 2 %.

The meter shall be manufactured in such a way that all moving parts can be removed and replaced from the top without removing the whole meter. Replacement parts should be freely available. Each water meter installation shall be supplied with a gate valve on the upstream side of the water meter at a distance of 10 times the diameter of the pipe. This gate valve shall be provided for under the relevant item in the schedule of quantities.

The meter shall have a connection point to send flow data by signal to a computer, similar to that of a Meinecke meter.

Installation of meter

The meter shall be installed by a person approved by the supplier in order to validate the guarantee.

All accessories for the complete installation shall be supplied by the Contractor.

All metal work shall be painted according to specifications after the testing and completion of the installation.

PS L 3.10.7 **Reflux Valves**

Reflux valves shall be suitable for a working pressure of 1,6 MPa and, unless otherwise indicated, shall be flanged.

The casing and flap shall be manufactured from close-grained cast iron with a brass face on the flap that close onto a corresponding brass plane in the casing.

The hinge pin shall swivel freely in bearings on both sides of the casing.

Cone-shaped rubber-seal reflux valves with stainless steel cones may be used if approved by the Engineer.

Single door reflux valves complying with the requirements of SABS 1551 - Part 2 shall be used for sewer pump lines.

PS L 3.10.8 **Control Valves**

The casing of the control valves shall be manufactured from close-grained cast iron and the flanges shall be drilled according to SABS 1123 Table 1600/3.

The valves shall be of the diaphragm single bed ball-type controlled hydraulically by a pilot valve. The main valves shall be fixed on three sides with single removable bronze beds and synthetic rubber disks with a rectangular cross-section, with disk clamps. No packing material will be allowed and repairs must be done without removing the valve from the pipeline.

The design must be such that no water can come from the main valve into the pilot valve system. Bermad type 700 with a V-port throttling plug, or a similar product, must be used. If the pressure in the main pipe is not sufficient to control the valve, a connection shall be made with the pump line.

Functional requirements of the control valve

DESCRIPTION	CONTROL VALVE 1	CONTROL VALVE 2
Pipe details	250 FC Class 30	100 FC Class C
End connections	Flanged, SABS 1123 Class 1600/3	Flanged, SABS 1123 Class 1600/3
Maximum working pressure	130 m	50 m
Minimum working pressure	100 m	10 m
Maximum flow rate	70 ℓ/s	10 ℓ/s
Minimum flow rate	10 ℓ/s	5 ℓ/s
Type of control	Pressure reduction 130 m - 80 m	Water level control in reservoir with ability to balance flow with with-drawl from the reservoir

L 3.11 **MANHOLES AND SURFACE BOXES**

PS L 3.11.4 **Step Irons**

Substitute L 3.11.4 with the following:

Step irons shall consist of polypropylene coated 12 mm high tensile steel such as Calcamite or similar. The installation of the step irons shall be in accordance with the specification of the manufacturer.

PS L 3.11.6 **Surface Boxes**

Add the following to L 3.11.6:

The type of cast iron boxes shall be as specified on the drawings.

L 4 **PLANT**

PS L 4.3 **TESTING**

Add the following to L 4.3

The Contractor must ensure that the test equipment is in good order and that it is calibrated.

L 5 **CONSTRUCTION**

L 5.1 **LAYING**

PS L 5.1.1 **General**

Add the following to L 5.1.1:

Where asbestos cement pipes are built into structures as indicated on the drawings, the length of pipe that is built in, must not exceed 600 mm.

In order to facilitate for movement between structures, a length of asbestos cement pipe of a minimum of 600 mm must be connected to the section that is built into the structure or to the pipe, as indicated on the drawings.

PS L 5.1.4.2 **Deflection**

Substitute "1,5° per joint in the case of AC pipes" in L 5.1.4.2 with "3° per joint in the case of AC pipes with AC couplings and 4° in the case of AC pipes with cast iron short collar repair couplings".

L 5.6 **VALVE AND HYDRANT CHAMBERS**

PS L 5.6.1 **General**

Substitute the first sentence of L 5.6.1 with the following:

The drawings of valve and hydrant chambers which are bound into the document shall supersede the corresponding drawings in the standard specification.

PS L 5.9 **LIFTING AND RELAYING OF EXISTING PIPES**

Add the following to L 5.9:

Existing water pipes at certain points shall be lifted and relayed deeper in the same position. The Contractor must make timeous arrangements with the local authority.

PS L 5.11 **STAND PIPES**

Stand pipes shall comprise a CI saddle, of size suitable for the water main, drilled and tapped 28 mm; length of 28 mm copper pipe ending 750 mm above ground level; 25 mm brass hose bip-tap; all bends, fasteners and other fittings necessary; standpipe fixed to wall of building or fixed to and including 100 mm diameter wooden pole 1 400 mm long firmly installed in the ground.

PS L 7 **TESTING**

PS L 7.3 **STANDARD HYDRAULIC PIPE TEST**

PS L 7.3.1 **Test pressure and time of test**

Add the following to L 7.3.1.1:

Pipes shall not be tested against isolating valves. Special blank flanges or end caps, fully anchored, shall be provided for testing.

Substitute L 7.3.1.2 with the following:

The test pressure for field testing shall be 1,5 times the rated maximum working pressure of the pipe e.g. class 12 AC pipe (0,6 MPa rated working pressure) shall be tested to 0,9 MPa and class C AC pipe (0,9 MPa rated working pressure) to 1,35 MPa.

Substitute L 7.3.1.3 with the following:

The test pressure applied according to L 7.3.1.2, must, with allowance for any level differences along the pipeline, be such that the pressure at any point in the pipeline will be at least 1,25 times and not more than 1,5 times the rated working pressure of the pipe.

PS L 8 **MEASUREMENT AND PAYMENT**

PS L 8.2 **SCHEDULED ITEMS**

PS L 8.2.3 **Extra-over 8.2.1 For The Supplying, Fixing And Bedding Of Valves ..... Unit : No**

Add the following to L 8.2.3:

Valves are measured and paid for per item, complete with the inclusion of the cutting of pipes, couplings, extra excavation and all extra material and labour that is required, including tees, fittings, isolating valves (e.g. under air valves), complete as shown on the drawings. Flanged distance pieces shall be included in the rate for fire hydrants.

PS L 8.2.8 **Recover Old Pipe Line ..... Unit : m**

Add the following to L 8.2.8:

The tendered rate for the lifting and relaying of pipelines at a deeper position in the same trench shall be all inclusive to expose the existing pipeline which lies at a depth of up to 1,5 m, to disconnect it, remove it, deepen the trench to 2 m, prepare the bedding and relay the pipes, and backfill and compact the trenches. The rate shall also cover the cost of timeous liaison with the authority concerned and homeowners, and the programming for the disconnection of that service at a time arrange with the authority so that the minimum disruption occurs.

There will be distinguished between the various pipe diameters, and all the requirements of L 8.2.8 and L 8.2.9 are applicable as well.

PS L 8.2.10 **Temporary Valves, Etc. ..... Unit : Sum or No**

Substitute L 8.2.10 with the following:

Temporary valves, end caps or blank flanges testing shall be included in the rate for the laying of pipes except where separate items are included in the schedule of quantities.

PS L 8.2.11 **Anchor/Thrust Blocks And Pedestals ..... Unit : m^3**

Anchor and thrust blocks shall be measured per cubic metre concrete and the tendered rate shall include for all formwork and reinforcement (where specified) for the required dimensions.

PS L 8.2.13 **Valve And Hydrant Chambers, Etc ..... Unit : No**

Add the following to L 8.2.13:

The rate for scour-valve chambers must also cover the cost of the supply and installation of the scour outlet as described in PS L 3.10.4 and indicated on the drawings.

PS L 8.2.14 **Manholes ..... Unit : No**

Add the following to L 8.2.14:

Overflow boxes and pipe outlets shall, as in the case of manholes, be measured and paid for per number and shall be all inclusive as shown on the drawings.

PS L 8.2.16 **Cut Into And Connect To Existing Mains ..... Unit : No**

The cutting into existing mains shall be measured by the number of each type and diameter of pipe cut into.

The tendered rate shall include full compensation for all arrangements with the relevant authorities, isolating the main, cutting into the main to accommodate the connecting fitting, dewatering, excavating, removing of excess material, taking steps to prevent the ingress of soil, stones and other material into the main as well as all material and labour to connect the pipe.

PS L 8.2.17 **Stand Pipes ..... Unit : No**

Separate items will be scheduled for each diameter and type of water main.

The tendered unit rate shall cover the cost of the all material described in PS L 5.11, and of the plant and labour necessary for the complete construction of a stand pipe.

PS L 8.2.18 **Extra-over L 8.2.1 For Laying Of Control Cable ..... Unit : m**

The control cable shall be supplied by the electrical contractor and it must be laid in the pipe trench under this contract according to the specifications of the electrical contractor. The tendered rate shall cover the cost of receiving, storing, handling, laying, bedding, making of joints, etc. and shall provide for all delays that may be caused by this.

PS L 8.3 **WATER METERS ..... Unit : No**

The rate for water meters shall cover the cost of the supply of a flanged water meter, with the necessary couplings to be connected to the appropriate pipes, the installation, testing and putting into operation of the complete meter.

PS L 8.4 **CONTROL VALVES ..... Unit : No**

The rate for control valves shall cover the cost of the provision of a flanged control valve with a flanged gate valve of the same diameter, with the required fittings, couplings, piping, etc. to be connected to the appropriate pipes, as well as for the pilot valve, copper pipe, etc. and for the complete installation, testing and putting into operation of the valve.

PROJECT SPECIFICATION : PORTION 2

SABS 1200 LB : BEDDING (PIPES)

LB 1 **SCOPE**

PS LB 1.1 **SCOPE**

Add the following to LB 1.1:

This specification also covers the bedding required for electric cables and cable ducts.

LB 3 **MATERIALS**

PS LB 3.1 **SELECTED GRANULAR MATERIAL**

Substitute LB 3.1 with the following:

Selected granular material shall be an aggregate, sand or granular material, all of a non-cohesive nature and free from any organic material, of which the grading analysis shows 100 % passing a 13,2 mm sieve and not more than 5 % passing a 0,075 mm sieve.

In very wet conditions and if so ordered by the Engineer, a non plastic crushed material with the specification as stated underneath should be used for bedding cradle.

a) **Grading**

Sieve size (mm)	**% going through**
19,0	100
13,2	84 - 100
9,5	70 - 84
4,75	45 - 65
2,36	29 - 47
1,18	19 - 33
0,600	13 - 25
0,300	10 - 18
0,150	6 - 13
0,075	4 - 10

b) **Crusher value**

The aggregate crushing value, calculated at minus 13,2 mm plus 0,5 mm fraction, may not exceed 29.

PS LB 3.2 **SELECTED FILL MATERIAL**

Substitute LB 3.2 with the following:

The requirements of PS LB 3.1 shall apply mutatis mutandis.

PS LB 3.3 **BEDDING**

Add the following to LB 3.3:

All pipes shall be classified as rigid pipes and shall be laid on a Class C bedding except water connections which shall be classified as flexible pipes. Cable bedding is specified separately.

PS LB 3.4 SELECTION

PS LB 3.4.1 Suitable Material Available from Trench Excavation

Substitute the first sentence of LB 3.4.1 with the following:

Irrespective the requirements of subclause 3.7 of SANS 1200 DB and subclause 3.4.1 of SANS 1200 LB regarding the use of selective methods of excavation, the Contractor must use selective methods of excavation and supply and use plant that will avoid burying or contaminating material that is suitable and required for bedding or covering the pipeline.

PS LB 3.5 **PROTECTIVE CONCRETE SLABS FOR CABLES**

Protective concrete slabs shall be precast concrete slabs with dimensions of 1 000 mm x 350 mm x 50 mm, and shall comply with the requirements of SABS 1200 G for 25 MPa strength concrete. The slabs shall be reinforced with three 8 mm diameter high-tensile reinforcing bars in both directions.

PS LB 3.6 **POLYETHYLENE WARNING TAPE**

The danger tape shall be manufactured from Grade XJF 46/60 polyethylene at least 0,4 mm thick and with a nominal width of 230 mm, and which is completely impregnated with a light orange pigment reasonably matching colour no B26 of SABS 1091.

A black triangle and lighting flashes for electricity, as depicted on sign WW7 of SABS 1186, as well as the words "DANGER, GEVAAR, INGOSI" shall be printed clearly and permanently onto the tape. The whole pattern shall be repeated every 1 m.

The quality of all materials employed shall be such as to ensure the permanency of the tape under all environmental and soil conditions, as well as the stability of the orange pigmentation and the lettering and warning symbols.

LB 5 **CONSTRUCTION**

LB 5.1 **GENERAL**

PS LB 5.1.4 **Compacting**

Substitute "90 % of MAASHTO" in LB 5.1.4 with "93 % of MAASHTO (100 % for sand)".

PS LB 5.1.5 **Placing And Preparation Of Bedding/Fill Blanket For Electric Cables**

Bedding for electric cables shall be placed under this contract, so that only the cables, protective concrete slabs or warning tape can be installed by the electrical contractor.

The bedding shall be the same as specified for flexible pipes.

LB 8 **MEASUREMENT AND PAYMENT**

LB 8.1 **PRINCIPLES**

PS LB 8.1.1 **Supply Of Bedding Materials Measured Separately**

Add the following to LB 8.1.1:

Except for electric cables payment for bedding material and selected fill material is only made if the selected trench-excavation material cannot be used in the same position as bedding material but has to be obtained from another part of the site of works or designated borrow pits, or from commercial sources.

PS LB 8.1.4 **Separate Items For Cradle And Blanket**

Substitute LB 8.1.4 with the following:

No distinction shall be made as regards material for the bedding cradle and selected fill blanket, and the material shall comply with the requirements for material for bedding cradle.

PS LB 8.1.5 **Disposal Of Displaced Material**

Add the following to LB 8.1.5:

Surplus displaced material shall be dumped and levelled at the spoil site.

LB 8.2 **SCHEDULED ITEMS**

LB 8.2.2 **Supply Only Of Bedding By Importation**

PS LB 8.2.2.3 **From commercial sources**

Add the following to LB 8.2.2.3:

c) Bedding for wet conditions ..... Unit : m^3

The requirements of PS LB 3.1 for bedding in wet conditions must be noted. Payment will only be applicable if ordered by the Engineer.

PS LB 8.2.2.4 **From stockpile (provisional)**

a) Selected granular material ..... Unit : m^3

b) Selected fill material ..... Unit : m^3

The rate shall cover the cost of obtaining, handling and transport regardless the distance, of the required bedding material from the stockpile, the delivery thereof at positions that are spaced along the trench in such a way as suits the working method of the Contractor, as well as the removal of material displaced by this importation within a free-haul distance of 0,5 km.

PS LB 8.2.5 **Overhaul Of Material For Bedding Cradle And Selected**

Fill Blanket ..... Unit : m^3.km

Substitute LB 8.2.5 with the following:

a) Limited overhaul .....Unit : m^3

b) Long overhaul ..... Unit : m^3km

Except that the volume is calculated according to LB 8.1.3, the requirements of D 8.3.6 or DA 8.3.3, as applicable, shall apply for overhaul.

PS LB 8.2.6 **Bedding For Cables ..... Unit : m trench**

The tendered rate for cable bedding shall provide for the placing of material from any position along the trench within 50 m, the preparation and bedding for cables for the complete trench length, regardless of the number of cables. The tendered rate shall also make provision for the fact that long trenches have to be prepared (as specified PS DB 8.3.2), for all necessary arrangements with the electrical contractor to lay the cables, for the installation of the fill blanket and backfilling on the same day on which the cables are installed.

PS LB 8.2.7 **Additional Bedding ..... Unit : m trench**

The rate for additional bedding for electric cables is extra over LB 8.2.1 and LB 8.2.2 and provides for the preparation of each additional bedding level for cables, concrete slabs and protective layers over and above the preparation of the initial bedding level in the same trench.

PS LB 8.3 **PROTECTIVE CONCRETE SLABS FOR CABLES ..... Unit : No**

The provisions of G 8.6 shall apply mutatis mutandis.

PS LB 8.4 **POLYETHYLENE WARNING TAPE ..... Unit : m**

The rate shall cover the cost of the supply, handling and placing of the tape.

PROJECT SPECIFICATION : PORTION 2

SABS 1200 LC : CABLE DUCTS

LC 3 **MATERIALS**

PS LC 3.1 **DUCTS**

Add the following to LC 3.1:

Class 6 uPVC pipes (dia 110 mm or 160 mm) shall be used as ducts for electric cables under streets. Ducts for Telkom shall be of pitch-impregnated fibre pipes.

PS LC 3.1.1 **Supply Of Ducts By Telkom**

Notwithstanding any provisions of the contract in terms of which the Contractor is required to provide all materials necessary for the construction of the works, Telkom will supply the ducts for telephone cables. Consequently, the Contractor's obligations under the contract shall include taking delivery, the construction, completion and maintenance of the works and the provision of all labour, materials (other than those that are to be supplied by Telkom), plant, temporary works, and everything, whether of a temporary or permanent nature, required in and for such construction, completion and maintenance, so far as the necessity for providing the same is specified in or reasonably to be inferred from the contract.

To assist Telkom in arranging for the goods to be supplied to suit the Contractor's construction program, the Contractor shall submit to the Engineer, at agreed intervals, lists of his requirements. These lists shall be submitted at least 6 weeks (or another approved period) in advance of the date by which the goods are required. The Engineer will ascertain in advance the actual dates of delivery of consignments and will advise the Contractor who shall adjust his construction program as necessary to minimise any disruption of his work.

In the event of supply being effected, the Contractor shall, provided that appropriate due notice of dispatch has been given, be responsible for taking immediate delivery of such goods as they arrive at the site. He shall be responsible for checking the actual deliveries against delivery notes. From the time of taking delivery the Contractor shall be responsible for the handling, transportation and storage of the goods and he shall at the same time accept the risk of damage to or loss of the goods.

Should any goods reach the point(s) of delivery in a damaged or an apparently damaged condition, the Contractor shall report this fact to the Engineer, and he shall, before removing the goods from the transport vehicle, to avoid demurrage or similar charges, afford the Engineer reasonable opportunity to inspect such damaged goods.

On receipt of the goods, the Contractor shall issue a receipt to Telkom in an approved form. The Contractor shall accept full responsibility for checking deliveries and ensuring that the goods supplied to him are in sound condition.

The Contractor's receipt will be deemed to indicate that he has satisfied himself that the goods enumerated on it are in sound condition. Unless the Contractor at the time of receipt advises the Engineer that goods have been short delivered or are defective, and obtains the Engineer's approval to take delivery (which approval will not be unreasonably withheld), no subsequent claim for short deliveries or replacement of damaged goods will be considered by the Engineer.

PS LC 3.2 **BEDDING**

Substitute LC 3.2 with the following:

The provisions of SABS 1200 LB : Bedding (Pipes) and the relevant project specification shall apply mutatis mutandis and payment shall be made under the appropriate payment clauses of SABS 1200 LB.

PS LC 3.3 **BACKFILL**

Substitute LC 3.3 with the following:

The provisions of SABS 1200 DB : Earthworks (Pipe Trenches) and the relevant project specification shall apply mutatis mutandis and payment shall be made under the appropriate payment clauses of SABS 1200 DB.

PS LC 3.4 **CABLE DUCT MARKERS**

Add the following to LC 3.4:

Cable duct markers shall be provided as specified in PS LC 5.10.

LC 5 **CONSTRUCTION**

LC 5.1 **EXCAVATION OF TRENCHES**

PS LC 5.1.1 **Trench Widths And Depths**

Add the following to LC 5.1.1:

Trench widths shall be in accordance with the provisions of SABS 1200 DB : Earthworks (Pipe Trenches).

The minimum depth of cover over ducts shall be 600 mm from the final road level.

PS LC 5.1.3 **Excavation Of Trenches At Road Crossings**

The minimum depth of cover over ducts shall be 300 mm where construction traffic is liable to cross them. Road crossings shall therefore be constructed after the construction of the roadworks has reached the stage where the required cover is available.

PS LC 5.2 **BEDDING AND COMPACTION OF BEDDING**

Substitute LC 5.2.1 and LC 5.2.2 with the following:

All ducts shall be laid on a Class C bedding according to the provisions of SABS 1200 LB : Bedding (Pipes). Backfilling shall be according to the provisions of SABS 1200 DB : Earthworks (Pipe Trenches).

PS LC 5.4 **BACKFILLING AND COMPACTION**

Add the following to LC 5.4:

Road crossings shall be backfilled with sand from designated borrow pits, the site or commercial sources, whichever is applicable, up to underneath the subbase, and compacted to a minimum of 100 % of MAASHTO density.

PS LC 5.8 **ROAD CROSSINGS**

Substitute "0,5 m" in the last sentence of LC 5.8 with "1,0 m" and add the following:

Ducts for road crossings shall be effectively sealed by means of end caps.

PS LC 5.10 **POSITION TO BE MARKED**

Add the following to LC 5.10:

The lettering height shall be at least 70 mm.

The positions of ducts shall be marked by means of incisions on top of the kerb. The dimensions of such incisions shall be at least 40 mm long, 3 mm wide and 5 mm deep and the spacing, where more than one incision is required, shall be 20 mm. Ducts for Telkom crossings and electrical crossings shall be marked with green and red painted incisions respectively.

The draw wire, as specified in LC 5.3.3, shall be secured to a 150 x 150 x 150 mm grade 20 MPa/19 mm concrete marker, which shall be installed with a depth of cover of 50-100 mm below the final level.

PS LC 5.12 **DRAW AND JOINT BOXES FOR TELKOM CABLES**

Draw and joint boxes shall be constructed strictly in accordance with the positions and details given on the plans.

LC 7 **TESTING**

PS LC 7.2 **COMPACTION TESTS**

Substitute LC 7.2 with the following:

The Contractor shall, for at least one out of every five road crossings, submit density tests to the Engineer at his own expenses. The decision as to which road crossing densities shall be tested, rests with the Engineer. The Contractor shall, if such densities fail to meet the minimum requirements, prove at his expense that all the other densities do comply with the specified minimum requirements.

LC 8 **MEASUREMENT AND PAYMENT**

LC 8.2 **SCHEDULED ITEMS**

PS LC 8.2.5 **Supply, Lay, Bed And Prove Duct ..... Unit : m**

Substitute "GPO" in LC 8.2.5(a) with "Telkom".

Add the following to LC 8.2.5(a):

The rates for the installation of Telkom distribution ducts parallel to streets shall first be submitted by the Employer to Telkom for approval. The installation of these ducts will only form part of this contract if approved by Telkom.

PS LC 8.2.8 **Cable Markers ..... Unit : No**

Substitute LC 8.2.8 with the following:

The rate shall also cover the cost of the end cap and the incisions, concrete marker and draw wire, as specified in PS LC 5.10.

PS LC 8.2.10 **Concrete Slabs For Electrical Cable Ducts ..... Unit : m**

The rate shall cover the cost of supplying, bedding and laying of precast 400 x 400 x 50 mm grade 20 MPa/19 mm concrete slabs above electric cables as shown on the drawings.

PROJECT SPECIFICATION : PORTION 2

SABS 1200 LD : SEWERS

LD 3 **MATERIALS**

PS LD 3.1 **PIPES, FITTINGS, AND PIPE JOINTS**

PS LD 3.1.3 **AC Pipes**

Add the following to LD 3.1.3:

Double bitumen-dipped AC pipes and fittings shall be used.

PS LD 3.5 **MANHOLES, CHAMBERS, ETC.**

PS LD 3.5.2 **Precast Concrete Sections**

Add the following to LD 3.5.2:

Precast concrete sections with an inside diameter of at least 1 000 mm shall be used for manholes.

Where the angle between the inlet and outlet of the manhole deviates by more than 45 ° from the straight or where more then one inlet enter a manhole, the invert level of the outlet shall be 30 mm lower than the lowest inlet invert level.

The 1,95 m diameter lower sections of the pump sumps shall comply with SABS 677 Class C.

Sectional spun concrete cylinders shall have been manufactured from dolomitic aggregate.

PS LD 3.5.3 **Prefabricated AC Manholes**

Substitute LD 3.5.3 with the following:

Prefabricated AC manholes shall comply with the requirements for fibre-reinforced cement sewer pipes according to SABS 819 with an internal diameter of 1 000 mm. All manholes shall be bitumen-dipped.

The joint between the manhole and the concrete roof slab shall be sealed effectively with a sealant, to the prescriptions of the manufacturers and approval of the Engineer, to prevent the infiltration of subsurface water or stormwater. Lifting holes shall be sealed off effectively, with an epoxy, after installation and before backfilling.

In the case of only one inlet pipe with the same diameter as the outlet pipe and with a deviation of less than 45° from the straight, the invert level of the outlet pipe shall be 10 mm lower than that of the inlet pipe.

Where the angle between the inlet and outlet of the manhole deviates by more than 45 ° from the straight or where more then one inlet enter a manhole, the invert level of the outlet shall be 30 mm lower than the lowest inlet invert level.

The soffits of all inlet pipes in a manhole shall be on the same level.

If the outlet pipe is bigger than all the inlet pipes, it shall have the same soffit level as the inlet pipes.

To prevent buoyancy of manholes, all manholes deeper than 1,5 m shall be bedded in grade 20 MPa/19 mm concrete to dimensions as specified on drawing STE/R-11. The concrete bases may be partly precast, subject to approval by the Engineer.

All manholes complete with bottom, shall be able to accommodate a water pressure of the full manhole depth, as specified on the drawings, with an additional 50 % safety factor.

PS LD 3.5.7 **Step Irons**

Substitute LD 3.5.7 with the following:

Step irons shall be installed in all manholes deeper than 1,2 m. Step irons shall consist of polypropylene coated 12 mm high tensile steel, such as Calcamite or similar. The installation of the step irons shall be in accordance with the specification of the manufacturer.

PS LD 3.5.9 **Locking Devices For Manhole Covers**

Two 6 mm x 40 mm long stainless steel grub screws shall be installed in the cover as follows:

i) Two holes must be drilled through the cover on opposite sides to host the screws.

ii) Two threaded holes must be provided in the frame to suit the screws and must be at least 20 mm deeper than required for the screws to accommodate dirt etc. These holes must be drilled through the holes in the cover to ensure accurate alignment.

iii) Incisions must be made in the frame to indicate the positions of the holes after the cover is in place.

PS LD 3.5.10 **Sandtraps**

Sand traps shall be identical to manholes specified in PS LD 3.5.3 except that the diameter shall be 1 200 mm and the bottom will be 500 mm below the invert level and will have no benching.

PS LD 3.6 **MARKER POSTS**

Add the following to LD 3.6:

Marker posts consisting of a 1 m length of fibre-cement pipe shall be planted directly above of the end cap at the connection point. The one end of the pipe must extend to 500 mm above the natural ground level and shall be painted red. The bottom end of the marker post shall be connected to the end cap with a piece of wire.

LD 5 **CONSTRUCTION**

LD 5.4 **CONNECTIONS TO MANHOLES**

Add the following to LD 5.4:

If the gradient of a pipe is more than 1:10, a vertical bend shall be used to connect up to the manhole. The Contractor shall take care that no low point is formed in the pipe as a result of the bend. If a pipe lies at a gradient of 1:10 (5,71°), a 11,25° bend cannot be used since a bend with an angle larger than the grade of the pipe will result in a low point. It is the responsibility of the Contractor to shorten the bend in order to create the required angle.

For pipes with a gradient of up to 1:10, the angle can be taken up by a joint in the manhole and if required, also by the joint between the short-length and first full pipe.

LD 5.6 **MANHOLES, INSPECTION CHAMBERS, ETC**

PS LD 5.6.1 **General**

Substitute LD 5.6.1(a) with the following:

Manholes shall be of asbestos cement and shall be constructed as shown on drawings no's STE/R-11 and STE/R-12, unless otherwise indicated on the drawings.

1. Final cover levels of manholes in streets and paved areas shall be to the same level as the street or paved area.

2. On side walks, lawns and garden areas the cover level shall be 20 mm above the final ground level.

3. In midblock sewers it shall be 50 mm above ground level.

4. In the veld 100 mm above natural ground level.

If a manhole is positioned at a low point or in a hollow where stormwater infiltration may occur, the manhole cover level must be raised to a level to avoid the danger of infiltration, or to a level as agreed with the Engineer.

If the manhole needs to be raised with more than 300 mm, AC sections with the same diameter shall be installed and sealed with epoxy.

PS LD 5.6.2 **Benching**

Add the following to LD 5.6.2.3:

Benching for all manholes except those with sandtraps shall be in accordance with drawing no STE/R-12.

PS LD 5.6.3 **Step Irons**

Add the following to LD 5.6.3:

Step irons shall only be installed in manholes deeper than 1,2 m.

In the case of sand traps the lowest step iron will be installed 300 mm above the floor of the manhole. An additional step iron shall be installed on the opposite side of the sand trap at the same level as the lowest step iron, as shown on the drawings.

PS LD 5.6.4 **Brick Manholes**

Add the following to LD 5.6.4.3:

Walls of brick manholes, as well as the extension of AC manholes above the concrete roof slab, shall be plastered internally as shown on drawing LD-3. External plaster work shall extend to at least 150 mm below ground level. Manholes shall not be extended above the concrete roof slab by more than 300 mm with brickwork.

If manhole covers are raised with bricks, a half-brick recess, as a foothold, shall be left directly above the concrete slab above the step irons.

LD 5.9 **CONNECTING SEWERS**

PS LD 5.9.1 **Location And Details**

Add the following to LD 5.9.1:

Erf connections shall be installed on the exact positions as indicated on the drawings and shall extend 1 m into the erf where it shall be blanked of with an end cap.

All connecting sewers shall be laid at a gradient of 1:60, except where otherwise ordered by the Engineer.

This excludes midblock sewers where connections on the topographical high side can be laid at steeper gradients to end at a minimum depth of 1,2 m or at such greater depth that any point on the erf is able to be connected.

PS LD 5.11 **LIFTING AND RELAYING OF EXISTING SEWER PIPES**

A section of the existing 150 mm diameter sewer line has to be removed and re-laid at a deeper level. For this purpose an additional manhole has to be installed in the 150 mm diameter pipe and from there the pipe has to be laid at a steeper grade to the existing sewer manhole to avoid interference with the new sewer mains and channel.

PS LD 5.12 **PUMP SUMPS**

PS LD 5.12.1 **General**

Pump sumps shall be constructed as detailed on the drawings using sectional spun concrete cylinders as specified in PS LD 3.5.2.

PS LD 5.12.2 **Plaster**

Brickwork shall be plastered externally and internally as specified in LD 5.6.4.3 with 1:3 cement plaster.

PS LD 5.12.3 **Precast slabs**

Floor and roof slabs shall be as detailed on the drawing and shall be manufactured of grade 25 MPa/19 mm concrete as specified in SABS 1200 G or SABS 1200 GA, as applicable. Floor slabs shall be bedded solidly on a 300 mm thick sand bed compacted to 100 % of MAASHTO density.

PS LD 5.12.4 **Covers**

Covers shall be SABS 558 Type 9E cast iron covers and frames (900 mm x 600 mm) and shall be grouted solidly onto the roof slab with concrete surround as shown on the drawing. The frame and cover shall be treated as specified in LD 5.6.1(e).

PS LD 5.12.5 **Waterproofing**

Brickwork and joints between concrete cylinders shall be waterproofed as shown on the drawing, with BITUTHENE 3000 as supplied by Darex Africa (Pty) Ltd. In addition all joints shall be filled with a rubber-bitumen. All lifting holes in concrete cylinder shall be sealed with an approved epoxy. The waterproofing and epoxy shall be applied as prescribed by the suppliers and to the satisfaction of the Engineer.

LD 7 **TESTS**

PS LD 7.1 **GENERAL**

Add the following to LD 7.1.5:

All tests shall be repeated after the completion of backfilling of pipe trenches.

LD 8 **MEASUREMENT AND PAYMENT**

LD 8.2 **SCHEDULED ITEMS**

PS LD 8.2.2 **Extra-over Item 8.2.1 For Specials ..... Unit : No**

Add the following to LD 8.2.2:

The tendered rate for bends in mains shall include, over and above the cost of the material, the cost of the labour and cutting of the bends to the required angle, finishing of the cut edge and the painting thereof with bitumen.

The bends scheduled in the schedule of quantities are only measured according to standard sizes and the number of bends required. It remains the responsibility of the Contractor to cut the bends to the desired angle.

PS LD 8.2.3 **Manholes**

Add the following to LD 8.2.3:

PS LD 8.2.3.1 **AC manholes ..... Unit : No**

AC manholes shall be measured complete as indicated on the drawings and the rate shall be all inclusive for benching, step irons, type 4 CI cover and frame, and it shall make provision for all additional excavation and backfilling.

Manholes deeper than 1,5 m shall be provided with an additional concrete base, if specified by the Engineer. All costs involved in additional excavation, backfilling, material and labour shall be included in the rate for the additional base. These bases will be measured as an extra-over item and shall not be included with manholes.

The depth of manholes as mentioned in the schedule of quantities, shall be measured from the final cover level to the outlet invert level (flow level).

Sandtraps shall be measured and payed for as for manholes. Separate items shall be scheduled for sandtraps.

PS LD 8.2.3.3 **New AC manholes on existing pipes ..... Unit : No**

The tendered rate shall be all inclusive for the handling of sewage flow, all excavation and backfilling, cutting of pipe and supply and installation of the new AC manhole, complete as described in LD 8.2.3.1, with finish and benching to accommodate the level difference of approximately 200 mm.

PS LD 8.2.3.4 **Brick manholes ..... Unit : No**

The tendered rate shall be all inclusive for the manholes on both sides of the railway crossing as indicated on the drawings and shall include all extra excavation and backfilling.

PS LD 8.2.6 **Erf Connections ..... Unit : No**

Substitute LD 8.2.6 with the following:

Erf connections shall be laid up to 1,0 m within the erf boundary.

There will be distinguished between long, medium and short connections.

A long connection consists of a 100 mm dia x 45° junction, a 100 mm dia x 45° bend, 10 m of 100 mm dia pipe with a 100 mm dia end cap with marker.

A medium connection consists of a 100 mm dia x 45° junction, a 100 mm dia x 45° bend, 2 m of 100 mm dia pipe with a 100 mm dia end cap with marker.

A short connection consists of a 100 mm dia x 45° junction, 1 m of 100 mm dia pipe with a 100 mm dia end cap with marker.

150 mm connections shall be the same as above, but 150 mm dia pipes and fittings shall be used.

There will be distinguished between the various connections to different main-pipe diameters, as well as between the various depth increments. The depth increment for the connection shall be determined by the depth of the junction.

The rate shall be all inclusive and shall cover the cost of excavation, backfilling, bedding, pipes and fittings. An extra-over item for variation in pipe lengths is provided for connections, shorter or longer than specified and shall include the necessary excavation, bedding, backfilling, all material, etc. and will be also be measured under depth increments in the schedule of quantities.

The depth increment for the extra pipe lengths shall be determined by the depth of the end caps. If the deviations are negative, payment shall be reduced accordingly.

The rate for new erf connections on existing sewers shall also cover the cost of additional excavation and backfilling around the mains, cutting of pipes, handling of sewage flow, etc.

Imported material for bedding, fill blanket and main fill shall be measured and paid for under the relevant items for mains.

PS LD 8.2.7 **Encasing Of Pipes In Concrete ..... Unit : m^3**

Add the following to LD 8.2.7:

The tendered rate for the encasing of pipes in concrete applies for the railway crossing and shall be all inclusive for all additional labour to lay the sewer in the channel, encase it in concrete and shall include steel reinforcement, joints, etc.

PS LD 8.2.8 **Anchor Blocks ..... Unit : m^3**

Add the following to LD 8.2.8:

Payment for anchor blocks shall be made for pipes with gradients steeper than 1:10 and shall be measured in m^3.

PS LD 8.2.11 **Connection To Existing Sewers ..... Unit : No**

Add the following to LD 8.2.11:

Separate items will be scheduled for each diameter of connecting pipe.

The tendered rate shall include full compensation for connecting the proposed pipe, any additional channelling and benching associated with the connection, cutting the pipe to suit the connection, supplying and building in the short junction pipe, extra couplings, dealing with existing flow, preventing foreign material from entering the sewer and making the connection.

The excavation for pipelines, pipes, backfilling and manholes shall be measured separately.

Where a direct connection is made to an existing pipe, the rate covers all labour involved in opening the existing pipe, the removal of the existing end cap and disconnection at the pipe.

PS LD 8.2.13 **Lifting And Relaying Of Existing Sewer ..... Unit : m**

The tendered rate for the lifting and relaying of an existing sewer at a deeper level in the same trench shall be all inclusive for excavating to expose the existing pipe at a depth of approximately 1,8 m, disconnecting it, removing it, deepening the trench, preparing the bedding and relaying the pipe, backfilling and compaction.

Additional items shall be provided for the installation of a new manhole on the existing pipe, as well as for breaking into the existing manhole and adjustment of the benching.

All the requirements for the recovery and relaying of pipes as in L 8.2.8 and L 8.2.9 of SABS 1200 L, where applicable, shall apply.

The tendered rate shall make additional provision for the necessary arrangements with the authorities concerned and for working at times when the sewage flow is at its minimum as well as for the handling of the sewage.

PS LD 8.2.14 **Locking Devices For Manhole Covers ..... Unit : No**

The rate shall cover the cost of the supply of two 6 mm x 40 mm long stainless steel grub screws, the fitting thereof and the providing of two incisions on the frame all as specified in PS LD 3.5.9.

PS LD 8.2.15 **Pump Sumps**

a) **Brickwork ..... Unit : m^2**

Brickwork shall be measured on the centre lines of the walls.

The rate shall cover the cost of the complete brickwork, including pointing and building in of pipes.

b) **Plaster ..... Unit : m^2**

The rate shall cover the cost of raking out of joints in the brickwork and rendering 1:3 cement plaster to all surfaces required to be plastered.

c) **Sectional spun concrete cylinders ..... Unit : m**

Each rate for each diameter and class of sectional spun concrete cylinder shall cover the cost of supplying and installing the cylinders.

d) **Precast slabs ..... Unit : No**

The provisions of clause 8.6 of SABS 1200 G or SABS 1200 GA, as applicable shall apply mutatis mutandis.

e) **Cast iron covers ..... Unit : No**

The rate shall cover the cost of supplying and installing the covers, including the concrete surround and reinforcement as detailed and the treatment as specified in LD 5.6.1(e).

f) **Step irons ..... Unit : No**

The rate shall cover the cost of supplying and installing the step irons.

g) **Waterproofing ..... Unit : Sum**

The sum shall cover the cost of supplying all materials as specified in PS LD 5.12.5 to render waterproof pump sumps and applying of such materials.

PROJECT SPECIFICATION : PORTION 2

SABS 1200 LE : STORMWATER DRAINAGE

LE 3 **MATERIALS**

LE 3.1 **CULVERT UNITS AND PIPES**

PS LE 3.1 d) **Skewed Ends**

Substitute LE 3.1(d) with the following:

Where pipe culverts are to be constructed with a skew angle of more than 20°, the skew ends shall be cut on site.

PS LE 3.1 f) **Materials For Subsurface Drains**

i) Pipes : Perforated or slotted uPVC pipes (normal duty) shall, before perforations or slots are provided, comply with the requirements of SABS 791.

The size of perforations in perforated pipes shall in all cases be 8 mm in diameter ± 1,5 mm and the number of perforations per metre shall be not less than 26 for 100 mm pipes and 52 for 150 mm pipes. Perforations shall be spaced in two rows for 100 mm pipes. The centre-lines of all perforations shall be contained within an arc of between 100° and 160°.

Slotted pipes shall have a slot width of 8 mm ± 1,5 mm. The arrangement of slots shall be subject to the Engineer's approval, but the total slot area shall be not less than that presented for perforations.

Pipes without slots or perforations required for conveying ground water from the subsoil drainage proper to the point of discharge, shall be unperforated uPVC pipes of the type specified above, or concrete pipes complying with the requirements of SABS 677.

ii) Geotextile : The provisions of PS DK 3.1.4 shall apply mutatis mutandis;

iii) Aggregate : The nominal size shall be 19 mm and the aggregate shall comply with the requirements of SABS 1083 for concrete aggregate;

iv) Filter sand : Sand obtained from approved commercial sources shall be clean, hard and durable and shall comply with the following grading requirements:

D15 : 0,2 mm to 0,4 mm
D85 : 1,2 mm to 4,7 mm

LE 3.4 **MANHOLES, CATCHPITS AND ACCESSORIES**

PS LE 3.4.3 **Manhole Covers, Grid Inlets, Etc.**

Substitute the last sentence in LE 3.4.3 with the following:

Covers and frames for manholes and grid inlets shall comply with the requirements of SABS 558 for Type 2A and Type 9D, respectively.

PS LE 3.4.4 Step Irons

Substitute LE 3.4.4 with the following:

Step irons shall be installed in all manholes deeper than 1,2 m. Step irons shall consist of polypropylene coated 12 mm high tensile steel, such as Calcamite or similar. The installation of the step irons shall be in accordance with the specification of the manufacturer.

PS LE 3.4.5 **Locking Devices For Manhole Covers**

Two 6 mm x 40 mm long stainless steel grub screws shall be installed in the cover as follows:

i) Two holes must be drilled through the cover on opposite sides to host the screws.

ii) Two threaded holes must be provided in the frame to suit the screws and must be at least 20 mm deeper than required for the screws to accommodate dirt etc. These holes must be drilled through the holes in the cover to ensure accurate alignment.

iii) Incisions must be made in the frame to indicate the positions of the holes after the cover is in place.

PS LE 3.6 GEOFABRIC BLANKET

Substitute LE 3.6 with the following:

PS LE 3.6 MATERIALS FOR SUBSURFACE DRAINS

a) **Pipes:** Perforated or slotted uPVC pipes (normal duty) shall, before perforations or slots are provided, comply with the requirements of SABS 791.

The size of perforations in perforated pipes shall in all cases be 8 mm in diameter ± 1,5 mm and the number of perforations per metre shall be not less than 26 for 100 mm pipes and 52 for 150 mm pipes. Perforations shall be spaced in two rows for 100 mm pipes. The centre-lines of all perforations shall be contained within an arc of between 100° and 160°.

Slotted pipes shall have a slot width of 8 mm ± 1,5 mm. The arrangement of slots shall be subject to the Engineer's approval, but the total slot area shall be not less than that presented for perforations.

Pipes without slots or perforations required for conveying ground water from the subsoil drainage proper to the point of discharge, shall be unperforated uPVC pipes of the type specified above, or concrete pipes complying with the requirements of SABS 677.

b) **Geotextile:** A Kaymat U14 or similar geomembrane shall be used;

c) **Aggregate:** The nominal size shall be 19 mm and the aggregate shall comply with the requirements of SABS 1083 for concrete aggregate;

d) **Filter sand:** Sand obtained from approved commercial sources shall be clean, hard and durable and shall comply with the following grading requirements:

D15 : 0,2 mm to 0,4 mm
D85 : 1,2 mm to 4,7 mm

LE 5 **CONSTRUCTION**

LE 5.1 **TRENCH BOTTOM**

PS LE 5.1.3 **Unsuitable Founding Conditions**

Substitute "90 % of MAASHTO maximum density" in LE 5.1.3 with "90 % of MAASHTO maximum density (100 % for sand)".

LE 5.2 **BEDDING AND LAYING**

PS LE 5.2.2 **Pipe Culverts**

Add the following to LE 5.2.2:

All pipes shall be laid on a Class B bedding, as specified in SABS 1200 LB.

Delete "Ogee type pipes need not be wrapped but shall be laid with the spigot ends pointing downstream".

PS LE 5.2.4 **Pipes With Open Joints Laid With Geofabric Filter Wrapping**

Substitute LE 5.2.4 with the following:

Pipes shall not be laid with open joints.

PS LE 5.4 **BACKFILLING OF PREFABRICATED CULVERT UNITS**

PS LE 5.4.2 **Portal And Rectangular Sections**

Add the following to LE 5.4.2:

Backfilling on the sides of portal and rectangular sections can, if indicated on the drawings and requested in writing by the Engineer, be done with a 1:3:6/38 mix concrete.

LE 5.5 **CATCHPITS, MANHOLES, INLETS, AND OUTLET STRUCTURES**

PS LE 5.5.1 General

Add the following to LE 5.5.1:

The following final cover levels will apply unless otherwise shown on the drawings:

- In streets and paved areas

: same level as paved area.

- On side walks, lawns and garden areas : 20 mm above the final ground level.
- In midblock sewers : 50 mm above ground level.
- In the veld : 100 mm above natural ground level.

PS LE 5.5.3 **Plaster**

Add the following to LE 5.5.3:

No plaster is required for manholes or inlets, except where otherwise shown on the drawings or ordered in writing by the Engineer.

PS LE 5.5.5 **Precast Manholes And PS LE 5.5.7 : Precast Inlet And Outlet Structures**

Substitute LE 5.5.5 and LE 5.5.7 with the following:

Manholes and inlet and outlet structures shall be constructed in accordance with the details as shown on the drawings.

LE 8 **MEASUREMENT AND PAYMENT**

LE 8.2 **SCHEDULED ITEMS**

PS LE 8.2.1 **Supply And Lay Concrete Pipe Culverts ..... Unit : m**

Add the following to LE 8.2.1:

The provisions of LE 8.2.1 shall apply mutatis mutandis to uPVC pipes.

PS LE 8.2.4 **Extra-over Items LE 8.2.1 And LE 8.2.2 For Cutting End Units For Culverts On Site ..... Unit : No**

Add the following to LE 8.2.4:

Payment shall be made only for skew cuts greater than 20° at manholes, kerb inlets and inlet and outlet structures.

PS LE 8.2.8 **Supply And Install Manholes, Catchpits, And The Like ..... Unit : No**

Substitute LE 8.2.8 with the following:

The unit of measurement shall be the number of each, in the depth increments as scheduled, fully installed in accordance with the details shown on the drawings.

The rate shall cover the cost of excavating and backfilling with approved selected material from site borrow pits, stockpile or commercial sources, compacted to 93 % of MAASHTO density (100 % for sand), supplying and installing of all material and accessories, the inlet kerbs and the channel adjacent thereto as well as for the removal and spoil of all surplus material. The rate shall also include the connection of pipes to manholes, catchpits, etc. and of building pipes into the walls of such structures, but not for the cutting of skewed ends.

PS LE 8.2.14 **Supply And Install Subsurface Drains According To Drawings ..... Unit : m**

The length shall be measured on the centre line of the completed subsurface drain.

The rate shall cover the cost of supplying, transporting, off-loading and installing all materials as well as for cutting, wasting, overlapping and installing of the materials where applicable.

PS LE 8.2.15 **Connecting Subsurface Drains To Manholes, Kerb Inlets, Etc ..... Unit : No**

The number is the number of subsurface drain pipes built in at manholes or kerb inlets.

The rate shall cover the cost of all labour, plant and materials necessary to connect the subsurface drain to manholes and/or kerb inlets, and making the structure watertight, all as shown on the drawings.

PS LE 8.2.16 **In Situ Concrete Invert Slabs For Portal Culverts ..... Unit : m**

The rate covers the supply, delivery and placement of all material as indicated on the drawing, including all required formwork, as well as the wood-floated finishing thereof.

PS LE 8.2.17 **Concrete Lined Channels ..... Unit : m**

Channels of different shapes and sizes will be scheduled separately.

The rate shall cover the cost of the supply, delivery and placing of all materials as specified on the drawings, including formwork, wood-floated finishing, steel reinforcement, weep-holes and filter materials wrapped in geotextile below and alongside the channels and compaction and preparation of the channel bed to 93 % of MAASHTO density, all as specified on the drawings.

PS LE 8.2.18 **Expansion Joints ..... Unit : m**

Expansion joints for the different channels will be scheduled separately. The length shall be measured on the surface of the completed expansion joints.

The item shall be extra-over PS LE 8.2.17 and the rate shall cover all costs of the construction of the joint, complete as specified on the drawings.

PS LE 8.2.19 **Rectangular Brick Channel ..... Unit : m**

The tendered rate shall cover the cost of the supply, handling and placing of all material, complete as indicated on the drawings, including the required formwork, casting of concrete invert slab, wood-floated finishing, brick walls, preparation and compaction of the channel bed to 93 % of MAASHTO density (100 % for sand).

The length shall be measured along the centre line of the channel.

PS LE 8.2.20 **Locking Devices For Manhole Covers ..... Unit : No**

The rate shall cover the cost of the supply of two 6 mm x 40 mm long stainless steel grub screws, the fitting thereof and the providing of two incisions on the frame all as specified in PS LD 3.5.9.

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PROJECT SPECIFICATION : PORTION 2

SABS 1200 M : ROADS (GENERAL)

M3 **MATERIAL**

PS M 3.2 **RESPONSIBILITY FOR LOCATION**

Add the following to M3.2:

The subbase and base layers of all streets shall be constructed with material from designated borrow areas. The Contractor is responsible for the selection of the material in the borrow areas and if the material in the paving layers do not comply with the minimum requirements it shall be removed and replaced with suitable material at the expense of the Contractor.

M 5 **CONSTRUCTION**

Add the following paragraph:

PS M 5.1 **SELECTION**

The Contractor shall deal selectively with material when existing streets are broken up in order that suitable material is not contaminated with unsuitable material. If suitable material is contaminated, the Contractor shall replace such contaminated material with suitable material, at his own expense.

M 6 **TOLERANCES**

PS M 6.3 **FREQUENCY OF CHECKS**

Add the following to M 6.3:

These checks shall be submitted to the Engineer for his approval.

M 7 **TESTING**

PS M 7.3 **ROUTINE INSPECTION AND TESTING**

Substitute M 7.3.3 with the following:

Statistical evaluation of test results shall not be applicable to this contract and all tests shall meet the specified minimum requirements for the specific material.

M 8 **MEASUREMENT AND PAYMENT**

Add the following to M 8.1:

The cost of all routine testing done by the Engineer, and of which the results do not comply with specified minimum requirements for the material, shall be borne by the Contractor.

These costs shall be deducted from the Contractor's monthly payment certificates.

PROJECT SPECIFICATION : PORTION 2

SABS 1200 ME : SUBBASE

ME 3 **MATERIALS**

ME 3.2 **PHYSICAL PROPERTIES**

PS ME 3.2.1 **Subbase Material**

Substitute ME 3.2.1 with the following:

a) Materials of G5 quality for use in the unstabilised subbase shall comply with the requirements of SABS 1200 M 3.3.3.

b) Materials of G7 quality for use in the unstabilised subbase shall comply with the requirements as specified in SABS 1200 M 3.3.3, except that the maximum aggregate size after compaction shall not exceed 63 mm.

PS ME 3.2.2 **Gravel Shoulder And Gravel Wearing Coarse Material**

Substitute ME 3.2.2 with the following:

The material used for gravel shoulders and/or gravel wearing course shall comply with the following requirements:

i) Maximum aggregate size after compaction ..... 37,5 mm

ii) Oversize index (Io) ..... nil

iii) Shrinkage product (Sp) 100-240

iv) Grading coefficient (Gc) 16-34

v) Minimum CBR at 95 % of MAASHTO of density 25

Where:

Oversize index (Io) is the mass of the material larger than 37,5 mm, expressed as a percentage of the total mass of material;

Shrinkage product (Sp) is the product of the linear shrinkage and the percentage smaller than 0,425 mm (expressed as a percentage of the material smaller than 37,5 mm) of the material;

and

Grading coefficient (Gc) is the product of the percentage of material smaller than 26,5 mm but larger than 2,0 mm and the percentage smaller than 4,75 mm (expressed as a percentage of the material smaller than 37,5 mm) divided by 100.

ME 3.3 **STABILISING AGENT**

PS ME 3.3.1 **General**

Substitute ME 3.3.1 with the following:

Where ionic stabilisation is required, the stabilising agent shall be approved by the Engineer, and the rate of application shall be 0,03 ℓ/m^2 for layer thickness of 150 mm and 0,02 ℓ/m^2 for layer thicknesses of 100 mm.

ME 5 **CONSTRUCTION**

ME 5.4 **PLACING AND COMPACTION**

PS ME 5.4.1 **Placing**

Substitute "the project specification" in the second paragraph of ME 5.4.1 with "ME 6.1.4".

PS ME 5.4.5 **Work In Restricted Areas**

No additional payment shall be made for work in restricted areas and any relevant costs shall be deemed to be included in the tendered rates.

ME 5.7 **TRANSPORT**

PS ME 5.7.1 **Free-haul**

Substitute ME 5.7.1 with the following:

An unlimited free-haul distance shall apply to subbase material.

ME 7 **TESTING**

ME 7.2 **PROCESS CONTROL AND ROUTINE INSPECTION AND TESTING**

PS ME 7.2.1 **Process Control**

Substitute "1 500 m^2" with "1 200 m^2" and "5 000 m^2" with "3 000 m^2" in Table 2 of ME 7.2.1.

PS ME 7.2.2 **Routine Inspection And Testing**

Substitute the second sentence of ME 7.2.2 with the following:

No density shall be less than the specified minimum density for the relevant layer.

ME 8 **MEASUREMENT AND PAYMENT**

PS ME 8.2 **COMPUTATION OF QUANTITIES**

Substitute ME 8.2 with the following:

Measurement and payment shall be to the exact dimensions as shown on the drawings.

ME 8.3 **SCHEDULED ITEMS**

PS ME 8.3.3 Construct subbase course/gravel wearing course with material from commercial source

Unit: m^3

Add the following to ME 8.3.3:

Rate to include PS A 7.1.1,PS A 7.1.2, PS A 7.2, PS A 7.4, PS M 7.3, PS M 8.3, PS ME 3.2.1, PS ME 5.4.1, PS ME 5.4.5, PS ME 5.7.1, PS ME 7.2.1, PS ME 7.2.2, PS ME 8.2 and all other relevant amendments in the project specifications.

PS ME 8.3.8 **Stabilising Agent**

Add the following subitem to ME 8.3.8:

g) Ionic stabilising agent ..... Unit : ℓ

The rate shall also cover the cost of application and mixing in of the stabilising agent.

PS ME 8.3.11 **Preparation of Road bed to a depth of 150 mm as subbase compacted to 95 % of MAASHTO density (100 % for sand) ..... Unit : m^3**

The rate covers the cost of crust breaking up to a minimum depth of 150 mm, watering, shaping, building and compaction of subbase, final scraping, compliance with the tolerances and testing.

PROJECT SPECIFICATION : PORTION 2

SABS 1200 MF : BASE

MF 3 **MATERIALS**

MF 3.3 **PHYSICAL AND CHEMICAL PROPERTIES**

PS MF 3.3.1 **Natural Gravel (Unstabilised or Stabilised)**

Substitute the requirements of MF 3.3.1 for unstabilised natural gravel with the following:

1) Natural gravel, of G4 quality which is placed in the base shall, after compaction, comply with the requirements of SABS 1200 M 3.3.3.

2) Natural gravel, of G5 quality which is placed in the base shall, after compaction, comply with the requirements of SABS 1200 M 3.3.3.

PS MF 3.3.2 **Graded Crushed Stone**

Substitute the requirements of MF 3.3.2 with the following:

Graded crushed stone placed in the base shall, after compaction, comply with the requirements for type G1 as specified in 3.3.3 in SABS 1200 M.

PS MF 3.3.3 **Graded Crushed Stone And Soil Fines**

Substitute the requirements of MF 3.3.3 with the following:

Graded crushed stone that is admixed with soil fines, placed in the base shall comply with the requirements for type G2 or G3 as specified in 3.3.3 in SABS 1200 M.

MF 5.4 **PLACING AND COMPACTION OF A BASE OTHER THAN A WATER BOUND MACADAM BASE**

PS MF 5.4.6 **Work In Restricted Areas**

No additional payment shall be made for work in restricted areas and any relevant costs shall be deemed to be included in the tendered rates.

MF 5.9 **TRANSPORT**

PS MF 5.9.1 **Free-haul**

Substitute M 5.9.1 with the following:

An unlimited free-haul distance shall apply to basecourse material.

MF 6 **TOLERANCES**

MF 6.1 **DIMENSIONS, LEVELS, ETC**

PS MF 6.1.2 **Grade**

Add the following to MF 6.1.2:

In addition to the above-mentioned requirements the surface shall be of such a grade that all surface water shall drain freely to the adjacent kerbs and/or channels, and all subsequent costs to rectify the surface to comply hereto shall be borne by the Contractor.

MF 7 **TESTING**

PSMF.3.2.2 Materials: Physical and Chemical Properties: Graded Crushed Stone (SANS 1200MF Cl 3.3.2)

Replace subclause (a) with the following:

"The maximum size of the crushed stone shall be 37.5mm"

Add the following subclause:

*"*d) The CBR at specified density shall be at least 80%"

PSMF.7.3.2 Testing: Routine Inspection and Testing (SANS 1200MF Cl 7.3.2)

Add the following:

"Notwithstanding subclause 7.3.2 and Table 4, no single test result which is below the specified density will be accepted."

PS MF 7.2 **PROCESS CONTROL**

Substitute "1 500 m^2" with "1 200 m^2", "1 500 m^3" with "1 200 m^3" and "5 000 m^2" with "3 000 m^2" in Table 3 of MF 7.2.

MF 7.3 **ROUTINE INSPECTION AND TESTING**

Substitute MF 7.3.2 with the following:

No density shall be less than the specified minimum density for the relevant layer.

MF 8 **MEASUREMENT AND PAYMENT**

PS MF 8.2 **COMPUTATION OF QUANTITIES**

Substitute MF 8.2 with the following:

PS ME 8.2 shall apply mutatis mutandis.

PROJECT SPECIFICATION : PORTION 2

SABS 1200 MG : BITUMINOUS SURFACE TREATMENT

MG 1 **SCOPE**

Add the following to MG 1.1(a):

13,2 mm aggregate plus grit.

MG 3 **MATERIALS**

PS MG 3.3 **BITUMINOUS BINDER FOR DOUBLE SURFACE TREATMENT**

Delete "Double" in the heading of MG 3.3.

Delete "first and second coats of a double" in the first line of MG 3.3.1.

PS MG 3.4 **BITUMINOUS BINDER FOR SLURRY SEAL**

Substitute clause MG 3.4 with the following:

A 60 % anionic stable-mix type bitumen emulsion complying with the applicable requirements of SABS 309, shall be used as a bituminous binder for slurry seal.

PS MG 3.6 **AGGREGATE**

Grade to be specified.

Grade 2 aggregate shall be used.

PS MG 3.7 **SAND FOR SLURRY SEAL**

Grade and type to be specified.

PS MG 3.10 **AGGREGATE FOR BLINDING**

Aggregate for the blinding of the primed surface, on instructions from the Engineer, shall be crushed aggregate of which 100 % by mass passes the 4,75 mm sieve and not more than 10 % by mass passes the 2,36 mm sieve and not more than 5 % by mass passes the 0,075 mm sieve. The aggregate shall be clean and hard and shall contain no dust, clay, loam or other deleterious material.

PS MG 3.11 **GRIT FOR 13,2 mm AGGREGATE PLUS GRIT**

The grit shall comply with the requirements of SABS 1200 ME 3.3.2 except for the grading which shall comply with the following:

SIZE OF SIEVE (mm)	PERCENTAGE PASSING SIEVE
4,75	100
2,36	0 - 100
1,18	0 - 50
0,60	0 - 20
0,30	0 - 10
0,15	0 - 5
0,075	0 - 2

PS MG 3.12 **MATERIAL FOR SEALING OF CRACKS**

i) **Primer**

The primer shall be a MC 30 cutback-bitumen conforming to SABS 308 diluted with 10 % mineral turpentine.

ii) **Emulsion**

60 % Anionic stable-grade bitumen emulsion shall be used.

iii) **Rubber pellets**

Rubber pellets used for crack sealing shall be obtained by processing rubber tyres. The rubber shall be granulated and free from fibres, steel wire and other impurities. The rubber pellets shall pass through a 2,0 mm sieve.

iv) **Weed killer**

The weed killer shall by Hyvar X or a similar non-selective weed killer.

MG 4 **PLANT AND EQUIPMENT**

PS MG 4.10 **PLANT FOR SEALING OF CRACKS**

Over and above the equipment normally used for surface treatments, the following additional equipment will be necessary for the sealing of cracks:

1) a vibratory roller having a mass approximately equal to that of a Bomag 905 or similar, with an adjustable amplitude and frequency of vibration;

2) a mobile pneumatic pump capable of producing at least 3 m^3/min at 750 kPa for blowing out cracks;

3) special spraying equipment with 2 mm nozzle openings and provided with reserve nozzles.

MG 5 **CONSTRUCTION**

MG 5.1 **GENERAL REQUIREMENTS**

PS MG 5.1.1 **Preparation Of Base**

Add the following to MG 5.1.1:

The application of the prime coat may only proceed after the written approval of the base by the Engineer and only if the moisture content of the upper 50 mm of the base is lower than 50 % of the optimum moisture content.

PS MG 5.1.5 **Weather Limitations**

Add the following to MG 5.1.5:

e) if the moisture content of the upper 50 mm of the base is more than 50 % of the optimum moisture content.

PS MG 5.2 **PRIME-COAT**

Substitute MG 5.2(c) with the following:

c) MC 30 cutback bitumen shall be applied;

Add the following to MG 5.2:

d) where the bituminous surface is not edged with kerbs, the prime-coat on each side shall be 150 mm wider than the specified width of the completed bituminous seal;

e) where the use of detours by the traffic is unpractical and if required in writing by the Engineer a prime-coat shall be applied and left to penetrate before the application of a blinding layer mineral aggregate at a rate of 0,0035 m^3/m^2. The mineral aggregate should not be applied to soon, and where practically possible a period of two to four hours must expire before the application. All cakes of aggregate which may appear shall be removed before the bituminous surface treatment commences.

MG 5.4 **DOUBLE SURFACE TREATMENT**

PS MG 5.4.1 **General**

Substitute "6,7 mm" with "6,7 mm or 13,2 mm and grit" respectively in MG 5.4.1.

PS MG 5.4.5 **Rolling Of Second Layer**

Substitute MG 5.4.5 with the following:

The provisions of MG 5.4.3 shall apply mutatis mutandis.

PS MG 5.4.6 **Fog Spray**

Substitute MG 5.4.6 with the following:

A fog spray, consisting of a mixture of equal parts of 60 % cationic spray-grade emulsion and water, shall be applied by a binder distributor at a nominal rate of 0,33 litre net bitumen per square metre.

MG 5.5 **BITUMINOUS SURFACE TREATMENT WITH AGGREGATE AND SLURRY SEAL**

PS MG 5.5.4 **Second Application Of Bituminous Binder, If Any**

Add the following to MG 5.5.4:

A second coat of bituminous binder shall be applied.

PS MG 5.5.5 **Preparation Of Surface For Slurry Seal**

Add the following after the first paragraph of MG 5.5.5:

Over and above the above-mentioned requirements, the slurry seal shall only be applied after a minimum period of four (4) days and a maximum period of four (4) weeks after the application of the second coat of bituminous binder.

PS MG 5.5.8 **Application Of Slurry Seal**

Substitute the first sentence of MG 5.5.8.2 with the following:

The slurry shall be applied in one layer in the case of 13,2 mm stone and in two layers in the case of 19,0 mm stone. The first application of slurry shall in all instances be done by hand distribution and only the second layer may be applied by means of a spreader box.

MG 5.8 **BITUMEN SURFACE TREATMENT WITH SINGLE LAYER THICK SLURRY SEAL**

PS MG 5.8.1 **Slurry Seal**

The slurry seal shall consist of aggregate of the correct grading for the slurry, 60 % cationic stable-mix bitumen emulsion, cement and water mixed as follows:

Thickness of slurry seal	5 - 8 mm	8 - 12 mm	12 - 15 mm
Aggregate grading	**Medium grading**	**Coarse grading**	**Extra coarse grading**
Dry aggregate (parts per mass)	100	100	100
Cement (parts per mass)	1,5	1,5	1,5
60 % stable grade emulsion (parts per mass)	14	12,5	11
Water (parts per mass)	12	12	12

PS MG 5.8.2 **Mixing Of Slurry Seal**

The provision of MG 5.5.7 shall apply mutatis mutandis.

PS MG 5.8.3 **Application of slurry seal**

Before application the surface shall be lightly sprinkled with water. Care shall be taken to avoid saturating the base and causing free water to appear on the surface.

The slurry shall be applied in one layer at a rate of application described below:

Grade of aggregate	**Rate of application m^3/m^2**
Medium grading	0,007
Coarse grading	0,010
Extra coarse grading	0,013

The rate of application of the slurry shall be measured in cubic metre dry aggregate per square metre of slurry.

Should breaking of the emulsion, segregation of the mix or formation of lumps during the application of the slurry occur, the operations shall be discontinued at once and any defective material removed from the road.

Any spillage of slurry and all excess slurry shall be neatly removed and disposed of. Any damage to the slurry seal caused by rain or traffic before the slurry has cured, shall be rectified by the Contractor at his own expense.

PS MG 5.8.4 **Rolling**

Rolling shall be carried out after the slurry has set sufficiently. The roller wheels shall be kept wet to prevent the slurry from adhering to the wheels.

PS MG 5.8.5 **Correction for bulking**

The provisions of MG 5.5.9 shall apply mutatis mutandis.

PS MG 5.9 **SEALING OF CRACKS**

The cracks to be treated will be indicated by the Engineer on site. The Engineer will instruct the contractor regarding the treatment to be used in the various cases.

The cracks shall be blown clean with compressed air, and all foreign and loose matter shall be removed from the cracks.

A non-selective weed killer shall be sprayed into the cracks if so instructed, at a rate as prescribed by the manufacturer and by means of rucksack type of sprayers, and allowed to dry.

Twenty-four hours after application of the weed killer, the cracks shall be penetrated with a primer.

(a) **Cracks less than 5 mm wide**

After the primer has been applied, anionic stable-grade emulsion shall be mixed with synthetic modifiers, as specified in PS MG 3.12(ii) and applied by means of pneumatic spray cans or other approved equipment to achieve a total sealing of the cracks or at a rate ordered by the Engineer.

Where the cracks are to be rolled, the Contractor shall treat the cracks in one of the following two manners before rolling:

(i) the surface shall be heated in an approved manner along the full length of the crack and over a width of 250 mm on each side of the crack and then rolled with approved rollers until an even surface has been obtained;

(ii) a solution of one part of RC-250 and two parts of diesel oil shall be applied by paint roller over the crack at a rate determined by the Engineer. The adjacent surfaces or the crack itself may not be overfilled with the material. Twenty-four hours after treatment of the crack, it shall be rolled with approved rollers until an even surface is obtained.

(b) **Cracks of 5 mm and wider**

Depending on the instructions of the Engineer, the cracks shall be treated with cold rubber slurry, hot bitumen-rubber, or any other approved sealant.

Where, in the opinion of the Engineer, the cracks are too wide for this type of treatment, the Contractor shall treat the cracks in accordance with the instructions of the Engineer.

(i) **Rubber slurry**

The rubber slurry mixture shall be proportioned as follows (by volume):

10,0 parts of rubber pellets

4,5 parts of stable-grade emulsion

0,3 parts of synthetic modifiers

0,2 parts of cement.

Water may be added to improve workability. The mixture shall be neatly worked into the cracks by rubber squeegees. Excess slurry shall be removed from the surface as soon as the emulsion has broken.

(ii) **Bitumen-rubber**

Bitumen-rubber may be used only where the Contractor is able to convince the Engineer that he is able to mix, heat and apply the material satisfactorily.

The bitumen-rubber shall be mixed on the site or at another approved locality on condition that the contractor is able to propose efficacious methods for controlling both the mixing process and the end product.

Approved heating equipment and mechanical equipment for mixing and applying the mixture shall be used.

The rubber content of the mix shall be at least 30 % by mass of the total bitumen-rubber mix. The minimum ring and ball softening point of the mixture shall be 65° C when sampled 5 minutes before application.

(c) **Restrictions**

Cracks may be sealed only where the temperature of the road surface exceeds 10°C. Crack sealing may not be done within three (3) days after rain has fallen on the site, unless otherwise instructed by the engineer.

The Contractor shall note that a single application of crack sealant is usually insufficient and that the application will have to be repeated.

MG 7 **TESTING**

PS MG 7.1 **INITIAL TESTING**

Add the following to MG 7.1:

The Contractor is solely responsible for the testing and all costs arising therefrom, to prove that the proposed aggregate complies with the requirements of SABS 1083. The cost of testing of **approved** materials to determine application rates shall not be borne by the Contractor.

MG 8 **MEASUREMENT AND PAYMENT**

MG 8.1 **RATES OF APPLICATION**

PS MG 8.1.2 **Prime Coat**

Substitute "0,7 ℓ/m^2" in MG 8.1.2 with "0,8 ℓ/m^2".

PS MG 8.1.4 **Double Surface Treatment**

Amend Tables 4 and 5 of MG 8.1.4 as follows:

Table 4 : substitute 0,82 ℓ/m^2 with 0,85 ℓ/m^2

Table 5 : substitute 0,98 ℓ/m^2 with 0,85 ℓ/m^2

Add the following to Table 5:

1	2	3
NOMINAL SIZE OF AGGREGATE	**NOMINAL RATE OF APPLICATION**	
	SECOND COAT OF BITUMEN OR TAR (ℓ/m^2)	**AGGREGATE (m^3/m^2)**
Grit	0,6	0,005

PS MG 8.1.5 **Bituminous Surface Treatment With Aggregate And Slurry Seal**

a) Amend Table 6 of MG 8.1.5 as follows:

1	2	3
NOMINAL SIZE OF AGGREGATE	**NOMINAL RATE OF APPLICATION**	
	NET BINDER (ℓ /m²)	**AGGREGATE (m³/m²)**
13,2	0,85	0,009
19,0	1,50	0,013

b) Substitute MG 8.1.5(b) with the following:

The second application of bituminous binder shall consist of a mixture of equal parts of 60 % cationic spray-grade emulsion and water applied at a rate of 0,33 litres net bitumen per m^2.

PS MG 8.1.6 **Single Coat Thick Slurry**

The rate of application shall be 0,010 m^3/m.

MG 8.4 **SCHEDULED ITEMS**

PS MG 8.4.3 **Double Surface Treatment Using**

Add the following to MG 8.4.3:

c) 13,2 mm aggregate and grit (Types of binder are shown) ..... Unit : m^2

PS MG 8.4.10 **Fog Spray (In Double Surface Treatment) Consisting Of ..... Unit : ℓ**

Substitute "(in double surface treatment)" with "(in double surface treatment or aggregate with slurry)".

Substitute the last sentence in MG 8.4.10 with the following:

The rate shall cover the cost of the supply of the bonding agent and water, mixing thereof and the application of the fog spray.

PS MG 8.4.14 **Blinding Layer ..... Unit : m^2**

The rate shall cover the cost of supplying and applying the aggregate at positions as ordered by the Engineer, as well as for the later removal thereof if necessary. No payment shall be made for areas where a blinding layer has to be applied as a result of excess application of the prime coat.

PS MG 8.4.15 **Single Coat Thick Slurry ..... Unit : m^2**

The rate shall cover the cost of all material and labour to apply the slurry as well as the preparation of the layer, protection of the kerbs and rolling where necessary.

PS MG 8.4.16 **Cleaning The Cracks With Compressed Air ..... Unit : metre (m)**

The unit of measurement for cleaning the cracks with compressed air shall be the metre of cracks which have been blown clean.

The tendered rate shall include full compensation for providing all equipment, labour, supervision and incidentals for blowing clean the cracks over the full width of the road to the satisfaction of the Engineer.

PS MG 8.4.17 **Applying Bituminous Binders And Weed Killer For Sealing Cracks**

(a) Weed killer ..... Unit : itre (ℓ)

(b) MC 30 cutback-bitumen, diluted with 10 % mineral turpentine ..... Unit : litre (ℓ)

(c) 60 % Anionic stable-grade emulsion mixed with synthetic modifiers ..... Unit : litre (ℓ)

(d) Hot bitumen-rubber ..... Unit : litre (ℓ)

(e) One part of RC-250 plus two parts of diesel oil ..... Unit : litre (ℓ)

The unit of measurement shall be the litre of material applied as specified or as instructed by the Engineer.

The tendered rates shall include full compensation for providing, mixing, heating (where required) and applying all the materials as specified, and for all equipment, labour, supervision and incidentals for completing the work. No additional payment will be made for multiple application of material, and payment will not distinguish between the various types, widths or lengths of cracks.

PS MG 8.4.18 **Cold Rubber Slurry Mix For Sealing Cracks ..... Unit : cubic metre (m^3)**

The unit of measurement for crack treatment with rubber slurry shall be the cubic metre of fine rubber crumbs used for preparing the mix.

The tendered rate shall include full compensation for procuring and providing all the material, including emulsion, synthetic modifiers, cement and water, and for mixing and applying the mixture, and for all equipment, labour, supervision and incidentals for executing the work in accordance with the specifications.

Payment will not be made for redundant rubber pellets or redundant mixture or for mixture which, in the opinion of the Engineer, had been wasted.

PS MG 8.4.19 **Rolling The Cracks ..... Unit : metre (m)**

The unit of measurement shall be the metre of crack rolled to the satisfaction of the Engineer.

The tendered rate shall include full compensation for all supervision, labour, plant, equipment, fuel, materials and incidentals necessary for completing the work.

PS MG 8.4.20 **Extra Over Items 8.4.1, 8.4.3, 8.4.4, 8.4.5, 8.4.6, 8.4.8, 8.4.9, 8.4.10, 8.4.12, And 8.4.13, For The Provision Of Bitumen Complying With SABS 307 ..... Unit : ℓ (Type and grade to be specified)**

The unit shall be the litre of bitumen used in the surfacing complying with the requirements of SABS 307. Compensation will only be paid when the local refinery - Cape Town is unable to supply bitumen to SABS 307 and it is ordered by die Engineer that bitumen be supplied from the alternative source.

The rate will be an extra over the items and must include all additional costs to construct the surfacing produced with bitumen which complies to the requirements of SABS 307.

PROJECT SPECIFICATION : PORTION 2

SABS 1200 MH : ASPHALT BASE AND SURFACING

MH 3 **MATERIAL**

PS MH 3.1 **PRIME**

Substitute MH 3.1 with the following:

The prime shall be MC 30 cutback bitumen complying with the applicable requirements of SABS 308.

PS MH 3.3 **TACK COAT**

Substitute MH 3.3 with the following:

The tack coat shall be a 60 % stable-grade bitumen emulsion diluted with water at a 1:1 ratio.

MH 3.4 **BITUMINOUS BINDER**

PS MH 3.4.2 **Surfacing**

Substitute MH 3.4.2 with the following:

The bituminous binder shall consist of 60/70 penetration-grade bitumen complying with the requirements of SABS 307.

MH 3.5 **AGGREGATES**

PS MH 3.5.1 **General**

Add the following:

Single-sized crushed aggregates used for asphalt shall comply with the requirements for grade 2.

PS MH 3.5.5 **Sand Equivalent Value**

Substitute "30" with "35" in MH 3.5.5.

MH 5 **CONSTRUCTION**

PS MH 5.1 **GENERAL REQUIREMENTS**

PS MH 5.1.1 **Preparation Of Surface**

Add the following to MH 5.1.1:

The application of the prime-coat may only proceed after the written approval of the base by the Engineer and only if the moisture content of the upper 50 mm of the base is lower than 50 % of the optimum moisture content.

PS MH 5.1.5 **Weather Limitations**

Add the following to MH 5.1.5:

d) if the moisture content of the upper 50 mm of the base is more than 50 % of the optimum moisture content.

MH 5.5 **DESIGN OF ASPHALT**

PS MH 5.5.2 **Marshall Criteria**

Amend Table 6 of MH 5.5.2 as follows:

PROPERTY	CONTINUOUSLY GRADED		GAP-GRADED OR SEMI-GAP-GRADED	
	MINIMUM	MAXIMUM	MINIMUM	MAXIMUM
Stability, Kn	4,0	12,5	3,0	12,5
Air voids, %	3,0	5,0	2,0	6,0

The rest of the values remain the same.

PS MH 5.11 **CONSTRUCTION OF TRIAL SECTION**

Before the Contractor commences the construction of asphalt surfacing, he shall if so ordered, demonstrate, by laying a trial section 200 m^2 in area, that the equipment and processes that he proposes to use will enable him to construct the asphalt layer in accordance with the specified requirements.

Only when such a trial section has been satisfactorily laid and finished, and is found to comply with the specified requirements, will the Contractor be allowed to commence with construction of the permanent work.

Should the Contractor make any alteration in the methods, processes, equipment, or materials used, or should the work consistently fail to comply with the applicable requirements of the specifications, the Engineer may require that further trial sections be laid and tested at the cost of the Contractor before allowing the Contractor to continue with the permanent work.

Trial sections shall be laid where indicated by the Engineer. The Contractor shall prepare the surface on which a trial section is to be laid and shall also, if the work fails to comply with the applicable requirements of the specification, remove the trial section after completion and acceptably restore the surface on which it was constructed, all at his own cost.

MH 6 **TOLERANCES**

MH 6.3 **DIMENSIONS, LEVELS, ETC.**

PS MH 6.3.6 **Smoothness**

Add the following to MH 6.3.6:

The appropriate degree of accuracy under this contract shall be degree II.

In addition to the above-mentioned requirements the surface shall be of such a grade that all surface water shall drain freely to the adjacent kerbs and/or channels and subsequent costs to rectify the surface to comply herewith shall be borne by the Contractor.

MH 7 **TESTING**

PS MH 7.1 **MIX DESIGN**

Add the following to MH 7.1:

The proposed mixture design shall be submitted for approval to the Engineer at least two (2) weeks fourteen (14) days before commencement of the construction of asphalt surfacing. The Contractor shall ensure that the samples, on which the mixture is based, are a true representation of the actual materials to be used for the work.

MH 8 **MEASUREMENT AND PAYMENT**

PS MH 8.1 **RATES OF APPLICATION AND BITUMINOUS BINDER CONTENT**

PS MH 8.1.5 **Bituminous Binder Content**

Amend MH 8.1.5(b)(I) as follows:

(b) Surfacing 1) Continuously graded 5,5 %

PS MH 8.4 **COMPUTATION OF QUANTITIES**

Substitute the first sentence of MH 8.4.2 with the following:

Asphalt is measured and paid for according to the exact dimensions (width and thickness) as indicated on the drawings.

Delete the last paragraph of MH 8.4.2.

MH 8.5 **SCHEDULED ITEMS**

PS MH 8.5.9 **Construction Of Trial Section ..... Unit : m^2**

The tendered rate shall include full compensation for the construction of the trial section of asphalt surfacing as specified in PS MH 5.11 and in accordance with the relevant requirements of the specifications as well as for subsequent removal of the trial section if ordered.

PS MH 8.5.10 **Extra Over Items 8.5.4 And 8.5.5 For The Provision Of Bitumen Complying With SABS 307 (Type And Grade To Be Specified) .... Unit : ℓ**

The unit shall be the litre of bitumen used in the surfacing complying with the requirements of SABS 307. Compensation will only be paid when the local refinery, Cape Town, is unable to supply bitumen to SABS 307 and it is ordered by the Engineer that bitumen be supplied from the alternative source.

The rate will be an extra over the items and must include all additional costs to supply asphalt produced with bitumen which complies to the requirements of SABS 307.

PROJECT SPECIFICATION : PORTION 2

SABS 1200 MJ : SEGMENTED PAVING

MJ 3 **MATERIAL**

MJ 3.1 **UNITS**

PS MJ 3.1.2 **Class, Strength And Type**

Add the following to MJ 3.1.2:

All paved parking areas shall be constructed of 60 mm thick Type S-A class 25 precast concrete blocks (interlocking type). Footpaths shall consist of 60 mm thick Type S-C class 25 precast rectangular concrete blocks. A "Terracotta" colour shall be used.

MJ 5 **CONSTRUCTION**

MJ 5.1 **PREPARATION**

PS MJ 5.1.2.3 **Stabilised subbase**

Add the following to MJ 5.1.2.3:

The subbase for the parking area shall be stabilised.

PS MJ 5.7 **JOINT FILLING**

Joint filling shall be done with a 1:3 cement-sand mix.

MJ 6 **TOLERANCES**

PS MJ 6.2 **PERMISSIBLE DEVIATIONS**

Add the following to MJ 6.2:

The degree of accuracy shall be degree I.

The degree of accuracy shall be degree I.

MJ 7 **TESTING**

PS MJ7.1.1 **TESTING: GENERAL: CHECKING**

Add the following to MJ7.1.1:

A SANS accredited laboratory must be used for conducting tensile splitting tests on the materials that will be used in construction. Testing on batches will be as instructed by the Engineer.

PS MJ 7.4.2 OTHER TEST

PS MJ 7.4.2 OTHER TEST

Replace 7.4.2 with the following:

Blocks shall be subject to such tests as are described in SANS 1058:2012 and/or in the latest (on the date of tender closing) "*Concrete Block Paving Specification and Installation"* published by the Concrete Manufacturing Association. The frequency of the tests will be 10 samples per each day of delivery or 10 samples every 500m². Samples must be taken from the roadways and will be identified by the Engineer and will be tested by an independent and SANS accredited lab. The onus is placed on the Contractor to ensure that sufficient control testing is done and is deemed included in the rate tendered.

MJ 8 **MEASUREMENT AND PAYMENT**

MJ 8.2 **SCHEDULED ITEMS**

PS MJ 8.2.2 **Construction Of Paving Complete ..... Unit : m^3**

Add the following to MJ 8.2.2:

The rate shall also cover the cost of the cement-sand mix as specified in PS MJ 5.7.

PS MJ 8.2.6 **Placement Of Pavers In Stead Of Painted Lines ..... Unit : m**

If required by the Engineer, parking bays and other painted markings on the parking area shall be indicated with tan-coloured paving blocks.

The rate shall cover the cost of all material, labour and equipment for the placing of such blocks.

PROJECT SPECIFICATION : PORTION 2

SABS 1200 MK : KERBING AND CHANNELLING

MK 3 **MATERIALS**

MK 3.2 **PRECAST KERBING AND CHANNELLING**

PS MK 3.2.3 **Strength**

Substitute MK 3.2.3 with the following:

Precast kerbs, edging and channels shall be of grade 20 MPa/19 mm concrete.

PS MK 3.9 **BEDDING MATERIAL**

Substitute MK 3.9 with the following:

The material on which concrete kerbs, channels and edging are bedded, shall be in accordance with the dimensions shown on the drawings and shall consist of a 1:3:6 concrete mix with a 6,7 mm single size coarse aggregate.

MK 5 **CONSTRUCTION**

PS MK 5.1 **EXCAVATION AND BEDDING**

Substitute "90 %" in MK 5.1 with "93 % (100 % for sand)".

PS MK 5.2 **PRECAST CONCRETE KERBING AND CHANNELLING**

Substitute the first sentence of MK 5.2 with the following:

Precast concrete kerbing and channelling shall be laid and bedded on a concrete bedding complying with the requirements of PS MK 3.9 and to the dimensions shown on the drawings.

PS MK 5.11 **TRANSITION SECTIONS AND INLET AND OUTLET STRUCTURES**

Substitute the first sentence of the second paragraph of MK 5.11 with the following:

Inlet and outlet structures shall be in accordance with the details shown on the drawings.

MK 8 **MEASUREMENT AND PAYMENT**

PS MK 8.1 **BASIC PRINCIPLES**

Substitute the second sentence of MK 8.1.1 with the following:

Deductions will be made for catchpits, etc.

Add the following to MK 8.1.1:

Payment shall include the provision of expansion joints as specified.

MK 8.2 **SCHEDULED ITEMS**

PS MK 8.2.1 **Concrete kerbing..... Unit: m**

The rate shall include provision for expansion joints every 10m interval, neatly corked with polystyrene and sealed off to the approval of the engineer.

Rate will be include PS MK 3.2.3, PS MK 3.9, PS MK 5.2 and all other relevant amendments in the project specifications.

PS MK 8.2.2 **Concrete kerbing and channelling combined ..... Unit: m**

The rate shall include provision for expansion joints every 10m interval, neatly corked with polystyrene and sealed off to the approval of the engineer.

Rate will be include PS MK 3.2.3, PS MK 3.9, PS MK 5.2 and all other relevant amendments in the project specifications.

PS MK 8.2.15 **Street Name and Transition Kerbs ..... Unit: No**

The provisions of MK 8.2.1(b) shall apply mutatis mutandis.

Rate will be based on all relevant amendments in the project specifications.

PROJECT SPECIFICATION : PORTION 2

SABS 1200 MM : ANCILLARY ROADWORKS

MM 3 **MATERIALS**

MM 3.2 **ROAD SIGNS**

PS MM 3.2.1 **General**

Add the following to MM 3.2.1:

All road signs and road markings shall be in accordance with the SA Road Traffic Signs Manual and as shown on the drawings.

No special breakaway devices are required.

PS MM 3.2.2 **Structural Steel**

Substitute the second paragraph of MM 3.2.2 with the following:

All structural steel, including steel tubes, shall have a hot-dip (galvanised) zinc coating that complies with the requirements of SABS 763 for coatings of type A1 or B1 articles, as applicable.

MM 5 **CONSTRUCTION**

MM 5.2 **ROAD SIGNS**

PS MM 5.2.1.1 **Supports**

All the supports for signboards shall be galvanised supports. Confirm with the engineer and the local authorities before any materials is purchased and delivered to site

PS MM 5.2.1.6 **Galvanising**

Substitute the second paragraph of MM 5.2.1.6 with the following:

Galvanised mild steel supports for road signs shall be painted in accordance with PS MM 5.2.2.4.

MM 5.2.2 **Painting**

PS MM 5.2.2.4 **Painting of structural steelwork**

The provisions of MM 5.2.2.4 shall apply mutatis mutandis to the painting of galvanised surfaces, except for the following:

a) **Surface preparation**

Galvanised surfaces shall be thoroughly scrubbed down using an approved galvanised iron cleaning agent to remove all traces of the resin protective coating.

The surface shall be washed down and scrubbed to remove all traces of grease, oil, dirt, etc;

b) **Priming**

Two coats of calcium plumbate primer shall be applied to a dry film thickness of at least 25 microns. The undercoat shall follow within one week after the priming.

d) **Finishing coat**

The colour of the finishing coat shall be dark grey, as specified in MM 3.2.8.2.

PS MM 5.3.2 **Surface Preparation**

Substitute "48 h" in MM 5.3.2 with "7 days (168 h)".

MM 8 **MEASUREMENT AND PAYMENT**

PS MM 8.3.1 **Sign Faces With Painted Background And Symbols ..... Unit : m^2**

Add the following to MM 8.3.1:

No additional payment shall be made for the aluminium extrusions for road signs and all relevant costs shall be deemed to be covered by the tendered rates for such road signs.

PS MM 8.3.8 **a) Removal And Re-erection Of Traffic Lights By Employer .....Unit : Sum Stated**

b) Overheads, cost and profit on (a) above ..... Unit : % = R

The rate for PS MM 8.3.8(b) includes the cost of all arrangements concerning the removal of the traffic lights, control of traffic and re-erection of the traffic lights.

PS MM 8.3.9 **Sign faces of 1.4mm thick chromadek steel plate including pedestal ..... Unit.: No**

Add the following to MM 8.3.8:

Rate will be based on all relevant amendments in the project specifications.

MM 8.4 **SCHEDULED ITEMS FOR ROAD MARKINGS**

PS MM 8.4.1 **Non-reflectorised Paint Applied At Nominal Rate Of 0,42 ℓ/m^2 ..... Unit : km or m^2**

Add the following to MH 8.4.1:

Markings for parking bays shall be measured and paid for as "characters and symbols".

No additional measurement and payment shall be made for "(e) Traffic island markings" and payment shall be made under the appropriate rates of payment item MM 8.4.1.

PS MM 8.4.4 **Setting Out And Premarking ..... Unit : km, Sum or No**

Add the following to MM 8.4.4:

No additional payment shall be made for the premarking and/or dotting of lines or special markings and all relevant costs are deemed as covered by the tendered rates for MM 8.4.1.

PROJECT SPECIFICATION : PORTION 2

PARTICULAR SPECIFICATION PA : FENCING

PA 3 **MATERIALS**

PS PA 3.1 **POST, STAYS, STANDARDS AND DROPPERS**

Add the following to PA 3.1:

Precast concrete posts shall be used.

PS PA 3.2 **BOLTS FOR STAYS**

Add the following to PA 3.2:

All bolts, nuts and washers shall be manufactured of galvanised steel.

PS PA 3.3 **WIRE**

Add the following to PA 3.3:

All wire used shall be galvanised.

PS PA 3.4 **DIAMOND MESH**

Add the following to PA 3.4:

Only galvanised diamond mesh shall be used.

PS PA 3.6 **GATES**

Add the following to PA 3.6:

All gates shall be galvanised double gates as specified on drawing STA/A-04.

PS 8 **MEASUREMENT AND PAYMENT**

PS PA 8.1.1 **Clearing Fence Line ..... Unit : kilometre (km)**

Add the following to PA 8.1.1:

The rate for clearing of the fence line must take into account that the site is uneven and must allow for the filling and levelling of the site to ensure that the fence is not more than 50 mm above ground level.

LANGEBERG MUNICIPALITY

TENDER 20/2025

REFURBISHMENT OF VARIOUS ROADS AND STORMWATER IN LANGEBERG MUNICIPALITY; FOR A PERIOD OF THREE (3) YEARS

C3.5 **Management**

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3.5.1. FORMS FOR CONTRACT ADMINISTRATION
3.5.2. HEALTH AND SAFETY

3.5.1. FORMS FOR CONTRACT ADMINISTRATION

The Contractor shall complete, sign and submit with each monthly statement for payment, the following updated returns (the format of which are attached in C3.6 Annexes as amended from time to time):

a) Monthly Project Labour Report (Annex 1)
b) B-BBEE Sub-contract Expenditure Report (Annex 2)
c) Joint Venture Expenditure Report (Annex 3)

The Monthly Project Labour Report must include details of all labour (including that of sub-contractors) that are South African citizens earning less than **R350.00** per day, as adjusted from time to time (excluding any benefits), who are employed on a temporary or contract basis on this contract in the month in question.

In addition to the Monthly Project Labour Report the Contractor shall simultaneously furnish the Employer's Agent with copies of the signed employment contracts entered into with such labour, together with certified copies of identification documents, proof of attendance in the form of attendance register or timesheets as well as evidence of payments to such labour in the form of copies of payslips or payroll runs. If the worker is paid in cash or by cheque, this information must be recorded on the envelope and the worker must acknowledge receipt of payment by signing for it and proof of such acknowledgement shall be furnished to the Employer's Agent.

The Monthly Project Labour Reports shall be completed and submitted in accordance with the instructions therein and copies of all submitted documents must be kept on site be made available to the employer's agent upon request.

The **B-BBEE Sub-contract Expenditure Report** is required for monitoring the prime contactor's compliance with the sub-contracting conditions of the **Preference Schedule**.

The Joint Venture Expenditure Report is required for monitoring the joint venture's compliance with the percentage contributions of the JV partners as tendered, where the joint venture has been awarded preference points in respect of its consolidated B-BBEE scorecard.

The Expenditure Reports shall be verified by the Employer's Agent/Employer's Agent's Representative.

In respect of Annexes 2 and 3, the Employer shall, in addition to any other sanctions available to it, apply the financial penalties applicable to breach of preferencing conditions in the **Preference Schedule** Preference Schedule in Part T2.2 Returnable Schedules. In the case of joint ventures (Annex 3), the contractor shall prove his compliance with item 6 in Section 2 of the Preference Schedule by providing a consolidated scorecard at his own cost on instruction from the Employer's Agent.

3.5.2. HEALTH AND SAFETY

Particular Specification C6: Health and Safety Specification is attached hereto.

LANGEBERG MUNICIPALITY

TENDER 20/2025

REFURBISHMENT OF VARIOUS ROADS AND STORMWATER IN LANGEBERG MUNICIPALITY; FOR A PERIOD OF THREE (3) YEARS

Part C4: **Site Information**

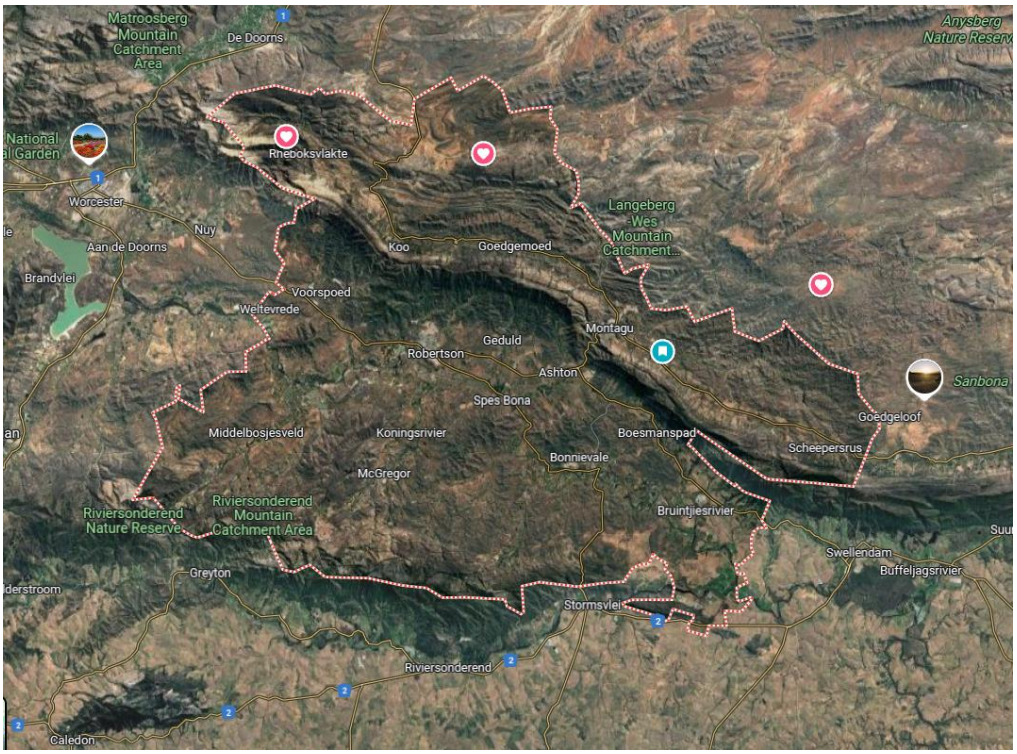
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LANGEBERG MUNICIPALITY

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REFURBISHMENT OF VARIOUS ROADS AND STORMWATER IN LANGEBERG MUNICIPALITY; FOR A PERIOD OF THREE (3) YEARS

SITE



LOCALITY PLAN 01

The coordinates below can be used for directions to the sites.

Robertson, Langeberg
-33.81463778576174, 19.896504410119586

LANGEBERG MUNICIPALITY

TENDER 20/2025

REFURBISHMENT OF VARIOUS ROADS AND STORMWATER IN LANGEBERG MUNICIPALITY; FOR A PERIOD OF THREE (3) YEARS

Part C5: **Langeberg Municipality Supply Chain Policy**

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(The Supply Chain Policy can be obtained from https://www.langeberg.gov.za)

LANGEBERG MUNICIPALITY

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H: HEALTH AND SAFETY SPECIFICATION

For use with the General Conditions of Contract for Construction Works, Third Edition, 2015.

H1 DEFINITIONS

For the purposes of this Specification, the definitions given in the Occupational Health and Safety Act, 85 of 1993 and the Construction Regulations, 2014, and the following definitions, shall apply:

a) "Construction Regulations, 2014" means the Construction Regulations (GNR. 84 of 7 February 2014) published in terms of the OHS Act.
b) "Contractor" means the Principal Contractor as defined in the Construction Regulations, 2014.
c) "Employer" means the Client or his agent as defined in the Construction Regulations, 2014.
d) "Employer's Agent" means the person/firm so named in the Contract Data whose function is to administer the Contract as agent of the Employer, acting through, if appointed, a Health and Safety Agent.
e) "OHS Act" means the Occupational Health and Safety Act, 85 of 1993.
f) "subcontractor" means any contractor employed by the Contractor to perform construction work.

H2 SCOPE

In terms of the OHS Act and the Construction Regulations, 2014 the Employer must provide the Contractor with a Health and Safety Specification, to which the Contractor must respond with a Health and Safety Plan for approval by the Employer.

The purpose of this Specification is to ensure that a contractor entering into a contract with the Employer maintains an acceptable level of compliance with regard to health and safety issues during the performance of the Contract. In this regard the Health and Safety Specification forms an integral part of the Contract and the Contractor shall ensure that his subcontractors and/or suppliers comply with the requirements of this Specification.

H3 INTERPRETATION

The OHS Act and its associated regulations shall have precedence in the interpretation of any ambiguity or inconsistency between it and this Specification.

Responsibility for health and safety relating to the Works lies with the Contractor as described in this Specification. Nothing stated in or omitted from this Specification shall in any way limit the Contractor's obligations and liabilities in terms of the OHS Act.

H4 GENERAL REQUIREMENTS

The Contractor shall:

a) create and maintain a safe and healthy work environment;
b) execute the Works in a manner that complies with all the requirements of the OHS Act and all its associated regulations, and in so doing, minimize the risk of incidents occurring; and
c) respond to the instructions issued by the Employer's Agent through the Employer's Agent's Representative, except in the case of a health and safety issue which requires the Contractor's immediate attention, in which case the Employer's Health and Safety Agent can issue an instruction directly to the Contractor.

H5 ADMINISTRATION

H5.1 Application for construction work permit

In terms of Regulation 3 of the Construction Regulations, 2014, read together with the exemptions published by the Department of Labour in Government Notice dated 7 July 2015, a client who intends to have construction work carried out, must at least thirty days before that work is to be carried out apply to the Provincial Director in writing for a construction work permit to perform construction work if the works contract is of a value exceeding one hundred and thirty million Rand (R130 000 000) or Construction Industry Development Board (CIDB) grading level 9. In such cases, the Employer's Agent will not issue an instruction to commence executing the Works, and the Contractor will not be permitted to commence with Works execution, until such time as the required construction work permit has been issued by the Provincial Director.

The employer will apply for the construction work permit as soon as possible after its Bid Adjudication Committee has awarded the contract based on the draft Health and Safety Plan submitted. Should the issuing of a construction work permit be delayed by the submission of a draft Health and Safety Plan which, in the opinion of either the Employer's Health and Safety Agent, or the Provincial Director of the Department of Labour, is unacceptable, no claim for an extension of time will be entertained.

The issuing of a construction work permit by the Department of Labour shall in no way nullify the requirement to submit a Health and Safety Plan to the Employer's Health and Safety Agent for discussion and approval (in terms of Clause H8.3 of this specification) before commencement with Works execution.

H5.2 Notification of intention to commence construction work

The Contractor shall notify the Provincial Director of the Department of Labour in writing using the pro forma contained in Annexure 2 of the Construction Regulations, 2014 before construction work commences, and retain a copy of such notification in the health and safety file, if such work will:

a) include excavation work;
b) include working at a height where there is a risk of falling;
c) include the demolition of a structure; or
d) include the use of explosives to perform construction work.

The Contractor shall ensure that no work commences on an electrical installation which requires a new supply or an increase in electricity supply before the person who supplies or contracts or agrees to supply electricity to that electrical installation has been notified of such work.

The Contractor shall ensure that no asbestos work is carried out before the Provincial Director of the Department of Labour has been notified in writing.

H5.3 Occupational Health and Safety Agreement

The Contractor shall enter into an Agreement with the Employer before the commencement of the Works on Site.

H5.4 Good standing with the Compensation Fund or a licensed compensation insurer

The Contractor shall provide the Employer's Agent with a letter of good standing from the Compensation Commissioner or a licensed compensation insurer before the commencement of the Works on Site.

H5.5 Emergency procedures

The Contractor shall submit for acceptance to the Employer's Agent a health and safety emergency procedure, which includes but is not limited to fire, spills, accidents and exposure to hazardous substances, which:

a) identifies the key personnel who are to be notified of any emergency;
b) sets out details of available emergency services, including contact particulars; and
c) the actions or steps which are to be taken during an emergency.

The Contractor shall within 24 hours of an emergency taking place notify the Employer's Agent in writing of the emergency and briefly outline what happened and how it was dealt with.

H5.6 Health and safety file

The Contractor shall ensure that a Health and Safety file, which shall include all documentation required in terms of the provisions of the OHS Act, the Construction Regulations, 2014 and this Health and Safety Specification, is open and kept on Site at all times.

The Health and Safety file shall be made available for inspection by any inspector, subcontractor, the Employer, the Employer's Agent, the Employer's Health and Safety Agent, or employee of the Contractor, upon the request of such persons.

The Contractor shall hand over the Health and Safety file to the Employer's Agent upon Works completion of the Contract and, if applicable, a certificate of compliance accompanied by a test report for the electrical installation in accordance with the provisions of the Electrical Installation Regulations, 1992.

H5.7 Health and safety committee

Where applicable, the Contractor shall establish a health and safety committee, and shall convene health and safety meetings as provided for in the OHS Act.

The Employer's Agent or the Employer's Health and Safety Agent shall be invited to attend such meetings as an observer.

The Contractor shall ensure that minutes of the health and safety committee meetings are kept.

H5.8 Inspections, formal enquires and incidents

The Contractor shall inform the Employer's Agent:

a) beforehand of inspections, investigations or formal inquiries of which he has been notified by an inspector; and
b) as soon as reasonably practicable of the occurrence of an incident (as defined in the OHS Act) on the Site.

The Contractor shall record all incidents and notify the Employer's Agent of any incident, except in the case of a traffic accident on a public road, as soon as possible after it has occurred and report such incident to an inspector as designated in terms of the OHS Act.

The Contractor shall investigate all incidents and issue the Employer's Agent with copies of such investigations.

H5.9 Personal protective equipment and clothing

The Contractor shall ensure that all workers are issued with the necessary personal protective clothing.

H5 APPOINTMENTS

H6.1 Appointment of construction manager

The Contractor shall, prior to commencing the Works on Site, appoint a full-time competent person as the construction manager, with the duty of managing all construction work on a single site, including the duty of ensuring occupational health and safety compliance. In the absence of the construction manager an alternative must be appointed by the Contractor.

The Contractor may, having considered the size of the project, appoint, in writing, one or more assistant construction managers for different sections thereof.

No construction manager may manage any construction work on or in any construction site other than the Site in respect of which he or she has been appointed.

H6.2 Appointment of construction supervisor, and health and safety officers

The construction manager shall appoint a competent employee(s) in writing as the construction supervisor(s) for the Site, who will be responsible for construction activities and ensuring occupational health and safety compliance on the construction site. The Contractor may, having considered the size of the project, appoint, in writing, one or more competent employees to assist the appointed construction supervisor(s).

The Contractor may, having considered the size of the project, the degree of danger likely to be encountered or the accumulation of hazards or risks on the Site, appoint a full-time or part-time construction health and safety officer in writing, who has in the Contractor's opinion the necessary competencies and resources, to assist the Contractor in the control of all health and safety related aspects on the Site.

The Contractor shall compile an maintain an organogram which outlines the roles and responsibilities of the construction supervisor's assistants, and health and safety officers.

H6.3 Other competent persons

The Contractor shall appoint in writing competent persons to supervise or inspect, as relevant, any of the following:

a) temporary works operations;
b) excavation work;
c) demolition work;
d) scaffolding work operations;
e) suspended platform work operations;
f) rope access work;
g) material hoists;
h) operation of bulk mixing plant;
i) explosive activated fastening device;
j) cranes;
k) construction vehicles and mobile plant (equipment);
l) the stacking and storage of articles on the Site; and
m) fire equipment.

The Contractor shall appoint in writing competent persons to:

l) induct employees in health and safety; and
m) prepare a fall protection plan.

H6.4 Health and safety representative(s)

The Contractor shall appoint in writing, if necessary in terms of the OHS Act, a health and safety employee representative(s), whose duties shall be as described in the OHS Act.

H7 EMPLOYER'S HEALTH AND SAFETY AGENT

The Employer's Health and Safety Agent shall:

a) audit the Contractor's compliance with the requirements of this Specification prior to the commencement of any physical construction activities on the Site;
b) accept or reject all safety plans, giving reasons for rejecting such plans;
c) monitor the effective implementation of all safety plans;
d) conduct periodic and random audits on the health and safety file to establish compliance with the requirements of this Specification and the Contractor's health and safety plan; and
e) visit the site at regular intervals to conduct site inspections, and based upon such visits issue, wherever necessary, any notices and/or instructions to the Contractor or any of the Contractor's subcontractors with a copy to the Employer's Agent and, where relevant, to the Contractor.

The Contractor shall invite the Employer's Health and Safety Agent to audit compliance with the requirements of this Specification before commencing with any new construction activity on the Site.

The Contractor shall permit the Employer's Health and Safety Agent to audit the Contractor's compliance with the approved Health and Safety Plan, and shall provide any assistance and/or documentation as may be required in this regard.

H8 CREATING AND MAINTAINING A SAFE AND HEALTHY WORK ENVIRONMENT

H8.1 General

The Contractor shall with respect to the Site and the construction works that are contemplated:

a) cause a preliminary hazard identification to be performed by a competent person before commencing any physical construction activity;
b) evaluate the risks associated with such work constituting a hazard to the health and safety of such employees and the steps that need to be taken to comply with the OHS Act; and
c) as far as is reasonably practicable, prevent the exposure of such employees to the hazards concerned or, where prevention is not reasonably practicable, minimize such exposure.

The Contractor shall ensure that:

d) all reasonably practicable steps are taken to prevent the uncontrolled collapse of any new or existing structure or any part thereof, which may become unstable or is in a temporary state of weakness or instability due to the carrying out of construction work;
e) no structure or part of a structure is loaded in a manner which would render it unsafe;
f) relevant information, if any, provided by the designer of the structure is taken into account in the risk assessment; and
g) the designer of any temporary works complies with the requirements of regulation 6(2) of Construction Regulations, 2014.

The Contractor shall carry out regular inspections and audits to ensure that the Works are being performed in accordance with the requirements of this Specification and the Contractor's health and safety plan.

H8.2 Risk assessment

The Contractor shall before the commencement of any construction work on Site and during such construction work, cause risk assessment(s) to be performed by a competent person appointed in writing. Such assessment(s) shall as a minimum:

a) identify the risks and hazards to which persons may be exposed to;
b) analyse and evaluate the identified risks and hazards based on a documented method;
c) document a plan of safe work procedures, including the use of any personal protective equipment or clothing and the undertaking of periodic "toolbox talks" or inductions before undertaking hazardous work, in order to mitigate, reduce or control the risks and hazards that have been identified;
d) provide a monitoring plan; and
e) provide a review plan.

The Contractor shall ensure that as far as is reasonably practicable, ergonomic related hazards are analysed, evaluated and addressed in the risk assessment.

The Contractor must review the relevant risk assessment -

f) where changes are effected to the design and or construction that result in a change to the risk profile; or
g) when an incident has occurred.

H8.3 Health and safety plans

The Contractor shall prior to commencing the Works to which this Specification applies, submit to the Employer's Health and Safety Agent for approval a suitable and sufficiently documented health and safety plan, based on this Specification and the risk assessment that is conducted.

The health and safety plan shall include, but not be limited to, the following:

a) The safety management structure, including the names of all designated persons such as the construction supervisor and any other competent persons;

b) Safety method statements and procedures to be adopted to ensure compliance with the OHS Act; Construction Regulations, 2014 and this Health and Safety Specification;
c) The provision and use of temporary services;
d) Personal protective equipment, devices and clothing required;
e) Emergency procedures;
f) Provision of workers' welfare facilities;

g)
h) Induction and training;
i) Arrangements for monitoring and control to ensure compliance with the safety plan; and
j) Provision and maintenance of the health and safety file and all other relevant documentation.

The Contractor shall provide each subcontractor with the sections of this Health and Safety Specification pertaining to the construction work to be performed by that subcontractor. The subcontractor shall provide the Contractor with a health and safety plan pertaining to his work, for incorporation into the Contractor's health and safety plan.

The Contractor shall discuss the submitted health and safety plan with the Employer's Health and Safety Agent, modify such plan in the light of the discussions and resubmit the modified plan for approval.

The Contractor shall apply the approved health and safety plan from the date of its approval and for the duration of the Works to which this Specification applies.

The Contractor shall conduct periodic audits for compliance with the approved health and safety plan at intervals agreed upon with the Employer's Health and Safety Agent, but at least once every month.

The Contractor shall update the health and safety plan whenever changes to the Works are brought about.

H8.4 Responsibilities towards employees and visitors

The Contractor shall, as far as is reasonably practicable, cause every employee to be made conversant with the hazards to his health and safety attached to any work which he has to perform, any article or substance which he has to produce, process, use, handle, store or transport and any plant or machinery which he is required or permitted to use, as well as with the precautionary measures which should be taken and observed with respect to those hazards or safe work procedures.

The Contractor shall ensure that all employees under his control are informed, instructed and trained by a competent person regarding any hazard and the related work procedures before any work commences, and thereafter at such times as may be determined in the risk assessment.

The Contractor shall cause a record of all induction training to be kept, which indicates the names, identity numbers and job description of all those who attended such training.

The Contractor shall not allow or permit any employee to enter the Site, unless such person has undergone health and safety induction training pertaining to the hazards prevalent on the Site at the time of entry.

The Contractor shall ensure that all of his employees have a valid medical certificate of fitness specific to the construction work to be performed and issued by an occupational health practitioner on the prescribed form.

The Contractor shall ensure that each visitor to the Site, save where such visitor only visits the site office and is not in direct contact with the construction work activities:

a) undergoes health and safety instruction pertaining to the hazards prevalent on the Site; and
b) is in possession of and using the necessary personal protective equipment.

The Contractor shall cause a record of all induction training to be kept in the Health and Safety file.

The Contractor shall provide suitable on-site signage to alert workers and visitors to health and safety hazards and requirements. Such signage shall include but not be limited to:

c) prohibited unauthorized entrance;
d) signage to indicate what personal protective equipment is to be worn; and
e) activity related signs.

The Contractor shall not permit any person who is or who appears to be under the influence of intoxicating liquor or drugs, to enter or remain at a workplace.

LANGEBERG MUNICIPALITY

TENDER 20/2025

REFURBISHMENT OF VARIOUS ROADS AND STORMWATER IN LANGEBERG MUNICIPALITY; FOR A PERIOD OF THREE (3) YEARS

Part C7: ENVIRONMENTAL MANAGEMENT SPECIFICATION

PART C7: ENVIRONMENTAL MANAGEMENT SPECIFICATION 273

E: ENVIRONMENTAL MANAGEMENT SPECIFICATION

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E: ENVIRONMENTAL MANAGEMENT SPECIFICATION

For use with the General Conditions of Contract for Construction Works, Third Edition, 2015.

E1 SCOPE

The Environmental Management Programme (EMP) for the project is comprised of this Environmental Management (EM) Specification and its Annexures, including the "Additional environmental issues deemed to form part of the Environmental Management Specification" attached as Annexure D hereto, which together cover the requirements for controlling the impact on the environment of construction activities.

E2 INTERPRETATIONS

E2.1 Supporting specifications

The following standardised specification shall, *inter alia*, apply to this Contract:

a) SANS 1200A, as may be varied or added to in the Scope of Work

E2.2 Application

This EM Specification contains clauses that are generally applicable to the undertaking of construction works in areas where it is necessary to impose pro-active controls on the extent to which the construction activities impact on the environment.

E2.3

In the event of any difference or discrepancy between the provisions of the Standardised Specifications and the provisions of the EM Specification, the latter shall prevail.

E2.4 Definitions and abbreviations

For the purposes of this EM Specification the following definitions and abbreviations shall apply:

E2.4.1 Environment

The surroundings within which humans exist and that are made up of –

a) the land, water and atmosphere of the earth;
b) micro-organisms, plant and animal life;
c) any part or combination of i) and ii) and the interrelationships among and between them; and
d) the physical, chemical, aesthetic and cultural properties and conditions of the foregoing that influence human health and well-being.

E2.4.2 Potentially hazardous substance

E2.4.3 A substance which, in the reasonable opinion of the Employer's Agent, can have a deleterious effect on the environment.

E2.4.4 Method Statement

A written submission by the Contractor to the Employer's Agent in response to the EM Specification or a request by the Employer's Agent, setting out the plant, materials, labour and method the Contractor proposes using to carry out an activity, in such detail that the Employer's Agent is enabled to assess whether the Contractor's proposal is in accordance with the Scope of Work and/or will produce results in accordance with the EM Specification.

E2.4.5 Reasonable

Unless the context indicates otherwise, means reasonable in the opinion of the Employer's Agent after he has consulted with a person suitably experienced in "environmental implementation plans" and "environmental

management plans" (both as defined in the National Environmental Management Act, 107 of 1998).

E2.4.6 Solid waste

All solid waste, including construction debris, chemical waste, excess cement/ concrete, wrapping materials, timber, tins and cans, drums, wire, nails, domestic waste, dead vegetation, asphalt products, etc.

E2.4.7 Contaminated water

Water contaminated by the Contractor's activities containing cements, concrete, lime, paint products, thinners, turpentine, chemicals, fuels, oils washing detergents, etc.

E2.4.8 Working area

Any area within the boundaries of the Site where construction is taking place.

E2.4.9 Contractor's camp or construction camp

The area designated for all temporary site offices, storage areas, construction plant parking areas, staff welfare facilities, etc.

E2.4.10 Employer's Agent

The person/firm so named in the Contract Data, whose function is to administer the Contract as agent of the Employer.

E2.4.11 Employer's Agent's Representative (ER)

The natural person appointed by the Employer's Agent in terms of the Contract, who shall observe the execution of the Works, examine and test materials and workmanship, and deliver and receive communications to/from the Contractor.

E2.4.12 Environmental Officer (EO)

Appointed by the Employer's Agent as his environmental representative on Site, with the mandate to enforce compliance with the EMP. The duties of the EO are stipulated in the City's guideline document for the EO and ER.

E2.4.13 Environmental Control Officer (ECO)

An independent appointment to objectively monitor implementation of relevant environmental legislation, conditions of Environmental Authorisations (EAs), and the EMP for the project.

E2.4.14 Environmental Site Officer (ESO)

Employed by the Contractor as his environmental representative to monitor, review and verify compliance with the EMP by the Contractor. The ESO must ensure that he is involved at all phases of the construction (from site clearance to rehabilitation).

E2.4.15 Abbreviations

The following abbreviations occur in this EM Specification:

EMP - Environmental Management Programme
EM Specification – Environmental Management Specification
EO - Environmental Officer
ECO – Environmental Control Officer
ESO – Environmental Site Officer
ER – Employer's Agent's Representative
MSDS - Material Safety Data Sheets

E2.5 Employer's Agent's authority to delegate

In terms of Clause 3.2.4 of the General Conditions of Contract, Third Edition, 2015 (GCC 2015), the Employer's Agent has the authority to appoint a representative. Other than the Employer's Agent's Representative (ER) in terms of Clause 3.2, this can be in the form of an Environmental Officer (EO), who shall be responsible for monitoring compliance with the EMP. All instructions given by the EO shall go through the ER, who will then convey these to the Contractor, except in the case of an environmental emergency, in which case the EO can issue an instruction directly to the Contractor. An environmental emergency is one which, in the opinion of the EO, would cause serious environmental harm if not addressed immediately.

Depending on the nature/environmental sensitivity of the Contract the following variations in the organisational structure are possible:

a) The ER may work together with an EO; or
b) There may be an ER only (for construction projects with low potential for causing significant environmental impacts). In this case the ER has responsibility for the EO's functions.
c) There may be an independently appointed Environmental Control Officer (ECO) who will fulfil essentially the same functions as the EO. The ECO may work with just the ER (if there is no EO) or may work with both the ER and EO.

The term "Employer's Agent" in this EM Specification refers to the Employer's Agent as defined in Clause E2.3.9 acting through the ER/EO/ECO as delegated.

E3 MATERIALS

E3.1 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 EM Specification. The Contractor shall ensure that these delivery drivers are supervised during off loading by someone with an adequate understanding of the requirements of the EM Specification.

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 manufactured and or imported materials shall, where reasonably possible, be stored within the Contractor's camp and, if so required by the Employer's Agent, out of the rain. The location and method of protection of such materials stored outside of the Contractor's camp and the method of rehabilitation of these areas, shall be subject to the Employer's Agent's approval.

Stockpile areas shall be approved by the Employer's Agent before any stockpiling commences.

E3.2 Hazardous substances

Hazardous chemical substances (as defined in the Regulations for Hazardous Chemical Substances in GN 1179 (25 August 1995)) stored on Site for use during construction shall be stored in secondary containers which are clearly and appropriately marked/signed. The relevant Material Safety Data Sheets (MSDS) shall be available on Site. Procedures detailed in the MSDSes shall be followed in the event of an emergency situation.

If potentially hazardous substances are to be stored on Site, the Contractor shall inform the Employer's Agent of such substances and provide a Method Statement detailing the substances/ materials to be used, together with the storage, handling and disposal procedures of the materials. Hazardous substances shall be stored out of flood risk areas and disposal of these substances shall be at a licensed waste disposal facility.

E4 PLANT (referring to "Construction Equipment" as defined in GCC 2015, and the Contractor's facilities as used in SANS 1200A)

E4.1 Fuel (petrol and diesel) and oil

E4.1.1 Storage

If fuel and oil is to be stored on Site, then the Contractor shall submit a Method Statement covering the procedures for dealing with accidental hydrocarbon spillage and leaks, and detailing how these liquids will be stored, handled and disposed of.

The Employer's Agent shall approve the location of all fuel storage areas. All necessary approvals with respect to fuel storage and dispensing shall be obtained from the appropriate authorities. Symbolic safety signs depicting **"No Smoking", "No Naked Lights"** and **"Danger"** conforming to the requirement of SANS 1186 are to be prominently displayed in and around the fuel storage area. There shall be adequate fire-fighting equipment at the fuel storage area.

The Contractor shall ensure that all liquid fuels and oils are stored in tanks with lids, which are kept firmly shut and adequately secured. The capacity of the tank shall be clearly displayed and the product contained within the tank clearly identified using the emergency information system detailed in SANS 0232 part 1. Fuel storage tanks shall have a capacity not exceeding 9000 litres and shall be kept on site only for as long as fuel is needed for construction activities, on completion of which they shall be removed.

The tanks shall be situated on a smooth impermeable base with an earth bund. The volume inside the bund shall be 110% of the total capacity of the largest storage tank. The base may be constructed of concrete, or of plastic sheeting with impermeable joints, covered by a layer of compacted earth to protect the sheeting. The impermeable lining shall extend to the crest of the bund. The floor of the storage area shall be sloped to enable any spilled fuel and/or fuel-contaminated water to be removed easily.

If any rainwater collects in the bunded areas, it shall be promptly removed and taken off Site to a disposal site approved by the Employer's Agent.

Only empty and externally clean tanks may be stored on the bare ground. Empty and externally dirty tanks shall be sealed and stored on an area where the ground has been protected.

Adequate precautions shall be provided to prevent spillage during the filling of any tank and during the dispensing of the contents. If fuel is dispensed from 200 litre drums, the proper dispensing equipment shall be used, and the drum shall not be tipped in order to dispense fuel. The dispensing mechanism for the fuel storage tanks shall be stored in a waterproof container when not in use.

E4.1.2 Refuelling

Plant shall be refuelled at a designated refuelling area approved by the Employer's Agent. The surface under the temporary 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 (e.g. Spill Sorb or Enretech #1 powder or equivalent) readily available that is designed to absorb, break down and encapsulate minor hydrocarbon spillage. The quantity of such material shall be able to handle a minimum of 200 litres of hydrocarbon liquid spill.

E4.1.3 Treatment and remediation

Treatment and remediation of hydrocarbon spill and leak areas shall be undertaken to the 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.

E4.2 Ablution and toilet facilities

Washing, whether of the person or of personal effects, defecating and urinating are strictly prohibited other than at the facilities provided.

The Contractor shall provide ablution facilities for all personnel employed on the Site, including shelter, toilets and washing facilities. The Contractor's personnel will not be permitted to use the City's ablution facilities.

Toilet facilities provided by the Contractor shall occur in a ratio of not less than 1 toilet per 30 workers (1:15 is preferred) for each sex. Toilet facilities shall be located within the Contractor's camp, but also at work areas remote from the camp, all to the satisfaction of the Employer's Agent. All portable toilets shall be adequately secured to the ground to prevent them toppling over as a result of wind or any other cause.

The Contractor shall ensure that the entrances to these toilets are adequately screened from view, that they are maintained in a hygienic state, serviced regularly, that no spillage occurs when they are cleaned and that contents are removed from Site. Toilets shall also be emptied before any temporary site closure for a period exceeding one week. Discharge of waste from toilets into the environment and burial of waste is strictly prohibited. The Contractor shall provide toilet paper at all times.

No ablution facilities shall be located closer than 50m to any water body

A Method Statement shall be provided by the Contractor detailing the provision, location, and maintenance of ablution facilities.

E4.3 Eating areas

The Contractor shall designate eating areas within the approved Contractor's camp. The feeding of, or leaving of food for, animals is strictly prohibited. Sufficient bins, as specified in Clause E4.4 below, shall be present in these areas.

Any cooking on Site shall be done on well-maintained gas cookers with fire extinguishers present. No open fires for cooking purposes shall be permitted, unless for occasional use in facilities specifically provided for this purpose and within the confines of the Contractor's camp.

E4.4 Solid waste management

E4.4.1 Litter and refuse

The site shall be kept neat and clean at all times, littering is prohibited.

No on-site burying or dumping of any waste materials, vegetation, litter or refuse shall occur. The Contractor shall provide scavenger and weatherproof bins with lids, of sufficient number and capacity to store the solid waste produced on a daily basis. The lids shall be kept firmly on the bins at all times. Bins shall not be allowed to become overfull and shall be emptied regularly, at least once a week. Waste from bins 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. Wherever possible refuse shall be recycled, and containers for glass, paper, metals and plastics shall be provided and the contents delivered to suitable recycling facilities when necessary.

All other litter and refuse shall be disposed of off Site at an approved landfill site. The Contractor shall supply the Employer's Agent with a certificate of disposal.

E4.4.2 Construction waste

Where possible all construction waste or spoil material shall be recycled, either on Site or elsewhere. As a last resort all construction waste shall be disposed of off Site at an approved landfill site. The Contractor shall supply the Employer's Agent with a certificate of disposal.

E4.5 Contaminated water management

Potential pollutants of any kind and in any form shall be kept, stored, and used in such a manner that any spill or escape can be contained and the water table and/or any adjacent water courses or bodies are not endangered. Spill kits which can be used to contain and/or mop up spills shall be available. Water containing such pollutants as cements, concrete, lime, chemicals, oils and fuels shall be discharged into a conservancy tank for removal from the Site to a licensed disposal facility. This particularly applies to water emanating from concrete batching plants and to runoff from fuel storage, refuelling or construction equipment washing areas. Wash down areas shall be placed and constructed in such a manner so as to ensure that the surrounding areas are not polluted.

No paint products, chemical additives and cleaners, such as thinners and turpentine, may be disposed of into the stormwater system or elsewhere on Site. Brush/roller wash facilities shall be established to the satisfaction of the

Employer's Agent.

A Method Statement shall be provided by the Contractor detailing the management of contaminated water.

Should contaminated water be released into the environment, specifically into a water course, monitoring thereof shall commence in accordance to the National Water Act, 36 of 1998, Section 21(f) – refer to GN 399 (26 March 2004). Contaminated water must not be released into the environment without authorisation from the relevant authority.

The Contractor shall notify the Employer's Agent immediately of any pollution incidents on Site and, at his own cost, take all reasonable measures to contain and minimise the effects of the pollution.

Any rehabilitation of the environment required as a result of such pollution shall be carried out by the Contractor at his own cost in accordance with a Method Statement approved by the Employer's Agent.

E4.6 Site structures

The type and colour of roofing and cladding materials to the Contractor's temporary structures shall be selected to reduce the visual impact.

E4.7 Lights

The Contractor shall ensure that any lighting installed on the Site for his activities does not cause a reasonably avoidable disturbance to other users of the surrounding area.

Lighting installed shall, as far as practically possible, be energy efficient. Lighting utilised on Site shall be turned off when not in use.

E4.8 Workshop, equipment maintenance and storage

No workshops or plant maintenance facilities shall be constructed on Site for performing major or routine maintenance of equipment and vehicles.

The Contractor shall ensure that in those areas where, after obtaining the Employer's Agent's approval, the Contractor carries out emergency or minor routine plant maintenance, there is no contamination of the soil, water sources or vegetation. Drip trays to collect waste oil and other lubricants shall be provided in any areas of the Site where such maintenance takes place. Drip trays must be emptied regularly and after rain, and the contents disposed of at a licensed disposal facility.

All vehicles and plant shall be kept in good working order. Leaking vehicles and plant shall be repaired immediately or removed from the Site.

The washing of vehicles and plant on Site shall be restricted to emergency or minor routine maintenance requirements only. Washing may only be undertaken in areas designated by the Employer's Agent.

E4.9 Noise

The Contractor shall limit noise levels (for example, by installing and maintaining silencers on plant). The provisions of SANS 1200A Clause 4.1 regarding "built-up areas" shall apply.

Appropriate directional and intensity settings are to be maintained on all hooters and sirens.

No amplified music shall be allowed on Site. The use of audio equipment shall not be permitted, unless the volume is kept sufficiently low so as to be unobtrusive. The Contractor shall not use sound amplification equipment on Site, unless in emergency situations.

Construction activities generating output levels of 85 dB(A) or more in residential areas, shall be confined to the hours 08h00 to 17h00 Mondays to Fridays. Should the Contractor need to do this work outside of the above times, he shall do so only with the approval of the Employer's Agent, and the surrounding communities shall be informed prior to the work taking place.

E5 CONSTRUCTION

E5.1 Method Statements

The Contractor shall submit the environmental method statements required within such reasonable time as the Employer's Agent shall specify or as required by the EM Specification. The Contractor shall not commence any activity until the Method Statement in respect thereof has been approved and shall, except in the case of emergency activities, allow a period of two weeks for consideration of the Method Statement by the Employer's Agent.

The Employer's Agent may require changes to a Method Statement if the proposal does not comply with the specification or if, in the reasonable opinion of the Employer's Agent, the proposal may result in, or carries a greater than reasonable risk of, damage to the environment in excess of that permitted by the EM Specification.

E5.2 Approved Method Statements shall be readily available on the Site and shall be communicated to all relevant personnel. The Contractor shall carry out the Works in accordance with the approved Method Statement. Approval of the Method Statement shall not absolve the Contractor from any of his obligations or responsibilities in terms of the Contract.

Changes to the way the Works are to be carried out must be reflected by amendments to the original approved Method Statements, and these amendments require the signature of both the Contractor and the Employer's Agent.

Method Statements shall consider all environmental hazards and risks identified by the Contractor and/or Employer's Agent and shall contain sufficient information and detail to enable the Employer's Agent to assess the potential negative environmental impacts associated with the proposed activity and shall cover applicable details with regard to:

a) construction procedures,
b) materials and equipment to be used,
c) getting the equipment to and from Site,
d) how the equipment/material will be moved while on Site,
e) how and where material will be stored,
f) the containment (or action to be taken if containment is not possible) of leaks or spills of any liquid or material that may occur,
g) the control of fire,
h) timing and location of activities,
i) compliance/non-compliance with the EM Specification,
j) any other information deemed necessary by the Employer's Agent.

The format to be used for the required method statements is bound in Annexure A of this EM Specification. The Contractor (and, where relevant, any sub-contractors) must also sign the Method Statement, thereby indicating that the work will be carried out according to the methodology contained in the approved Method Statement.

E5.1.1 Method Statements to be provided within 14 days from the Commencement Date

a) Layout and Preparation of Contractor's Camp (E5.4).

b) Ablution Facilities: number of, location, cleaning, method of securing to the ground, etc. of portable toilets (E4.2).

c) Solid Waste Management: number of, type, location, cleaning, method of securing to the ground, etc. of bins (E4.4).

d) Environmental Awareness Training: logistics for the environmental awareness courses for all the Contractor's management staff, as well as other employees (E5.2).

e) Emergency Procedures for Accidental Hydrocarbon Leaks and Spillages (E4.1 and E5.8).

f) Asphalt and Bitumen: details of all methods and logistics associated with the use of bitumen and asphalt (E5.11).

E5.2 Environmental Awareness Training

It is a requirement of this Contract that environmental awareness training courses are run for all personnel on Site. Two types of courses shall be run: one for the Contractor's and subcontractors' management, and one for all site staff and labourers. Courses shall be run during normal working hours at a suitable venue provided by the Contractor. All attendees shall remain for

the duration of the course and sign an attendance register that clearly indicates participants' names on completion, a copy of which shall be handed to the Employer's Agent. The Contractor shall allow for sufficient sessions to train all personnel. Subsequent sessions shall be run for any new personnel coming onto Site. A Method Statement with respect to the organisation of these courses shall be submitted.

Notwithstanding the specific provisions of this clause, it is incumbent upon the Contractor to convey the spirit of the EM Specification to all personnel involved with the Works.

E5. Training Course for Management and Foremen

The environmental awareness training course for management shall include all management and foremen. The course, which shall be presented by the Employer's Agent or his designated representative, shall be of approximately one hour duration. The course shall be undertaken prior to the commencement of work on Site.

E5.2.1 Training Course for Site Staff and Labour

The environmental awareness training course for site staff and labour shall be presented by the Contractor from material provided by the Employer's Agent. The course shall be approximately one hour long. The course shall be undertaken not later than 3 working days after the commencement of work on Site, with sufficient sessions to accommodate all available personnel.

All the Contractor's employees, sub-contractors' employees and any suppliers' employees that spend more than 1 day a week or four days in a month on Site shall attend the Environmental Awareness Training Course for Site Staff and Labour

E5.3 Contractor's Environmental Representative (ESO)

The Contractor shall appoint an environmental representative, also called an Environmental Site Officer (ESO), who shall be responsible for undertaking a daily site inspection to monitor compliance with this EM Specification. The Contractor shall forward the name of the environmental representative (ESO) to the Employer's Agent for his approval. The environmental representative (ESO) shall complete Environmental Site Inspection Checklists (Annexure B attached hereto) and these shall be submitted to the Employer's Agent once a week.

E5.4 Site division, demarcation and "no go" areas

The Contractor shall restrict all his activities, materials, plant and personnel to within the Site or any particular working areas specified or indicated on the drawings.

The Contractor shall erect and maintain permanent and/or temporary fences of the type and in the locations specified elsewhere in the Scope of Work or on the drawings. Such fences shall, if so specified, be erected before undertaking any construction activities.

Where environmentally sensitive areas are specified as "no go" areas, the Contractor shall ensure that, insofar as he has the authority, no person, plant or material shall enter the "no go" areas at any time.

A Method Statement detailing the layout and method of establishment of the Contractor's camp (including all offices, shelters, eating areas, storage areas, ablution facilities and other infrastructure required for the running of the project) shall be provided.

E5.5 Access routes/ haul roads

On the Site and, if so required, within such distance of the Site as may be stated by the Employer's Agent, the Contractor shall control the movement of all vehicles and construction equipment, 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, the movement of such vehicles and construction equipment shall be planned and operated so as to minimise disruption to regular users of the routes. As far as possible the Contractor shall use existing access and haul routes. Damage to existing access roads as a result of construction activities shall be repaired to the satisfaction of the Employer's Agent, using material similar to that originally used. The cost of the repairs shall be borne by the Contractor. New temporary access or haul routes may only be established with the prior approval of the Employer's Agent. The rehabilitation of such routes shall be to the Contractor's own cost and to the approval of the Employer's Agent.

E5.6

Any directional signage required by the Contractor for the purposes of directing the movement of his own vehicles and construction equipment (or that of his subcontractors or suppliers) must be of a design and in a location approved by the Employer's Agent. Directional signage may not be erected in such a manner that it interferes with sight lines or pedestrian movement.

E5.7 Construction personnel information posters

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 EM Specification. A2 information posters, printed on white vinyl, shall be erected at the eating areas and any other locations specified by the Employer's Agent.

The specification for the poster is presented in Annexure C of this EM Specification. The symbols shall be black and the circles shall be red lines. The Contractor shall ensure that the construction personnel information posters are not damaged in any way, and shall replace a poster if any part of it becomes illegible.

E5.8 Fire control

Other than for cooking purposes as specified in Clause E4.3, no fires may be lit on Site. Any fires which occur shall be reported to the Employer's Agent immediately.

Smoking shall not be permitted in those areas where it is a fire hazard. Such areas shall include fuel storage and refuelling areas, and any other areas where the vegetation or other materials are susceptible to the start and rapid spread of fire.

In terms of the National Environment Management: Air Quality Act, 39 of 2004 and Community Fire Safety By-law, burning is not permitted as a disposal method.

The Contractor shall appoint a Fire Officer (who may be the ESO) who shall be responsible for ensuring immediate and appropriate actions in the event of a fire and shall ensure that employees are aware of the procedure to be followed. 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 forward the name of the Fire Officer to the Employer's Agent for his approval.

The Contractor shall comply with Clause 27 of the Construction Regulations, 2014 where applicable, and shall ensure that there is suitable and sufficient fire-fighting equipment available on Site at all times.

The Contractor shall be liable for any costs relating to the rehabilitation of burnt areas, should the fire be the result of the Contractor's activities on Site

The Contractor shall submit a Method Statement to the Employer's Agent covering the procedure to be followed in the event of a fire.

E5.9 Emergency procedures

The Contractor's attention is drawn to the Method Statements required in terms of Clauses E4.1 and E5.7 above. Such Method Statements shall include procedures to be followed by the Contractor in the event of an emergency.

Furthermore, in the event of an emergency the Contractor shall contact the City of Cape Town's Emergency Call Centre by telephoning 107 or 021 480 7700 (from a cell phone).Telephone numbers of emergency services, including the local fire fighting service, shall be posted conspicuously in the Contractor's office near the telephone.

E5.10 Health and safety

The Contractor shall comply with requirements of the Occupational Health and Safety Act, 85 of 1993 and Construction Regulations, 2014, the Health and Safety Specification and relevant clauses of GCC 2015, insofar as health and safety is concerned.

E5.11 Community relations

If so required, the Contractor shall erect and maintain information boards in the position, quantity, design and dimensions specified in the Scope of Work or as directed by the Employer's Agent. 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, and information regarding the complaint itself.

E5.12 General protections in terms of the National Heritage Resources Act, 25 of 1999

The Contractor shall take cognisance of the provisions of the National Heritage Resources Act, 25 of 1999 in respect of, *inter alia*, structures older than 60 years; archaeology, palaeontology and meteorites; burial grounds and graves; and public monuments and memorials.

E5.13 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 cost of restoration/rehabilitation shall be borne by the Contractor.

The Contractor shall not permit his employees to make use of any natural water sources (e.g. springs, streams, open water bodies) for the purposes of swimming, personal washing and the washing of machinery or clothes.

E5.14 Protection of flora and fauna

Except to the extent necessary for the carrying out of the Works, as specified by the Employer's Agent, no vegetation shall be removed, damaged or disturbed.

The presence of any wild animals found on Site shall be reported to the Employer's Agent, who shall issue an instruction with regard to their removal or relocation. If a wild animal needs removal from the Site the Cape Nature Conservation Services Manager may be contacted for assistance (tel 021 955 9132/9121/3122/9130). Trapping poisoning, injuring or shooting animals is strictly forbidden. No domestic pets or livestock are permitted on Site, with the exception of controlled watchdogs approved by the Employer's Agent.

Where the use of herbicides, pesticides and other poisonous substances has been specified, the Contractor shall submit a Method Statement to the Employer's Agent for approval.

E5.15 Erosion and sedimentation control

The Contractor shall take all reasonable measures to limit erosion and sedimentation due to the construction activities and shall, in addition, comply with such detailed measures as may be required by the Scope of Work. Where erosion and/or sedimentation, whether on or off the Site, occurs, rectification shall be carried out in accordance with details specified by the Employer's Agent. Where erosion and/or sedimentation occur due to the fault of the Contractor, rectification shall be carried out to the reasonable requirements of the Employer's Agent, at the Contractor's cost. In particular, the Contractor shall ensure that the municipality's stormwater system is kept free from sediment arising from the Works.

Any runnels or erosion channels developed during the construction period or during the vegetation establishment period shall be backfilled and compacted, and the areas restored to a proper condition. Stabilisation of cleared areas to prevent and control erosion shall be pro-actively managed by the Contractor. The method of stabilisation shall be determined in consultation with the Employer's Agent.

E5.16 Aesthetics

The Contractor shall take any requisite measures to ensure that construction activities do not have an undue negative impact on the aesthetics of the area.

E5.17 Temporary site closure

In the event of temporary site closure (for a period exceeding one week), the Contractor's ESO shall carry out checks and ensure that, amongst others, the following conditions pertain and report on compliance with this clause:

a) Fire extinguishers are serviced and accessible.
b) There is adequate ventilation in enclosed spaces.
c) All hazardous substance stores are securely locked.
d) Fencing and barriers are in place.
e) Emergency and management contact details are prominently displayed and available.
f) Wind and dust mitigation measures, e.g. straw, brush packs, irrigation, etc. are in place.
g) Excavated and filled slopes and stockpiles are at a stable angle and capable of accommodating normal expected water flows.
h) There are sufficient detention ponds or channels in place.
i) Cement and materials stores are secured.
j) Toilets are empty and secured.
k) Central waste area and all refuse bins are empty and secured.
l) Contaminated water conservancy tank empty.

m) Any bunded areas are clean and treated with an approved product where applicable (e.g. Spill Sorb or Enretech #1 powder or equivalent).
n) Drip trays are empty and secure

E5.18 Asphalt and bitumen

Bitumen drums/products, if stored on Site, shall be stored in an area approved by the Employer's Agent. This area shall be indicated on the Method Statement for the Layout and Preparation of the Contractor's Camp. The storage area shall be constructed with an appropriate base, bunding and sump to the satisfaction of the Employer's Agent. A Method Statement shall be provided in this regard.

When heating bitumen products, the Contractor shall take cognisance of appropriate fire risk controls. Heating shall only be undertaken using LPG or similar zero emission fuels. Appropriate fire fighting equipment shall be readily available on Site.

E5.19 Dust

The Contractors shall be solely responsible, at his cost, for the control of dust arising from his activities on Site, and for any costs involved in damages resulting from the dust. The Contractor shall take all reasonable measures to minimise the generation of dust

E5.20 Contractor's advertising signage

Any advertising on the Site or any part of the Works shall remain at the sole discretion of the Employer, who reserves the right to order, via the Employer's Agent, its removal, covering or re-sizing, wherever placed, at no cost to the Employer.

Apart from at the Contractor's camp, no signage advertising the Contractor, or any of its subcontractors, manufacturers, suppliers or service providers shall be placed, fixed or erected anywhere on the Site or on the Works without the prior approval of the Employer's Agent. No advertising signage will be permitted on any designated scenic route. Notwithstanding any prior approval given, the Employer's Agent may instruct the Contractor to remove, cover or re-size any advertising signage at any time at no cost to the Employer.

Advertising signage at the Contractor's camp shall be appropriately designed and sized with due consideration to the surrounding environment, views and sight lines.

Branding or identification markings on the Contractor's and subcontractor's vehicles and equipment is generally permitted, although the Employer reserves the right to instruct, via the Employer's Agent, the removal, covering or re-sizing of any branding, markings or signage, on any equipment (scaffolding, for example), which it considers inappropriate in the environment in which it is placed.

No third party advertising (that is, in respect of any person, business or product that is not associated with the Works) shall be permitted anywhere on the Site or Works.

E5.21 Clearance of Site on completion

On completion of the Works, and at final completion when all defects have been remedied or corrected, the Contractor shall, in addition to the requirements for clearance of the Site in terms of the Contract, ensure that he has complied with the following

requirements in terms of this EM Specification:

E5.21.1 Clause E3.1

Clean-up of improperly secured transported materials, and rehabilitation of storage areas.

E5.21.2 Clause E4.1.3

Remediation of hydrocarbon spill and leak areas.

E5.21.3 Clause E4.4

Disposal of litter, refuse and Contractor's waste.

E5.21.4 Clause E5.4

Removal of temporary fences and Contractor's camp

E5.21.5 Clause E5.5

Repair of access roads damaged by the Contractor, and rehabilitation of temporary access routes.

E5.21.6 Clause E5.7

Rehabilitation of burnt areas should a fire be the result of Contractor's activities on Site.

E5.21.7 Clauses E5.11 to 5.13

Rehabilitation of heritage and natural features, including vegetation which is damaged or disturbed, which required protection in terms of these clauses.

E5.21.8 Clause E5.14

Rectification where erosion and/or sedimentation has occurred due to the fault of the Contractor .

E5.21.9 Clause E5.19

Removal of Contractor's advertising signage.

E5.21.10

E6 TOLERANCES

E6.1 Fines

Environmental management is concerned not only with the final results of the Contractor's operations, but also with the control of how these operations are carried out. Tolerance with respect to environmental matters applies not only to the finished product, but also to the standard of the day-to-day operations required to complete the Works.

It is thus required that the Contractor shall comply with the EM Specification on an on-going basis and any failure on his part to do so will entitle the Employer's Agent to certify the imposition of a fine. Fines may be issued per incident at the discretion of the Employer's Agent. Such fines will be issued in addition to any remedial costs incurred as a result of non-compliance with the environmental specifications. The Employer's Agent will inform the Contractor of the contravention and the amount of the fine, and will deduct the amount from monies due in payment certificates issued under the Contract.

Maximum fines for the following transgressions by either the Contractor and/or his sub-contractors may be imposed by the Employer's Agent, as follows:

		Maximum fine per incident
a)	Vehicles, plant or materials related to the Contractor's operations, parked or stored outside the demarcated boundaries of the Site.	R 2 000
b)	Persons, vehicles, plant or materials related to the Contractor's operations, found within the designated boundaries of a "no go" area.	R 4 000
c)	Persistent and unrepaired oil leaks from machinery/not using a drip tray to collect waste oil and other lubricants/not using specified absorbent material to encapsulate hydrocarbon spillage/using inappropriate methods of refuelling (the use of a funnel rather than a pump).	R 3 000
d)	Refuelling in areas not approved by the Employer's Agent.	R 3 000
e)	Litter on Site.	R 1 000
f)	Deliberate lighting of fires on Site.	R 5 000
g)	Individual not making use of the Site ablution facilities.	R 1 000
h)	Damage to trees not specified to be removed.	R 5 000
i)	Dust or excessive noise emanating from the site	R 1 000
j)	Not containing water contaminated with pollutants such as cement, concrete, fuel, etc.	R 2 000

For each subsequent similar offence the fine shall be doubled in value to a maximum value of R50 000.

E7 TESTING

Not applicable to this tender.

E8 MEASUREMENT AND PAYMENT

E8.1 Basic principles

Except where separate pay items have been measured in the Bills of Quantities, all costs in respect of complying with the EM Specification are deemed to be covered by the sum tendered for complying with the EM Specification.

ANNEXURE A: ENVIRONMENTAL METHOD STATEMENT

CONTRACT:…….... **DATE**:…..……

PROPOSED ACTIVITY (give title of method statement and reference number from the EMP):

WHAT WORK IS TO BE UNDERTAKEN (give a brief description of the works - attach extra information to ensure accurate description given):

WHERE THE WORKS ARE TO BE UNDERTAKEN (where possible, provide an annotated plan and a full description of the extent of the works):

START AND END DATE OF THE WORKS FOR WHICH THE METHOD STATEMENT IS REQUIRED:

Start Date:	End Date:

HOW THE WORKS ARE TO BE UNDERTAKEN (provide as much detail as possible, including annotated sketches and plans where possible):

Note: please give too much information rather than too little. Please ensure that issues such as emergency procedures, hydrocarbon management, wastewater management, access, individual responsibilities, materials, plant used, maintenance of plant, protection of natural features, etc. are covered where relevant

DECLARATIONS

1) EMPLOYER'S AGENT'S REPRESENTATIVE/ENVIRONMENTAL OFFICER/ENVIRONMENTAL CONTROL OFFICER

The work described in this Method Statement, if carried out according to the methodology described, appears to be satisfactorily mitigated to prevent avoidable environmental harm:

_____ _____

(signed) (print name)

Dated: _____

2) CONTRACTOR

I understand the contents of this Method Statement and the scope of the works required of me. I further understand that this Method Statement may be amended on application to other signatories and that the Employer's Agent's Representative/Environmental Officer/Environmental Control Officer will audit my compliance with the contents of this Method Statement. I understand that this method statement does not absolve me from any of my obligations or responsibilities in terms of the Contract.

_____ _____

(signed) (print name)

Dated: _____

3) EMPLOYER'S AGENT

The works described in this Method Statement are approved.

_____ _____ _____

(signed) (print name) (designation)

Dated: _____

ANNEXURE B: ENVIRONMENTAL SITE INSPECTION CHECKLIST
TO BE SUBMITTED TO THE EMPLOYER'S AGENT ONCE A WEEK

CONTRACT:…..... **DATE**:…..……

ENVIRONMENTAL ASPECT	YES/ NO (✓ or X)	COMMENTS
• All new personnel on Site are aware of the contents of the EMP and have been through the environmental awareness course.		
• Contractor's camp is neat and tidy and the labourers' facilities are of an acceptable standard.		
• Sufficient and appropriate fire fighting equipment is visible and readily available in the appropriate places.		
• Waste control and removal system is being maintained.		
• Fences are being maintained.		
• Drip trays are being utilised where there is a risk of spillage.		
• Bunded areas/drip trays are being emptied on a regular basis (especially after rain).		
• No leaks are visible from construction vehicles.		
• Refuelling of vehicles and plant occurs within designated areas, and appropriate refuelling apparatus and drip trays are being used.		
• "No go" areas, natural features, vegetation, etc. have not been damaged.		
• Dust control measures (if necessary) are in place and are effectively controlling dust.		
• Noise control measures (if necessary) are in place and are working effectively.		
• Erosion and sedimentation control measures (if necessary) are in place and are controlling effectively.		
• Material stockpiles are located within the boundary of the Site and are protected from erosion.		
• Other		

Completed by:…… Signed:……..…….....……

ANNEXURE A: CONSTRUCTION PERSONNEL INFORMATION POSTER

ANNEXURE D: ADDITIONAL ENVIRONMENTAL ISSUES DEEMED TO FORM PART OF THE ENVIRONMENTAL MANAGEMENT PROGRAMME

Listed below are issues pertaining to the environment that form part of the Contract Document. The clause references relate to the **General Conditions of Contract for Construction Works, Third Edition, 2015 (GCC 2015)**. They are listed here to emphasise that they form part of the environmental considerations and requirements for this project. They must be read together with any Contract Specific Data referring thereto in Part C1.2 Contract Data. The comments made below on the various issues are to be taken as explanatory, in so far as environmental matters are concerned, and do not modify the clauses in any way.

1. **Monitoring**

   Clause 3.1.1 makes provision for the Employer's Agent to administer the Contract in accordance with the provisions of the Contract, including the monitoring of any environmental variables.

2. **Health and safety**

   Clauses 3.1.4, 4.3.1, 4.3.2 and 4.10.1 remind the Contractor of his obligations in terms of the Occupational Health and Safety Act (No. 85 of 1993) and Construction Regulations 2014.

   Clause 5.7 of SANS 1200A reinforces these requirements through the observation of proper and adequate safety arrangements.

3. **Employer's Agent's authority to delegate**

   Clause 3.2.4 gives the Employer's Agent the authority to appoint a representative to act as the Environmental Officer (EO) for the Contract. The EO, who shall be responsible for monitoring compliance with the EMP, may be the Employer's Agent's Representative or any other person accountable to the Employer's Agent.

4. **Employer's Agent's instructions**

   Clause 4.2.1 requires that the Contractor comply with the Employer's Agent's instructions on any matter relating to the Works. Moreover, Clause 4.2.2 ensures that the Contractor only takes instructions from the Employer's Agent, the Employer's Agent's Representative or a person authorised by the Employer's Agent in terms of Clause 3.2.4.

5. **Compliance with applicable laws**

   Clause 4.3.1 requires that the Contractor comply with all applicable laws, regulations, etc. in fulfilling the Contract.

6. **Protection of fossils, etc.**

   Clause 4.7.1 requires the Contractor to take reasonable precautions to prevent any person from damaging, *inter alia* anything of geological or archaeological interest, and requires that he inform the Employer's Agent and follows any instructions issued in this regard.

7. **Housing, food and transport**

   Clause 4.10.1 requires the Contractor to make his own arrangements for payment, housing, feeding and transport for his employees, provided that if he uses any part of the Site for such purposes he shall obtain the Employer's Agent's prior approval.

   Clause 4.2 of SANS 1200A further requires that facilities provided comply with local authority regulations and are maintained in a clean and sanitary condition.

8. **Competent employees**

   Clause 4.11.1 requires that all persons employed on Site are careful, competent, and efficient. These attributes embrace knowledge of the environmental matters and issues dealt with in the EMP.

9. **Removal from Site**
   Clause 4.11.2 makes provision for the Employer's Agent to instruct the removal from the Works and Site of any person who is

guilty of misconduct, or is incompetent or negligent, or is an undesirable presence on Site.

Clause 7.1.1 requires that all Construction Equipment be in good working order. Accordingly, the Employer's Agent may order that any Construction Equipment not complying with the environmental specifications be removed from Site.

10. **Unacceptable documentation**

Clauses 5.3.1 and 5.3.2 require the Contractor to provide documentation required before commencement with Works execution, failing which the Employer may terminate the Contract. Such documentation includes the Protection of the Environment Declaration provided for in the Contract Document.

11. **Programme and Method Statements**

Clause 5.6.1 makes provision for the Employer's Agent to request the programmes for carrying out the Works.

Clause 5.6.2 makes provision for the Employer's Agent to request statements from the Contractor for the entire scope of the work. In the case of the environmental specifications, these would be submitted as Method Statements.

12. **Hours of operation**

Clause 5.8.1 restricts the Contractors hours of operation to between sunrise and sunset on working days (usually from Monday to Saturday), unless, *inter alia,* permitted by the Employer's Agent in writing.

Clause 5.7.2 further requires that in the event that permission is granted for night work, then such work shall be carried out without excessive noise and disturbance.

13. **Suspension of Works**

Clause 5.11.1 enables the Employer's Agent to suspend the progress of the Works or any part thereof, which may be as a result of some default or breach of the Contract on the part of the Contractor.

14. **Site clean-up**

Clause 5.15.1 requires that, on completion of the Works, the Contractor shall clear away and remove from the Site all Construction Equipment, surplus materials, rubbish and Temporary Works of every kind and leave the whole of the Site and Works clean and in a safe condition. All streams and watercourses shall be restored to the condition as at the commencement of the Works. Should the Contractor fail to do the work upon notice from the Employer's Agent, the Employer may in terms of Clause 7.8.3, employ others to carry out the work and recover the cost of doing so from the Contractor.

15. **Access to the Works**

Clause 7.3.1 makes provision for the Employer's Agent to authorise the Environmental Officer (EO) to have access to the Works and Site.

16. **Pollution prevention and interferences**

Clause 8.1.2 requires that all operations necessary for the execution of the Works be carried out so as not to cause unnecessary noise or pollution, or to interfere unnecessarily or improperly with public services, or the access to, use and occupation of public or private roads and footpaths or properties.

Clause 5.6 of SANS 1200A further requires the Contractor to minimise dust nuisance and pollution of streams and inconvenience to or interference with the public.

17. **Dust**

Clause 8.1.2 requires that all operations necessary for the execution of the Works be carried out so as not to cause unnecessary pollution.

Clause 5.6 of SANS 1200A requires that the Contractor take all reasonable measures to minimise any dust nuisance.

18. **Noise**

Clause 8.1.2 requires that all operations necessary for the execution of the Works be carried out so as not to cause unnecessary noise.

Clause 4.1 of SANS 1200A requires that when working in built-up areas, the Contractor shall provide and use suitable and effective silencing devices for pneumatic tools and other plant that would otherwise cause a noise level exceeding 85dB.

19. **Protection of existing environment**

Clause 8.1.3 requires that the Contractor uses every reasonable means to prevent any roads or bridges to or in the vicinity of the Site being subjected to damage by excessive loads, or disruption due to excessive traffic, occasioned by his transport arrangements.

20. **Reinstatement**

Clauses 8.2 and 8.4 make provision for the Contractor to repair and make good any damage to the Works in his care (other than "excepted risks"), and bear any costs associated with such reinstatement.

21. **Reporting accidents**

Clause 8.5.1 requires the Contractor to report to the Employer's Agent every occurrence on the Site which causes environmental damage.