

CONTRACT DOCUMENT

FOR

CONTRACT NO: 28/2023

FOR

**CONSTRUCTION OF DIVERSION WEIR UPGRADE AND ASSOCIATED
WORKS IN NKQUBELA, ROBERTSON**

(RETURNABLE DOCUMENT)

- The Form Of Offer and Acceptance (C1.1) is on C1-Page 1 of this document
- The Preferencing Schedule is on T2-Pages 34 - 40 of this document

TENDERER	
CONTACT PERSON	
TEL NO.	
FAX NO.	
TENDER AMOUNT	
COMPLETION PERIOD (WEEKS)	

VOLUME 1: RETURNABLE DOCUMENT : CIVIL AND STRUCTURAL WORKS

ISSUED BY:

LANGEBERG MUNICIPAL OFFICES
28 MAIN ROAD
ASHTON,
6715

PART A INVITATION TO BID

YOU ARE HEREBY INVITED TO BID FOR REQUIREMENTS OF THE LANGEBERG MUNICIPALITY					
Bid Number:	28/2023	Closing Date:	8 September 2023	Closing Time:	12:00
Description:	CONSTRUCTION OF DIVERSION WEIR UPGRADE AND ASSOCIATED WORKS IN NKQUBELA, ROBERTSON				
THE SUCCESSFUL BIDDER WILL BE REQUIRED TO FILL IN AND SIGN A WRITTEN CONTRACT FORM MBD7 (FORM OF OFFER AND ACCEPTANCE).					
Bid Response Documents may be Deposited in the Bid Box situated at:					
MUNICIPAL HEAD OFFICE					
28 Main Road					
ASHTON					
6715					
SUPPLIER INFORMATION					
NAME OF BIDDER					
POSTAL ADDRESS					
STREET ADDRESS					
TELEPHONE NUMBER	CODE		NUMBER		
CELLPHONE NUMBER					
FACSIMILE NUMBER	CODE		NUMBER		
E-MAIL ADDRESS					
VAT REGISTRATION NUMBER					
TAX COMPLIANCE STATUS	TCS PIN:		AND	CSD No:	
B-BBEE STATUS LEVEL VERIFICATION CERTIFICATE [TICK APPLICABLE BOX]	☐ Yes ☐ No				
[A B-BBEE STATUS LEVEL VERIFICATION CERTIFICATE/ SWORN AFFIDAVIT (FOR EMES & QSEs) MUST BE SUBMITTED IN ORDER TO QUALIFY FOR PREFERENCE POINTS FOR B-BBEE]					
1. ARE YOU THE ACCREDITED REPRESENTATIVE IN SOUTH AFRICA FOR THE GOODS /SERVICES /WORKS OFFERED?	☐ Yes ☐ No [IF YES ENCLOSE PROOF]		2. ARE YOU A FOREIGN BASED SUPPLIER FOR THE GOODS /SERVICES /WORKS OFFERED?	☐ Yes ☐ No [IF YES, ANSWER PART B:3]	
3. TOTAL NUMBER OF ITEMS OFFERED			4. TOTAL PRICE BID	R	
5. SIGNATURE OF BIDDER			6. DATE		
7. CAPACITY UNDER WHICH THIS BID IS SIGNED					
BIDDING PROCEDURE ENQUIRIES MAY BE DIRECTED TO:			TECHNICAL INFORMATION MAY BE DIRECTED TO:		
DEPARTMENT	SCM		CONTACT PERSON	MONIQUE LYNERS	
CONTACT PERSON	Sabelo Ngcongolo		TELEPHONE NUMBER	021 914 0300	
TELEPHONE NUMBER	023 615 8000		FACSIMILE NUMBER		
FACSIMILE NUMBER	023 615 2428		E-MAIL ADDRESS	monique@lyniers.co.za	
E-MAIL ADDRESS	sngcongolo@langeberg.gov.za				

PART B

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 RE-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 taxpayer's 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 part B:3.
- 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.

SIGNATURE OF BIDDER:

CAPACITY UNDER WHICH THIS BID IS SIGNED:

Tender
General Tender Information

LANGEBERG MUNICIPALITY

TENDER NO. 28/2023

CONSTRUCTION OF DIVERSION WEIR UPGRADE AND ASSOCIATED WORKS IN NKQUBELA, ROBERTSON

GENERAL TENDER INFORMATION

TENDER ADVERTISED	:	11 August 2023
ESTIMATED CIDB CONTRACTOR GRADING	:	4CE or Higher
CLARIFICATION MEETING	:	A compulsory clarification meeting to be held on 24 August 2023 at 10:00.
VENUE FOR CLARIFICATION MEETING	:	Council Chambers, Municipal offices, 52 Church Street, Robertson
CLOSING DATE	:	8 September 2023
CLOSING TIME	:	12:00
CLOSING VENUE	:	Tender Box at the Municipal Office, 28 Main Road, Ashton, 6715.
VALIDITY PERIOD OF TENDER	:	120 days
TENDER BOX	:	The Tender Documents (which includes the Form of Offer and Acceptance) completed in all respects, plus any additional supporting documentation 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. The onus remains with the tenderer to ensure that the tender is placed in the correct tender box.

Contents	
Number	Heading
The Tender	
Part T1: Tendering procedures	
T1.1	Tender Notice and Invitation to Tender
T1.2	Tender Data and Supply Chain Management Conditions for bidding
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
C1.3	Form of Guarantee
C1.4	Occupational Health and Safety Agreement
Part C2: Pricing data	
C2.1	Pricing Instructions
C2.2	Bill of Quantities / Schedule(s) of Rates
Part C3: Scope of Work	
C3.1	Description of the Works
C3.2	Engineering
C3.3	Procurement
C3.4	Construction – Works Specifications
C3.5	Management
C3.6	Annexes
Part C4: Site information	
C4	Site Information
Part C5: Health and Safety Specifications	
C6	Health and Safety Specifications
Part C6: Drawings	
C6	Drawings

Part T1: Tendering procedures

T1.1 Tender Notice and Invitation to Tender

T1.2 Tender Data



INVITATION FOR TENDERS**TENDER NUMBER: 28/2023**

DESCRIPTION : **CONSTRUCTION OF DIVERSION WEIR UPGRADE AND ASSOCIATED WORKS IN NKQUBELA, ROBERTSON**

CLOSING DATE : 8 September 2023

CLOSING TIME : 12H00: Bids will be opened in public at 28 Main Road, Ashton.

CIDB : Tenderers must be registered with the CIDB in a **CE** 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 **4CE or higher**.

INFORMATION : **Obtain documentation:**

The document can be downloaded from municipal website : www.langeberg.gov.za

Enquiries regarding tender documentation:

Monique Lyners

021 914 0300

076 152 0353

monique@lyniers.co.za

A compulsory clarification meeting will be held on **17 August 2023** at **10:00** in the Municipal Offices, 52 Church Street, Robertson after which the sites will be visited. Bidders that fail to attend the compulsory clarification meeting will be disqualified. A representative may only represent one tenderer at this meeting. The entrance to the meeting will close 10h10 after which no more prospective bidders representatives will be allowed to attend the clarification meeting.

Bids may only be submitted on the bid documentation provided by the municipality and must remain valid for 90 days after bid closing.

The official tender document must be fully completed in black ink and all pages must be returned preferably stapled or bound

Telegraphic, telephonic, telex, facsimile, e-mailed or late tenders will not be accepted. The lowest, only or any bid shall not necessarily be accepted and the Council reserves the right to accept any part of the bid.

TENDERS TO BE DEPOSITED IN: The tender box of Langeberg Municipality, 28 Main Road, Ashton. The tender box is open from Mondays until Fridays from 08:00 until 16:30. This excludes weekends and public holidays.

NOTE: This tender will be evaluated in terms of the Preferential Procurement Regulations, 2022 that was promulgated by the Minister of Finance on 4 November 2022 in Government Gazette No 47452. Please take note of the responsiveness criteria as stipulated in the tender document.

PROCUREMENT PREFERENCE POINT SYSTEM: 80/20

D P LUBBE

MUNICIPAL MANAGER

T1.2 Tender Data

The Standard for Uniformity in Construction Procurement was first published in Board Notice 62 of 2004 in Government Gazette No 26427 of 9 June 2004. It was subsequently amended in Board Notice 67 of 2005 in Government Gazette No 27831 of 22 July 2005, Board Notice 99 of 2005 in Government Gazette No 28127 of 14 October 2005, Board Notice 93 of 2006 in Government Gazette No 29138 of 18 August 2006, Board Notice 9 of 2008 in Government Gazette No 30692, of 1 February 2008, Board Notice 11 of 2009 in Government Gazette No 31823 of 30 January 2009, Board Notice 86 of 2010 in Government Gazette No 33239 of 28 May 2010 and Board Notice 136 of 2015 in Government Gazette 38960 of 10 July 2015. (see www.cidb.org.za).

This edition incorporates the amendments made in Board Notice 136 of 2015 in Government Gazette 38960 of 10 July 2015 and the erratum notices issued thereafter.

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
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F.1	General
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F.1.1	Actions
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Add the following:

The Employer is the LANGEBERG MUNICIPALITY, represented by:

The Municipal Manager

F.1.2	Tender Documents: GCC
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Add the following:

"The tender documents issued by the Employer comprise:

VOLUME 1&2: The Tender Document (this document), in which is bound:

VOLUME 1 : CIVIL & STRUCTURAL WORKS

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

C1.3 Form of Guarantee

C1.4 Occupational Health and Safety Agreement

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

C3.3 Procurement

C3.4 Construction

C3.5 Management

C3.6 Annexes

Part C4: Site information

C4 Site information (if applicable)

Part C5: Health and Safety Specifications

C5 Health and Safety Tender Specifications

Part C6: Drawings**C6 Drawings**

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

The following documents form part of this contract:

VOLUME 2 : *The General Conditions of Contract for Construction Works (Third Edition) 2015 as published by the South African Institution of Civil Engineering. This publication is available and tenderers must obtain copies at their own cost from the South African Institution of Civil Engineering (SAICE), Private Bag X200, Halfway House 1685, Tel: (011) 805 5947, Fax: (011) 805 5971, e-mail: civilinfo@saice.org.za.*

VOLUME 3 : *The South African Bureau of Standards Standardized Specification for Civil Engineering Construction SANS 1200, prepared by and obtainable from the South African Bureau of Standards, Private Bag X191, Pretoria 0001, Tel: (012) 428 6929, Fax: (012) 428 6928, Web site : www.stansa.co.za.*

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

F.1.4 Communication and employer's agent

Add the following:

Attention is drawn to the fact that verbal information, given by the Employer's Agent 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. Only information issued formally by the Employer in writing to tenderers will be regarded as amending the Tender Documents.

F.1.5 The Employer's right to accept or reject any tender offer

Add the following:

F.1.5.3 The Employer may reject a tender if, in the opinion of the Employer, the tenderer will be unable to achieve the contract participation goal tendered, in the performance of the contract.

F.1.6.2 Competitive negotiation procedure

Add the following to F.1.6.2

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

F.1.6.3 Proposal procedure using two-stage system

Add the following to F.1.6.3:

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

F.2 Tenderer's obligations**F.2.1 Eligibility**

Add the following:

Only those tenderers who satisfy the following criteria are eligible to submit tenders:

F.2.1.1 Central Supplier Supplier Database Registration

Tenderers must be registered on the Central Supplier Supplier Database to be eligible to tender.

F.2.1.2 Construction Industry Development Board (CIDB) Registration

Only those tenderers who are registered with the CIDB, prior to the tender closing time and 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 an **CE** class of construction work, are eligible to have their tenders evaluated.

Joint ventures are eligible to submit tenders provided that:

1. every member of the joint venture is registered with the CIDB;
2. the lead partner has a contractor grading designation in the **4CE or higher** class of construction work;
3. the combined contractor grading designation calculated in accordance with the Construction Industry Development Board Regulations is equal to or higher than a contractor grading designation determined in accordance with the sum tendered for an **CE** class of construction work or a value determined in accordance with Regulation 25 (1B) or 25 (7A) of the Construction Industry Development Regulations.

For alpha-numerics associated with the contractor grading designations - see Annex G included in T1.2.

F2.1.3 Qualification in terms of Labour Intensive Construction

The proposed Construction Manager must hold an accredited NQF 5 qualification for labour intensive construction. Proof thereof must be submitted with the tender document.

F2.1.4 Experience

The company must provide proof of experience for successful completion of projects of a similar scope and nature. Similar scope and nature means at least 3 small earthworks and civils projects successfully completed in the past 5 years with a project value equal to or higher than the tendered sum.

F2.1.5 Bank Rating

The tender must receive at least a "C" bank rating from an approved financial institution. The Employer will, through his Agent, request the bank codes from the relevant financial institutions.

F.2.7 Clarification meeting

Add the following:

The arrangements for a **compulsory** tenderer's clarification meeting are as stated in the Tender Notice and Invitation to Tender.

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.

F.2.12 Alternative tender offers

Add the following to F.2.12.1

F.2.12.1 If a tenderer wishes to submit an alternative tender offer, the only criterion permitted for such alternative tender offer is that it demonstrably satisfies the Employer's standards and requirements, the details of which may be obtained from the Employer's Agent.

Calculations, drawings and all other pertinent technical information and characteristics as well as modified or proposed Pricing Data must be submitted with the alternative tender offer to enable the Employer to evaluate the efficacy of the alternative and its principal elements, to take a view on the degree to which the alternative complies with the Employer's standards and requirements and to evaluate the acceptability of the pricing proposals. Calculations must be set out in a clear and logical sequence and must clearly reflect all design assumptions. Pricing Data must reflect all assumptions in the development of the pricing proposal.

Acceptance of an alternative tender offer will mean acceptance in principle of the offer. It will be an obligation of the contract for the tenderer, in the event that the alternative is accepted, to accept full responsibility and liability that the alternative offer complies in all respects with the Employer's standards and requirements.

The modified Pricing Data must include an amount equal to 5% of the amount tendered for the alternative offer (after adding contingencies and VAT) to cover the Employer's costs of confirming the acceptability of the detailed design before it is constructed.

F.2.13 Submitting a tender offer

Add the following to F.2.13.1

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

Add the following to F.2.13.3

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

F.2.13.4 *Add the following after the first sentence of F.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.

- F.2.13.5 *Add the following to F.2.13.5:*
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: Tender Box
Physical address: Langeberg Municipality, 28 Main Road, Ashton, 6715.
Identification details: Tender number: 28/2023
Title of tender: **CONSTRUCTION OF DIVERSION WEIR UPGRADE AND ASSOCIATED WORKS IN NKQUBELA, ROBERTSON**
Sealed tenders with the Tenderer's name and address and the endorsement "**28/2023: CONSTRUCTION OF DIVERSION WEIR UPGRADE AND ASSOCIATED WORKS IN NKQUBELA, ROBERTSON**" on the envelope, must be placed in the appropriate official tender box at the abovementioned address. The tender box is open from Mondays until Fridays from 08:00 until 16:30. This excludes weekends and public holidays.
- F.2.13.6 *Add the following to F.2.13.6:*
A two-envelope procedure will **not** be followed. (F.3.5)
- Add the following sub-clause after F.2.13.9:*
- F.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.
- F.2.15 **Closing time**
Add the following to F.2.15.1:
- F.2.15.1 The closing time for submission of tender offers is as stated in the Tender Notice and Invitation to Tender.
Telephonic, telegraphic, telex, facsimile or e-mailed tender offers will not be accepted.
- F.2.16 **Tender offer validity**
Add the following to F.2.16.1:
- F.2.16.1 The tender offer validity period is **120 calendar days**.
- F.2.17 **Clarification of tender offer after submission**
Add the following to F.2.17:
A tender will be rejected as non-responsive if the tenderer fails to provide any clarification requested by the employer, within the time for submission stated in the Employer's written request for such clarification. A tender will also be rejected as non-responsive if the tenderer fails, within the time stated in writing by the Employer, to comply with the requirements of F.4.3.
- F.2.18 **Provide other material**
Delete the following word in F.2.18.1:
"Notarized"
- Add the following to F.2.18.1:*
- F.2.18.1 Provide, on written request by the Employer, where the tendered amount inclusive of VAT **exceeds R 10 million:**
- audited annual financial statement for 3 years, or for the period since establishment if established during the last 3 years, if required by law to prepare annual financial statements for auditing;
 - 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;
 - 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;
 - 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.
- F.2.23 **Certificates**
Add the following:
The tenderer is required to submit the following:
- F.2.23.1 **Tax Clearance Certificate**
Tenderers shall be registered and in good standing with the South African Revenue Services (SARS) and shall submit documentary evidence in the form of a TCS SARS compliance status pin

issued by SARS or proof that he or she has made arrangements with SARS to meet his or her outstanding tax obligations.

Each party to a Consortium/Joint Venture shall submit a separate TCS SARS compliance status pin, or proof that he or she has made the necessary arrangements with SARS.

Tenderers are to note that the Employer will not award a contract to a Tenderer whose tax matters are not in order. Furthermore, the successful Tenderer (Contractor) is required to submit an updated original or certified TCS SARS compliance status pin to the Employer should any current TCS SARS compliance status pin expire during the contract. Failure to do so may lead to the withholding of payment to the Contractor until a valid TCS SARS compliance status pin is received by the Employer.

F.2.23.2 Bargaining Council Certificates

Tenderers must be registered with a relevant Bargaining Council (if such be in place) and must submit, with the tender, the applicable Certificate of Compliance (letter of good standing in terms of the relevant Government Gazette).

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

F.2.23.3 Broad-Based Black Economic Empowerment (B-BBEE) Status Level Certificate(s)

Tenderers shall submit documentary evidence/proof in the form of an original valid or certified copy B-BBEE Status Level verification certificate in terms of the Construction Sector Charter on Black Economic Empowerment, or an Exempted Micro Enterprise certificate issued by a registered auditor, accounting officer (as contemplated in section 60(4) of the Close Corporation Act, 1984 (Act No. 69 of 1984)) or an accredited verification agency, or certified copies thereof in terms of the Preferential Procurement Regulations, 2022.

Consortiums/Joint Ventures will qualify for preference points, provided that the entity submits the relevant certificate/scorecard in terms of the Preferential Procurement Regulations, 2022. In the case of unincorporated entities, a verified scorecard in the name of the Consortium/Joint Venture must be submitted with the tender.

F.3 The Employer's undertakings

F.3.2 Issue Addenda

Add the following to F.3.2:

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.

F.3.4 Opening of tender submissions

Add the following to F.3.4.1:

F.3.4.1 The time and location for opening of the tender offers is:

Time: Tenders will be opened immediately after the closing time for receipt of tenders as stated in the Tender Notice and Invitation to Tender, or as stated in any Addendum extending the closing date.

Location: Langeberg Municipality, 28 Main Road, Ashton, 6715.

F.3.8 Test for responsiveness

Add the following to F3.8:

Tenders will be considered non-responsive if:

- the tender is not in compliance with the Scope of Work;
- the tenderer does not comply with the CIDB contractor grading designation as specified in F.2.1.2 above;
- the tenderer has failed to clarify or submit any supporting documentation within the time for submission stated in the Employer's written request.

F.3.9 Arithmetical errors, omissions and discrepancies

Delete the contents of Subclauses F.3.9.2 to F.3.9.4 and replace with the following:

F.3.9.2 Check responsive tender offers 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

F.3.9.3 Correct arithmetic errors in the following manner:

- (a) If bill of quantities (or schedule 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 unit rate shall govern and the line item total shall be corrected.
- (b) 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.
- (c) 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 be corrected.

F.3.9.4 Notify the highest ranked tender or tenderer with the highest number of tender evaluation points after the evaluation of tender offers in accordance with F.3.11 of all errors or omissions that are identified in the tender offer and invite the tenderer to confirm the tender offer as tendered and accept the corrected total of prices.**F.3.9.5 Check responsive tender offers for unbalanced unit rates and request tenderers to consider amending and adjusting any rates declared unbalanced by the Employer in accordance with F.4.3 while retaining the total of the prices derived after any correction made in terms of this condition to tender.**

Reject a tender offer if the tenderer does not correct or accept the correction of arithmetical errors and consider rejection of a tender offer if the tenderer refuses to amend/adjust an unreasonable, unbalanced rate in the manner described above.

F.3.11 Evaluation of tender offers**F.3.11.1 General**

Add the following:

The procedure for the evaluation of responsive tenders is **Method 2: Financial Offer and Preference** in accordance with F.3.11.3.

F.3.11.3 Method 2: Financial offer and preferences

The procedure for the evaluation of responsive tenders is **Method 2**, where the total number of tender evaluation points, $T_{EV} = N_{FO} + N_{P1}$ as detailed below.

Where N_{FO} is the number of tender evaluation points awarded for the financial offer made in accordance with F.3.11.7

N_{P1} is the number of tender evaluation points awarded for B-BBEE Status Level Contribution and Promotion of Local Enterprises in accordance with F.3.11.8

F.3.11.7 Scoring Financial Offers

Add the following:

The financial offer will be scored using **Formula 2 (Option 1)** where the value of W_1 is:

- 1) 90 points where the financial value inclusive of VAT of all responsive tenders received have a value in excess of R50 000 000; or

For this contract, the financial offers will be scored using **Formula 2 (Option 1)** where the value of W_1 is: **80** tender evaluation points. Up to a maximum of 100 minus W_1 namely **20** tender evaluation points will be awarded for Preference with responsive tenders scoring points in accordance with the **80 Financial /20 Preference** scoring criteria listed below.

80 Financial /20 Preference	
Points	Description
	FINANCIAL OFFER
80	Price
	PREFERENCES
10	B-BBEE Status Level Contribution
10	Promotion of Local Enterprises

F.3.11.8

Scoring Preferences

Add the following:

Points for preferences claimed will be determined in accordance with the Preferential Procurement Regulations, 2022. Points will be awarded to tenderers who are eligible for preferences in terms of Schedule 21: Preferencing Schedule (where preferences are granted in respect of B-BBEE Status Level Contribution) which is included in T2.2 Returnable Schedules.

The terms and conditions of Schedule 21: Preferencing Schedule shall apply in all respects to the tender evaluation process and any subsequent contract.

Points for Preference

A maximum of 100 minus W_1 tender evaluation points will be awarded for preference to tenderers with responsive tenders, who are eligible for such preference, in accordance with the criteria listed below.

Exempted Micro Enterprise or B-BBEE Status Level of Contributor

The Tenderer shall indicate on Schedule 21: Preferencing Schedule included in T2.2 Returnable Schedules his or her company/firm/entity's B-BBEE Status Level of Contributor, in accordance with one of the following:

- Exempted Micro Enterprise (>50% black owned)
- Exempted Micro Enterprise ($\leq$ 50% black owned)
- Verified B-BBEE status level of contributor in terms of the Construction Sector Charter on Black Economic Empowerment (Board Notice 111 of 2007 published in Government Gazette No. 29616 of 9 February 2007)
- Non-compliant contributor¹

For this Contract the **80 Financial / 20 Preference** shall apply and up to **20** tender evaluation points (N_{P1}) will be awarded for the Status Level of B-BBEE contribution and Local Enterprise Promotion, in accordance with the tables below:

B-BBEE Status Level of Contributor	Number of Points for B-BBEE
1	10
2	9
3	7
4	6
5	4
6	3
7	2
8	1
Non-compliant contributor ¹	0

¹ A non-compliant contributor is one who does not meet the minimum score for a level 8 contributor, or who is not verified in terms of the Construction Sector Charter

Locality of supplier	Points
Within the boundaries of the municipality	10
Outside of the boundaries of the municipality	0

Tenderers shall note the following Conditions of Clause 11 of the Preferential Procurement Regulations 2022:

- (8) A tenderer (company/firm/entity) will not be awarded points for B-BBEE status level if it is indicated in the tender documents that such a tenderer intends sub-contracting more than 25% of the value of the contract to any other enterprises / sub-contractors that do not have an equal or higher B-BBEE Status Level than the prime contractor, unless the intended sub-contractors are Exempted Micro Enterprises that have the capability and ability to execute the sub-contract works;
- (9) A prime contractor will not be awarded points for B-BBEE status level if he indicates in his tender that he intends sub-contracting more than 25% of the value of the contract to sub-contractors that do not qualify for at least the points that the prime contractor qualifies for, unless the intended sub-contractors are Exempted Micro Enterprises that have the capability and ability to execute the sub-contract works.

F.3.11.10 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 tenderers ability to fulfil its obligations in terms of the tender document, that is, that the tenderer can demonstrate that he/she possesses the necessary professional and technical qualifications, professional and technical competence, financial resources, equipment and other physical facilities, managerial capability, reliability, experience, reputation, personnel to perform the contract, etc.

No tenderer will be recommended for an award unless the tenderer has demonstrated that he/she has the resources and skills required.

F3.13 Acceptance of tender offer

Add the following to F.3.13.1:

F.3.13.1 Tender offers will only be accepted if:

- a) the tenderer is registered and in good standing with the South African Revenue Service (SARS) and has submitted evidence in the form of an **original** valid Tax Clearance Certificate issued by SARS or proof that he or she has made arrangements with SARS to meet his or her outstanding tax obligations;
- b) the tenderer or any of its directors is not listed on the Register of Tender Defaulters in terms of the Prevention and Combating of Corrupt Activities Act of 2004 as a person prohibited from doing business with the public sector;
- c) the tenderer has not:
 - i) abused the Employer's Supply Chain Management System; or
 - ii) failed to pay municipal rates and taxes or service charges and such rates, taxes and charges are in arrears for more than three months;
 - iii) failed to perform on any previous contract and has been given a written notice to this effect;
- d) the tenderer has completed the Compulsory Enterprise Questionnaire and there are no conflicts of interest which may impact on the tenderer's ability to perform the contract in the best interests of the employer or potentially compromise the tender process.

Tender offers will be rejected if they show any additional items not originally included in the tender documents, conditional or incomplete offers, irregularities of any kind in the tender.

The Employer does not bind himself to accept the lowest priced tender, highest 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.

F.3.13.2 Disputes, objections, complaints and queries

In terms of Regulations 49 and 50 of the Local Government: Municipal Finance Management Act, 2003 – Municipal Supply Chain Management Regulations (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.
- b) Objections, complaints, queries and disputes must be submitted in writing to the Municipal Manager, Langeberg Municipality, 28 Main Road, Ashton, 6715.

F.3.13.3 Appeals

- a) In terms of Section 62 of the Systems Act 32 of 2000 a person whose rights are affected by a decision taken by the Langeberg Municipality in the implementation of its supply chain management system, 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) Reasons and/or grounds for the appeal
 - ii) The way in which the appellants rights have been affected
 - iii) Remedy sought by appellant

F.3.13.4 Right to approach the courts & rights in terms of Promotion of Administrative Justice Act (Act 3 of 2000) and Promotion of Access to Information (Act 2 of 2000)

Clauses F.3.13.2 and F.3.13.3 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.

- a) All legal process and pleadings must be served on the Municipal Manager, Langeberg Municipality, 28 Main Road, Ashton, 6715.
- b) All requests in terms of PAJA and PAIA must be submitted in writing to the Municipal Manager, Langeberg Municipality, 28 Main Road, Ashton, 6715.

F.3.17 Provide copies of the contract

Add the following:

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

F.4 Additional Conditions of Tender

The additional conditions of tender are:

F.4.1 Compliance with Occupational Health and Safety Act 1993

Tenderers are to note the requirements of the Occupational Health and Safety Act No. 85 of 1993 and the Construction Regulations 2010 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, appended to Schedule 13 : Health and Safety Plan in T2.2 : Returnable Schedules, a detailed Health and Safety Plan in respect of the Works in order to demonstrate the necessary competencies and resources to perform the construction work all in accordance with the Act and Regulations. 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 in order 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 be available for inspection on Site at all times 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 C1.4 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.

F.4.2 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:

- 1) inspected the Contract Drawings and read and fully understood the Conditions of Contract.

- 2) 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.
- 3) 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 equipment to and from the site and made the necessary provisions for any additional costs involved thereby.
- 4) 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.

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

F.4.3 Imbalance in tendered rates

In the event of tendered rates or lump sums being declared by the Employer to be unacceptable to it because they are 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 as tendered or, if applicable, the corrected total of prices in accordance with F.3.9.3.

Should the Tenderer fail to amend his Tender in a manner acceptable to the Employer, the Employer may reject the Tender.

F.4.4 Targeted enterprises and targeted labour

It is a requirement of the Contract that the work be executed in such a manner as to maximise the use of small enterprises / subcontractors and labour intensive construction methods in order to provide low and semi-skilled work / employment opportunities.

To this end, it is a requirement of the Contract that the Contractor shall engage targeted enterprises and targeted labour, as described in Part C3.3 in the Scope of Work, directly or indirectly in the performance of the contract to the extent that the total monetary value of such engagements (exclusive of VAT), expressed as a percentage of the value of the contract. Failure to achieve the specified minimum CPG₂ in the performance of the contract will result in penalties being applied.

F.4.5 Invalid tenders

Tenders shall be considered invalid and shall be endorsed and recorded as such in the tender opening record, by the responsible official who opened the tender, in the following circumstances:

- a) if the tender offer is not submitted on the Form of Offer and Acceptance bound into this tender document (form C1.1, Part C1: Agreements and Contract Data);
- b) if the tender is not completed in non-erasable ink;
- c) if the offer (of the Form of Offer and Acceptance) has not been signed;
- d) if the offer (of the Form of Offer and Acceptance) is signed, but the name of the tenderer is not stated or is indecipherable.

F.4.6 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.

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

F.4.7 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, share holder 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.

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.

F.4.8 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) willfully 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 Schedule 15, 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.

F.4.9 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.

F.4.12 Price variations

The Contract Price shall **not** be subject to any contract price adjustment, the rates and prices tendered in the bills of quantities shall be 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.

F.4.13 Requests for contract documents, or parts thereof, in electronic format

The Employer shall not formally issue tender documents in electronic format as contemplated in F.2.13.2 and F.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 F.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 or part thereof. Only those tenders that have been completed on the issued hard copy tender document shall be considered.
- (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 F.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.

F.4.14 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 BBEE but should not be disqualified from the bidding process. They will score points out of 90 or 80 for price only and zero (0) points out of 5 or 10 for BBEE.

A trust, consortium or joint venture must submit a consolidated B-BBEE Status Level Verification Certificate for every separate bid.

Annex F
(normative)**Standard Conditions of Tender****F.1 General****F.1.1 Actions**

F.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 F.2 and F.3, timeously and with integrity, and behave equitably, honestly and transparently, comply with all legal obligations and not engage in anticompetitive practices.

F.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.

F.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.

F.1.2 Tender Documents

The documents issued by the employer for the purpose of a tender offer are listed in the tender data.

F.1.3 Interpretation

F.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.

F.1.3.2 These conditions of tender, the tender data and tender schedules which are only required for tender evaluation purposes, shall not form part of any contract arising from the invitation to tender.

F.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 fulfill his or her duties impartially;
 - ii) an individual or organisation 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 organisation which 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;
- e) **organization** means a company, firm, enterprise, association or other legal entity, whether incorporated or not, or a public body;

- f) **functionality** means the totality of features and characteristics of a product or service that bear on its ability to satisfy stated or implied needs.

F.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.

F.1.5 Cancellation and Re-Invitation of Tenders

F1.5.1 An organ of state 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 services, works or goods requested; or
- (b) funds are no longer available to cover the total envisaged expenditure; or
- (c) no acceptable tenders are received; or
- (d) there is a material irregularity in the tender process

F1.5.2 The decision to cancel a tender must be published in the cidb website and in the government Tender Bulletin for the media in which the original tender invitation was advertised.

F.1.6 Procurement procedures

F.1.6.1 General

Unless otherwise stated in the tender data, a contract will, subject to F.3.13, be concluded with the tenderer who in terms of F.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.

F.1.6.2 Competitive negotiation procedure

F.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 F.3.4, the employer shall announce only the names of the tenderers who make a submission. The requirements of F.3.8 relating to the material deviations or qualifications which affect the competitive position of tenderers shall not apply.

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

F.1.6.2.3 At the conclusion of each round of negotiations, tenderers shall be invited by the employer to make a fresh 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.

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

F.1.6.3 Proposal procedure using the two stage-system

F.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.

F.1.6.3.2 Option 2

F.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.

F.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.

F.2 Tenderer's obligations**F.2.1 Eligibility**

F.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.

F.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.

F.2.2 Cost of tendering

F.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.

F.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.

F.2.3 Check documents

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

F.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.

F.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.

F.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.

F.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.

F.2.8 Seek clarification

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

F.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.

F.2.10 Pricing the tender offer

F.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 14 days before the closing time stated in the tender data.

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

F.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.

F.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.

F.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.

F.2.12 Alternative tender offers

F.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.

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

F.2.12.3 An alternative tender offer may only be considered in the event that the main tender offer is the winning tender.

F.2.13 Submitting a tender offer

F.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, services or supply identified in the contract data and described in the scope of works, unless stated otherwise in the tender data.

F.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.

F.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.

F.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.

F.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.

F.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.

F.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.

F.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.

F.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.

F.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.

F.2.15 Closing time

F.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.

F.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.

F.2.16 Tender offer validity

F.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.

F.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.

F.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.

F.2.16.4 Where a tender submission is to be substituted, submit a substitute tender in accordance with the requirements of F.2.13 with the packages clearly marked as —SUBSTITUTEII.

F.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 F.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.

F.2.18 Provide other material

F.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.

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

F.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.

F.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.

F.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.

F.2.22 Return of other tender documents

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

F.2.23 Certificates

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

F.3 The employer's undertakings**F.3.1 Respond to requests from the tenderer**

F.3.1.1 Unless otherwise stated in the tender Data, respond to a request for clarification received up to five working days before the tender closing time stated in the Tender Data and notify all tenderers who drew procurement documents.

F.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.

F.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 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 drew documents.

F.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.

F.3.4 Opening of tender submissions

F.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.

F.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.

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

F.3.5 Two-envelope system

F.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.

F.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.

F.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.

F.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.

F.3.8 Test for responsiveness

F.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.

F.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.

F.3.9 Arithmetical errors, omissions and discrepancies

F.3.9.1 Check the highest ranked tender or tenderer with the highest number of tender evaluation points after the evaluation of tender offers in accordance with F.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.

F.3.9.2 The employer must correct the arithmetical errors in the following manner:

- a) Where there is a discrepancy between the amounts in words and amounts in figures, the amount in words shall govern.
- b) 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.
- c) 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.

Consider the rejection of a tender offer if the tenderer does not correct or accept the correction of the arithmetical error in the manner described above.

F.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.

F.3.11 Evaluation of tender offers**F.3.11.1 General**

Appoint an evaluation panel of not less than three persons. Reduce each responsive tender offer to a comparative offer and evaluate them using the tender evaluation methods and associated evaluation criteria and weightings that are specified in the tender data.

F.3.11.2 Method 1: Price and Preference

In the case of a price and preference:

- 1) Score tender evaluation points for price
- 2) Score points for BBBEE contribution
- 3) Add the points scored for price and BBBEE.

F.3.11.3 Method 2: Functionality, Price and Preference

In the case of a functionality, price and preference:

- 1) Score functionality, rejecting all tender offers that fail to achieve the minimum number of points for functionality as stated in the Tender Data.
- 2) No tender must be regarded as an acceptable tender if it fails to achieve the minimum qualifying score for functionality as indicated in the tender invitation.
- 3) Tenders that have achieved the minimum qualification score for functionality must be evaluated further in terms of the preference points system prescribed in paragraphs 4 and 4 and 5 below.

The 80/20 preference point system for acquisition of services, works or goods up to Rand value of R 50 million

- 4) (a)(i) The following formula must be used to calculate the points for price in respect of tenders(including price quotation) with a rand value equal to, or above R 200 000 and up to Rand value of R 50 000 000 (all applicable taxes included):

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

Where

P_s = Points scored for comparative price of tender or offer under consideration; P_t = Comparative price of tender or offer under consideration; and P_{min} = Comparative price of lowest acceptable tender or offer.

- (4)(a)(ii) An employer of state may apply the formula in paragraph (i) for price quotations with a value less than R30 000, if and when appropriate:

- (4)(b) Subject to subparagraph(4)(c), points must be awarded to a tender for attaining the B-BBEE status level of contributor in accordance with the table below:

B-BBEE status level of contributor	Number of points
1	20
2	18
3	14
4	12
5	8
6	6
7	4
8	2
Non-compliant contributor	0

- (4)(c) A maximum of 20 points may be allocated in accordance with subparagraph (4)(b)

- (4)(d) The points scored by tender in respect of B-BBEE contribution contemplated in contemplated in subparagraph (4) (b) must be added to the points scored for price as calculated in accordance with subparagraph (4)(a).

(4)(e) Subject to paragraph 4.3.8 the contract must be awarded to the tender who scores the highest total number of points.

The 90/ 10 preference points system for acquisition of services, works or goods with a Rand value above R 50 million

(5)(a) The following formula must be used to calculate the points for price in respect of tenders with a Rand value above R 50 000 000 (all applicable taxes included):

90/10

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

Where

P_s = Points scored for comparative price of tender or offer under consideration; *P_t* = Comparative price of tender or offer under consideration; and *P_{min}* = Comparative price of lowest acceptable tender or offer.

(5)(b) Subject to subparagraph(5)(c), points must be awarded to a tender for attaining the B-BBEE status level of contributor in accordance with the table below:

B-BBEE status level of contributor	Number of points
1	10
2	9
3	6
4	5
5	4
6	3
7	2
8	1
Non-compliant contributor	0

(5)(c) A maximum of 10 points may be allocated in accordance with subparagraph

(5)(b).

(5)(d) The points scored by tender in respect of B-BBEE contribution contemplated in subparagraph (5) (b) must be added to the points scored for price as calculated in accordance with subparagraph (5)(a).

(5)(e) Subject to paragraph 4.3.8 the contract must be awarded to the tender who scores the highest total number of points.

In terms of Regulation 11 of the Preferential Procurement Regulations 2022, a contract may be awarded to a tenderer that did not score the highest points, only in accordance with section 2(1)(f) of the Preferential Procurement Policy Framework Act (Act no 5 of 2000) and Regulation 11 of the Preferential Procurement Regulations 2022.

F.3.11.6 Decimal places

Score price, preference and functionality, as relevant, to two decimal places.

F.3.11.7 Scoring Price

Score price of remaining responsive tender offers using the following formula:

$$N_{FO} = W_1 \times A$$

where: N_{FO} is the number of tender evaluation points awarded for price.

W_1 is the maximum possible number of tender evaluation points awarded for price as stated in the Tender Data.

A is a number calculated using the formula and option described in Table F.1 as stated in the Tender Data.

Table F.1: Formulae for calculating the value of A

Formula	Comparison aimed at achieving	Option 1	Option 2
1	Highest price or discount	$A = (1 + \frac{P - P_m}{P_m})$	$A = P / P_m$
2	Lowest price or percentage commission / fee	$A = (1 - \frac{P - P_m}{P_m})$	$A = P_m / P$
a P_m is the comparative offer of the most favourable comparative offer. P is the comparative offer of the tender offer under consideration.			

F.3.11.8 Scoring preferences

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. Calculate the total number of tender evaluation points for preferences claimed in accordance with the provisions of the tender data.

F.3.11.9 Scoring functionality

Score each of the criteria and subcriteria for quality in accordance with the provisions of the Tender Data.

Calculate the total number of tender evaluation points for quality using the following formula:

$$N_Q = W_2 \times S_O / M_S$$

where: S_O is the score for quality allocated to the submission under consideration;

M_S is the maximum possible score for quality in respect of a submission; and

W_2 is the maximum possible number of tender evaluation points awarded for the quality as stated in the tender data.

F.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.

F.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:

- is not under restrictions, or has principals who are under restrictions, preventing participating in the employer's procurement,
- 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,
- has the legal capacity to enter into the contract,
- is not insolvent, in receivership, under Business Rescue as provided for in chapter 6 of the Companies Act, 2008, bankrupt or being wound up, has his affairs administered by a court or a judicial officer, has suspended his business activities, or is subject to legal proceedings in respect of any of the foregoing,
- complies with the legal requirements, if any, stated in the tender data, and
- is able, in the opinion of the employer, to perform the contract free of conflicts of interest.

F.3.14 Prepare contract documents

F.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.

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

F.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.

F.3.16 Notice to unsuccessful tenderers

F.3.16.1 Notify the successful tenderer of the employer's acceptance of his tender offer by completing and returning one copy of the form of offer and acceptance before the expiry of the validity period stated in the tender data, or agreed additional period.

F.3.16.2 After the successful tenderer has been notified of the employer's acceptance of the tender, notify other tenderers that their tender offers have not been accepted.

F.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.

F.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.

F3.19 Transparency in the procurement process

F3.19.1 The CIDB prescripts require that tenders must be advertised and be registered on the cidb i.Tender system.

F3.19.2 The employer must adopt a transparency model that incorporates the disclosure and accountability as transparency requirements in the procurement process.

F3.19.3 The transparency model must identify the criteria for selection of projects, project information template and the threshold value of the projects to be disclosed in the public domain at various intervals of delivery of infrastructure projects.

F3.19.4 The client must publish the information on a quarterly basis which contains the following information:

- Procurement planning process
- Procurement method and evaluation process
- Contract type
- Contract status
- Number of firms tendering
- Cost estimate
- Contract title
- Contract firm(s)
- Contract price
- Contract scope of work
- Contract start date and duration
- Contract evaluation reports

F3.19.5 The employer must establish a Consultative Forum which will conduct a random audit in the implementation of the transparency requirements in the procurement process.

F3.19.6 Consultative Forum must be an independent structure from the bid committees.

F3.19.7 The information must be published on the employer's website.

F 3.19.8 Records of such disclosed information must be retained for audit purposes.

Annex G

(normative)

Alpha-numerics associated with the Contractor Grading Designations

Table G1: Contractor grading designations and associated parameters

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

Table G2: Classes of construction work (see next page)

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Description	Design ation	Definition	Basic works types	Examples
Civil engineering works	CE	Construction works that are primarily concerned with materials such as steel, concrete, earth and rock and their application in the development, extension, installation, maintenance, removal, renovation, alteration, or dismantling of building and engineering infrastructure	Water, sewerage, roads, railways, harbours and urban transport, development and municipal services	Structures such as a cooling tower, bridge, culvert, dam, grand stand, road, railway, reservoir, runway, swimming pool, silo or tunnel. The results of operations such as dredging, earthworks and geotechnical processes. Township services, water treatment and supply, sewerage works, sanitation, soil conservation works, irrigation works, storm-water and drainage works, coastal works, ports, harbours, airports and pipelines.
Electrical engineering works (Infrastructure)	EP	Construction works that are primarily concerned with development, extension, installation, removal, renovation, alteration or dismantling of engineering infrastructure: a) relating to the generation, transmission and distribution of electricity; or b) which cannot be classified as EB.	Electrical power generation, transmission, control and distribution equipment and systems.	Power generation Street and area lighting Substations and protection systems Township reticulations Transmission Lines Supervisory control and data acquisition systems
Electrical engineering works (buildings)	EB	Construction works that are primarily concerned with the installation, extension, modification or repair of electrical installations in or on any premises used for the transmission of electricity from a point of control to a point of consumption, including any article forming part of such an installation	All electrical equipment forming an integral part of buildings and/or structures, including any wiring, cable jointing and laying and electrical overhead line construction	Electrical installations in buildings Electrical reticulations within a plot of land (erf) or building site Standby plant and uninterrupted power supply Verification and certification of electrical installations on premises

Description	Designation	Definition	Basic works types	Examples
General building works	GB	Construction works that: a) are primarily concerned with the development, extension, installation, renewal, renovation, alteration, or dismantling of a permanent shelter for its occupants or contents; or b) cannot be categorised in terms of the definitions provided for civil engineering works, electrical engineering works, mechanical engineering works, or specialist works.	Buildings and ancillary works other than those categorised as being: c) civil engineering works; d) electrical engineering works; e) mechanical engineering works; or f) specialist works.	Buildings for domestic, industrial, institutional or commercial occupancies Car ports Fences other than classified as SS Stores Walls
Mechanical engineering works	ME	Construction works that are primarily concerned with the development, extension, installation, removal, alteration, renewal of engineering infrastructure for gas transmission and distribution, solid waste disposal, heating, ventilation and cooling, chemical works, metallurgical works, manufacturing, food processing and, materials handling	Machine systems including those relating to the environment of building interiors: a) gas transmission and distribution systems b) pipelines c) solid waste disposal d) materials handling, lifting machinery, heating, ventilation and cooling, pumps, e) continuous process systems f) chemical works, metallurgical works, manufacturing, food processing such as that in concentrator machinery and apparatus, oil and gas wells, smelters, cyanide plants, acid plants, metallurgical machinery, equipment and apparatus, and works necessary for the beneficiation of metals, minerals, rocks, petroleum and organic chemical processes.	Air-conditioning and mechanical ventilation Boiler installations and steam distribution Central heating Centralised hot water generation Cranes and hoists Dust and sawdust extraction Compressed air, gas and vacuum installations Conveyor and materials handling installations Continuous process systems involving chemical works, metallurgical works, oil and gas wells, acid plants, metallurgical machinery, equipment and apparatus, and works necessary for the beneficiation of metals, minerals, rocks, petroleum and organic substances and other chemical processes Kitchen equipment Laundry equipment Lift installations and escalators Refrigeration and cold rooms Waste handling systems (including compactors)

Description	Designation	Definition	Basic works types	Examples
Specialist works	SB	A subset of construction works identified and defined by the Board that involves specialist capabilities for its execution	The extension, installation, repair, maintenance or renewal, or removal, of asphalt	
	SC		The development, extension, installation, removal, and dismantling, as relevant, associated with building excavations, shaft sinking and lateral earth support	
	SD		The development, extension, installation, repair, renewal, removal, or alteration of corrosion protection systems (cathodic, anodic and electrolytic)	
	SE		Demolition of buildings and engineering infrastructure and blasting	
	SF		The development, extension, installation, renewal, removal, renovation, alteration or dismantling of fire prevention and protection infrastructure (drencher and sprinkler systems and fire installation)	
	SG		The development, extension, installation, renewal, removal, renovation, alteration or dismantling of glazing, curtain walls and shop fronts	
	SH		The development, extension, installation, maintenance, renewal, removal, alteration or dismantling, as relevant, of landscaping, irrigation and horticultural works	
	SI		The development, extension, installation, repair, maintenance, renewal, removal, renovation, alteration or, dismantling of lifts, escalators, travellers and hoisting machinery	
	SJ		The development, installation, removal, or dismantling, as relevant, of piles and other specialized foundations for buildings and structures	
	SK		The installation, renewal, removal, alteration or dismantling, as relevant, road markings and signage	
	SL		The development, extension, installation, renewal, removal, renovation, alteration or dismantling of structural steelwork and scaffolding	
	SM		Timber buildings and structures	
	SN		The extension, installation, repair, maintenance, renewal, removal, renovation or alteration, as relevant, of the waterproofing of basements, roofs and walls using specialist systems.	
	SO		The development, extension, installation, renewal, removal, alteration or dismantling or demolition of water installations and soil and waste water drainage associated with buildings (wet services, plumbing)	
	SQ		The development, extension, installation, repair, removal, alteration, dismantling or demolition of precast concrete or steel fencing	

Part T2: Returnable Documents

T2.1 List of Returnable Documents

T2.2 Returnable Schedules



T2.1 List of Returnable Documents

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

1. Returnable Schedules required for tender evaluation purposes

- 1: COMPULSORY ENTERPRISE QUESTIONNAIRE
- 2: CLARIFICATION MEETING ATTENDANCE CERTIFICATE
- 3: AUTHORITY OF SIGNATORY
- 4: SCHEDULE OF WORK EXPERIENCE
- 5: SCHEDULE OF CONSTRUCTION EQUIPMENT
- 6: PRELIMINARY PROGRAMME
- 7: SCHEDULE OF ESTIMATED MONTHLY EXPENDITURE
- 8: TAX CLEARANCE CERTIFICATE, TCS SARS COMPLIANCE STATUS PIN, BARGAINING COUNCIL CERTIFICATE AND MINIMUM WAGE DECLARATION
- 9: CONFIRMATION OF CONTRACTOR ENTERPRISE REGISTRATION
- 10: TENDERER'S BANKING DETAILS
- 11: SCHEDULE OF SUBCONTRACTORS
- 12: DETAILS OF CONTRACT MANAGER, CONSTRUCTION MANAGER AND GENERAL FOREMAN'S EXPERIENCE
- 13: HEALTH AND SAFETY PLAN.....
- 14: PROPOSED AMENDMENTS AND QUALIFICATIONS BY TENDERER
- 15: DECLARATION OF TENDERER'S PAST SUPPLY CHAIN MANAGEMENT PRACTICES.....
- 16: DECLARATION OF "IN THE SERVICE OF THE STATE"
- 17: DECLARATION FOR MUNICIPAL SERVICES AND PAYMENTS TO SERVICE PROVIDER.....
- 18: CERTIFICATE OF INDEPENDENT TENDER DETERMINATION
- 19: DECLARATION OF INTEREST MBD4.....

2. Other documents required for tender evaluation purposes

- Joint Venture Agreement (if applicable) – append to Schedule 3.
- An **original or certified** valid Tax Clearance Certificate issued by the South African Revenue Services –append to Schedule 8.
- Documentary evidence / proof of registration and verification on Langeberg Municipality Supplier Database.- append to Schedule 9.
- Documentary evidence / proof of registration and verification on CIDB Contractor Database.- append to Schedule 9.
- Health and Safety plan – append to Schedule 13.
- **B-BBEE Verification Certificate** – append to Schedule 20.

3. Returnable Schedules that will be incorporated into the Contract

- 20: RECORD OF ADDENDA TO TENDER DOCUMENT

Preferencing Schedule(s)

- 21: PREFERENCING SCHEDULE – B-BBEE STATUS LEVEL CONTRIBUTION PREFERENCE.....

T2.2 Returnable Schedules

Notes to tenderer:

1. Failure to fully complete the relevant returnable documents may render such a tender offer unresponsive.
2. These forms must be completed in black ink. Returnable documents shall be signed by a signatory duly authorised to sign the tender offer. Any alterations made prior to tender closure must be countersigned by an authorised signatory.
3. Tenderers shall note that their signature appended to each returnable form represents a declaration that they vouch for the accuracy and correctness of the information provided.
4. Notwithstanding any check or audit conducted by or on behalf of the Employer, the information provided in the returnable documents is accepted in good faith and as justification for entering into a contract with a tenderer. If subsequently any information is found to be incorrect such discovery shall be taken as willful misrepresentation by that tenderer to induce the contract. In such event the Employer has the discretionary right under contract condition 9.2 to terminate the contract.
5. Should a tenderer wish to offer a different time period of completion than that required by the Employer, it shall be submitted as an alternative tender.
6. If more than one alternative tender is submitted, each one shall be numbered and submitted on a separate copy of form C1.1.1 Form of Offer, completed and signed, and accompanied by the prescribed priced C2.2 Bill of Quantities and supporting documents.



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:

Address of enterprise:

.....

.....

Section 2: VAT registration number, if any:

Section 3: CIDB registration number, if any:

Section 4: Particulars of sole proprietors and partners in partnerships

Name*	Identity number*	Personal income tax number*

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

Section 5: Particulars of companies and close corporations

Company registration number

Close corporation number

Tax reference number

Section 6: Record of service of the state

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

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

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

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

*insert separate page if necessary

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

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

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

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

*insert separate page if necessary

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

- authorizes the Employer to obtain a tax clearance certificate from the South African Revenue Services that my / our tax matters are in order;
- 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;
- 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;
- 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;
- 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:

SCHEDULE 2: CLARIFICATION MEETING ATTENDANCE CERTIFICATE

Refer to tender conditions F.2.1 and F.2.7

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

representing (the tenderer)

of (address)

telephone 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 or 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:

SCHEDULE 3 : AUTHORITY OF SIGNATORY

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.

NAME OF FIRM	ADDRESS	DULY AUTHORIZED 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.

SIGNED ON BEHALF OF TENDERER: SIGNATURE OF SIGNATORY:

SCHEDULE 4 : SCHEDULE OF WORK EXPERIENCE

The tenderer shall insert in the spaces provided below a list of similar completed civil engineering contracts awarded to him and those currently being undertaken. This information is deemed to be material to the award of the Contract.

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

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

SIGNED ON BEHALF OF TENDERER:

.....

SCHEDULE 5 : 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.

F1: CONSTRUCTION EQUIPMENT IMMEDIATELY AVAILABLE

DESCRIPTION, SIZE, CAPACITY	NUMBER
	

F2: CONSTRUCTION EQUIPMENT ON ORDER

(State details of arrangements made, with delivery dates)

DESCRIPTION, SIZE, CAPACITY	NUMBER

F3: 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:

.....

SCHEDULE 6 : 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:



SCHEDULE 7 : SCHEDULE OF ESTIMATED MONTHLY EXPENDITURE

The tenderer shall state his estimated expenditure indicating the values of each monthly claim in terms of Clause 6.10 of the General Conditions of Contract, which he estimates will arise based on his preliminary programme and tendered rates, in the table below. The total of the monthly amounts shall be equal to the tender sum.

MONTH	VALUE
1.	R
2.	R
3.	R
4.	R
5.	R
6.	R
7.	R
8.	R
9.	R
10.	R
11.	R
12.	R
SUB TOTAL	R
CONTINGENCIES (10%)	R
SUB TOTAL	R
VAT (15%)	R
TOTAL (INCLUDING VAT 15%)	R

SIGNED ON BEHALF OF TENDERER:

.....

SCHEDULE 8 : TAX CLEARANCE CERTIFICATE, TCS SARS COMPLIANCE STATUS PIN, BARGAINING COUNCIL CERTIFICATE AND MINIMUM WAGE DECLARATION**(A) TAX CLEARANCE CERTIFICATE**

A TCS SARS compliance status pin (valid at tender closing date) from the South African Revenue Services (SARS) shall be attached to this Schedule or proof that the tenderer has made arrangements with SARS to meet his or her outstanding tax obligations.

Each party to a Consortium/Joint Venture shall submit a separate Tax Clearance Certificate, or proof that he or she has made the necessary arrangements with SARS.

Failure to submit a TCS SARS compliance status pin will result in the invalidation of the tender/bid.

(B) BARGAINING COUNCIL CERTIFICATE OF COMPLIANCE

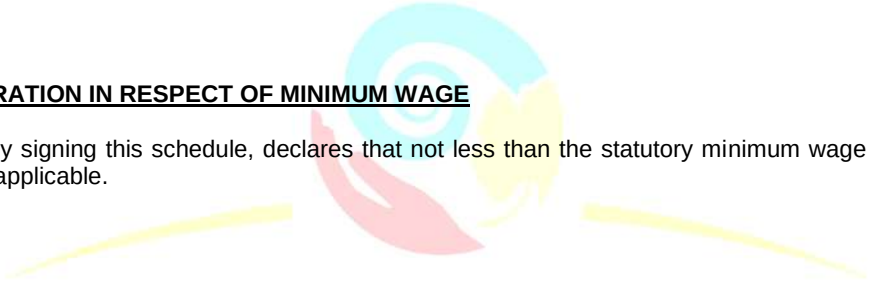
Tenderers must be registered with a relevant Bargaining Council (if such be in place) and provide the applicable Certificate of Compliance in terms of the relevant Government Gazette.

Where applicable, a Certificate of Compliance issued by the relevant Bargaining Council shall be attached to this schedule.

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

(C) DECLARATION IN RESPECT OF MINIMUM WAGE

The tenderer, by signing this schedule, declares that not less than the statutory minimum wage shall be paid to employees, as applicable.



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

SIGNED ON BEHALF OF TENDERER:

SCHEDULE 9 : CONFIRMATION OF CONTRACTOR ENTERPRISE REGISTRATION**A. CENTRAL SUPPLIER DATABASE REGISTRATION**

Refer to Tender Data clauses F.2.1 and F.2.23

I/We hereby confirm that I/we are registered and verified on the Langeberg Municipality Supplier Database

COMPANY NAME	REGISTRATION NUMBER

I/We attach a copy of the Company Registration on the Central Supplier Database and acknowledge that the validity of this certificate is dependent upon the validity of the tax clearance certificate attached to Schedule 8. In the case of Joint Venture Partnerships this requirement will apply to each party to the Joint Venture.

B. CIDB CONTRACTOR REGISTRATION

Refer to Tender Data clauses F.2.1.2, F.2.23.3 and F.3.13.1:

I/We hereby confirm my/our registration on the 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:

.....

SCHEDULE 10 : TENDERER'S BANKING DETAILS**BANKING DETAILS**

The bidder must provide its banking details as follows:

Name of bank :

Contact person :

Branch Name :

Branch Number :

Account number :

Name of account holder :

A letter from the bank must be attached as proof of the tenderer's bank account details along with a bank rating in the amount of the tender for the amount of time indicated in the Contract Data as the Contract Period. Failure to provide this letter may result in the Tender offer not being considered.

We notify you that it is our intention to employ the following Subcontractors for work in this contract.

Acceptance of this tender shall not be construed as approval of all or any of the listed subcontractors. Should any of the subcontractors not be approved subsequent to acceptance of the tender, this shall in no way invalidate this tender, and the tendered unit rates for the various items of work shall remain final and binding, even in the event of a subcontractor not listed below being approved by the Engineer.

SUBCONTRACTORS				
Category / type	Subcontractor Name / Address / Contact Person / Phone / Fax / Details Of Organisation / Firm Experience	B-BBEE Status	Items of work (pay items) to be undertaken by the Subcontractor	Estimated Cost of Work (Rand)
 LANGEBERG MUNICIPALITEIT MUNICIPALITY MASIPALA				
SUBTOTAL (Excluding VAT)				



is Schedule

Depended by the tenderer to this Schedule (If nil, enter NIL).

SIGNED ON BEHALF OF TENDERER:

SCHEDULE 12 : DETAILS OF CONTRACT MANAGER, CONSTRUCTION MANAGER GENERAL FOREMAN'S EXPERIENCE

Tenderers shall set out in the Schedule hereunder details of the Site Agent and General Foreman's experience in work of a similar nature to that for which their Tender is submitted.

Failure to complete this Schedule may result in the Tender not being considered.

CONTRACT MANAGER	NAME: NQF LEVEL				
CONTRACT & CLIENT	NATURE OF WORK	POSITION HELD	VALUE OF WORK	OF	YEAR COMPLETED

CONSTRUCTION MANAGER	NAME: NQF LEVEL				
CONTRACT & CLIENT	NATURE OF WORK	POSITION HELD	VALUE OF WORK	OF	YEAR COMPLETED

GENERAL FOREMAN	NAME: NQF LEVEL.....			
CONTRACT & CLIENT	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 THE TENDERER:



SCHEDULE 13: HEALTH AND SAFETY PLAN

Tenderers are to note the requirements of the Occupational Health and Safety Act No. 85 of 1993 and the Construction Regulations 2010 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 prepare and attach a Health and Safety Plan in respect of the Works in order to demonstrate the necessary competencies and resources to perform the construction work all in accordance with the Act and Regulations. 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 in order 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 tenderer shall also take into account the additional requirements stated in the Project Specifications when drawing up the Health and Safety Plan for the contract.

Details of the Health and Safety Plan 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:

SCHEDULE 14: PROPOSED AMENDMENTS AND QUALIFICATIONS BY THE TENDERER

The Tenderer should record any deviations or qualifications he may wish to make to the tender documents in this Returnable Schedule. Alternatively, a tenderer may state such deviations and qualifications in a covering letter attached to his tender and reference such letter in this schedule.

The Tenderer's attention is drawn to clause F.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 modifications are desired, the schedule hereunder is to be marked **NIL** and signed by the Tenderer.

No alternative Tender will be considered unless a Tender free of qualifications and strictly on the basis of the Tender Documents is also submitted.

PAGE	CLAUSE / ITEM	PROPOSAL / DESCRIPTION
		

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

SIGNED ON BEHALF OF TENDERER:

SCHEDULE 15: DECLARATION OF TENDERER'S PAST SUPPLY CHAIN MANAGEMENT PRACTICES

1.This Municipal Bidding Document must form part of all bids invited.

2.It serves as a declaration to be used by municipalities and municipal entities in ensuring that when goods and services are being procured, all reasonable steps are taken to combat the abuse of the supply chain management system.

3.The bid of any bidder may be rejected if that bidder, or any of its directors 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).

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

ITEM	QUESTION	Yes	No
4.1	Is the bidder or any of its directors listed on the National Treasury's database 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 National Treasury after the audi alteram partem rule was applied).	Yes ☐	No ☐
4.1.1	If so, furnish particulars:		
4.2	Is the bidder 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 (No 12 of 2004)? (To access this Register enter the National Treasury's website, www.treasury.gov.za , click on the icon "Register for Tender Defaulters" or submit your written request for a hard copy of the Register to facsimile number (012) 3265445).	Yes ☐	No ☐
4.2.1	If so, furnish particulars:		
4.3	Was the bidder 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 ☐
4.3.1	If so, furnish particulars:		

4.4	Does the bidder 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 90 days?	Yes ☐	No ☐
4.4.1	If so, furnish particulars:		
4.5	Was any contract between the bidder 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 ☐
4.5.1	If so, furnish particulars:		

CERTIFICATION

I, THE UNDERSIGNED

.....

(FULL NAME)

CERTIFY THAT THE INFORMATION FURNISHED ON THIS DECLARATION FORM IS TRUE AND CORRECT.
I ACCEPT THAT, IN ADDITION TO CANCELLATION OF A CONTRACT, ACTION MAY BE TAKEN AGAINST ME SHOULD THIS DECLARATION PROVE TO BE FALSE.

SIGNATURE

DATE

POSITION

NAME OF BIDDER

SCHEDULE 16: DECLARATION OF "IN THE SERVICE OF THE STATE"

the state, or has been in the service of the state in the previous twelve months, the following information must be completed:
(Please indicate if not applicable)

The name of the person in the employment of the state:

.....

The capacity in which that person is in service of the state:

.....

Is that person an owner, director, manager, shareholder or connected to the business: Yes or No? (If yes please specify)

.....

The relationship to the owner, director, manager, shareholder or stakeholder of the entity:

	Spouse	Child	Parent
Owner			
Director			
Manager			
Shareholder			

"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) a member of the accounting authority of any national or provincial public entity; or

(f) an employee of Parliament or a provincial legislature.

CERTIFICATION

I, THE UNDERSIGNED (FULL NAME)

CERTIFY THAT THE INFORMATION FURNISHED ON THIS DECLARATION FORM IS TRUE AND CORRECT.

I ACCEPT THAT, IN ADDITION TO CANCELLATION OF A CONTRACT, ACTION MAY BE TAKEN AGAINST ME SHOULD THIS DECLARATION PROVE TO BE FALSE.

.....
Signature

.....
Date

.....
Position

.....
Name of the Business



SCHEDULE 17: DECLARATION: CERTIFICATE FOR MUNICIPAL SERVICES AND PAYMENTS TO SERVICE PROVIDERS**PART A: PROPERTY OWNED BY ENTERPRISE OR DIRECTORS**

Please complete the following if property is owned by the enterprise, the proprietors, directors or partners in their personal capacity, which must be confirmed by the relevant municipality (**ATTACH COPY OF MUNICIPAL ACCOUNT(S) NOT OLDER THAN 30 DAYS:**

Name of account holder:

Account number:

Account number:

FOR MUNICIPAL USE ONLY

I/we hereby certify that the municipal account details of our client as indicated above is correct.

.....
Name of municipal official (print name)

.....
Signature of municipal official

Official date stamp of
municipality

PART B: PROPERTY LEASED BY ENTERPRISE OR DIRECTORS

Please attach a sworn affidavit or a copy of your lease agreement if the property is leased by the enterprise or the proprietors or directors in their personal capacity, for which the aforementioned is not responsible for payment of municipal rates and taxes.

PART C: WHERE PROPERTY IS NOT OWNED OR LEASED BY ENTERPRISE OR DIRECTORS

Please attach a sworn affidavit from the proprietor or director of the enterprise confirming that the enterprise does not own or lease any property and that the aforementioned is not responsible for payment of any municipal rates and taxes.

I,....., the undersigned, certify that the information furnished on this declaration form is correct and that I/we have no undisputed commitments for municipal services towards a municipality or other service provider in respect of which payment is overdue for more than 90 days.

.....
Signature for and on behalf of the bidder

.....
Date

.....
LANGEBERG MUNICIPALITY

SCHEDULE 18 : CERTIFICATE OF INDEPENDENT TENDER DETERMINATION

I, the undersigned, in submitting this tender for Contract No. Error! Reference source not found. 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 or not affiliated with the tenderer, 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 consortium¹ 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;

¹Joint 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.

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.

SIGNED ON BEHALF OF TENDERER:

.....
Position

.....
Name of Tenderer

.....
Date



SCHEDULE 19: DECLARATION OF INTEREST MBD 4

- 1 Any legal person, including persons employed by the state¹, or persons having a kinship with persons employed by the state, including a blood relationship, may make an offer or offers in terms of this invitation to bid (includes an advertised competitive bid, a limited bid, a proposal or written price quotation). In view of possible allegations of favouritism, should the resulting bid, or part thereof, be awarded to persons employed by the state, or to persons connected with or related to them, it is required that the bidder or his/her authorised representative declare his/her position in relation to the evaluating/adjudicating authority where-
 1. the bidder is employed by the state; and/or the legal person on whose behalf the bidding document is signed, has a relationship with persons/a person who are/is involved in the evaluation and or adjudication of the bid(s), or where it is known that such a relationship exists between the person or persons for or on whose behalf the declarant acts and persons who are involved with the evaluation and or adjudication of the bid.
- 2 In order to give effect to the above, the following questionnaire must be completed and submitted with the bid.
 1. Full Name of bidder or his or her representative:
 2. Identity Number:.....
 3. Position occupied in the Company (director, trustee, shareholder², member):
.....
 4. Registration number of company, enterprise, close corporation, partnership agreement or trust:
.....
 5. Tax Reference Number:
 6. VAT Registration Number:
- 3 The names of all directors / trustees / shareholders / members, their individual identity numbers, tax reference numbers and, if applicable, employee / PERSAL numbers must be indicated in paragraph 13.2 below.

¹"State" means –

1. (a) 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);
2. (b) any municipality or municipal entity;
3. (c) provincial legislature;
4. (d) national Assembly or the national Council of provinces; or
5. (e) Parliament.

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

4 Are you or any person connected with the bidder presently employed by the state? YES / NO

1. If so, furnish the following particulars:

Name of person / director / trustee / shareholder/ member:

.....

Name of state institution at which you or the person connected to the bidder is employed:

.....

Position occupied in the state institution:

.....

Any other particulars:

.....

.....

2. If you are presently employed by the state, did you obtain the appropriate authority to undertake remunerative

3. work outside employment in the public sector? YES / NO

4. If yes, did you attach proof of such authority to the bid document? YES / NO

5. (Note: Failure to submit proof of such authority, where applicable, may result in the disqualification of the bid.

6. If no, furnish reasons for non-submission of such proof:

.....

.....

.....

7. Did you or your spouse, or any of the company's directors / trustees / shareholders / members or their spouses conduct business with the state in the previous twelve months? YES / NO

8. If so, furnish particulars:

.....

.....

.....

9. Do you, or any person connected with the bidder, have any relationship (family, friend, other) with a person employed by the state and who may be involved with the evaluation and or adjudication of this bid? YES / NO

10. If so, furnish particulars.

.....

.....

.....

11. Are you, or any person connected with the bidder, aware of any relationship (family, friend, other) between any other bidder and any person employed by the state who may be involved with the evaluation and or adjudication of this bid? YES/NO

11.1 If so, furnish particulars.

.....

.....

.....

12. Do you or any of the directors / trustees / shareholders / members of the company have any interest in any other related companies whether or not they are bidding for this contract? YES/NO

12.1 If so, furnish particulars:

.....

.....

.....

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

Full Name	Identity Number	Personal Income Reference Number	Tax Status	State Employee Number	Personal Number

6 DECLARATION

I, THE UNDERSIGNED (NAME).....
 CERTIFY THAT THE INFORMATION FURNISHED IN THE SECTION ABOVE IS CORRECT.

I ACCEPT THAT THE STATE MAY REJECT THE BID OR ACT AGAINST ME SHOULD THIS DECLARATION
 PROVE
 TO BE FALSE.

.....
 Signature Date

 Position Name of bidder
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SCHEDULE 20: RECORD OF ADDENDA TO TENDER DOCUMENT (ANNEX K)

We confirm that the following communications / Addenda / Notice(s) to Tenderers received from the Employer before the submission of this tender offer, amending the tender documents, have been taken into account in this tender offer:

ADDENDUM No	DATE	SUBJECT MATTER OF ADDENDUM / NOTICE

Documentary evidence of Addenda / Notices issued to Tenderers indicating proof of receipt shall accompany this Schedule.

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

SIGNED ON BEHALF OF TENDERER:

.....

SCHEDULE 21 :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

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 SERVICES

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:

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

Where—
 P_s = Points scored for price of tender under consideration;

P_t = Price of tender under consideration; and

$P_{\min}$ = 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:

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

Where-

P_s = Points scored for price of tender under consideration;

P_t = Price of tender under consideration; and

$P_{\min}$ = 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:

$$P_s = 80 \left(1 + \frac{P_t - P_{\max}}{P_{\max}} \right)$$

Where-

P_s = Points scored for price of tender under consideration;

P_t = Price of tender under consideration; and

$P_{\max}$ = 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 –
- 4.6 may only score in terms of the 80/90-point formula for price; and
- 4.7 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.
- 4.5 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 municipality	10/5
Outside of the boundaries of the municipality	0

- 4.6 The policy should not include Pre-qualification goals.
- 4.7 Any specific goal for which a point may be awarded, must be clearly specified in the invitation to submit a tender.
- 4.8 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.
- 4.8.1 may only score in terms of the 80/90-point formula for price; and
- 4.8.2 scores 0 points out of 10/5 of the relevant specific goals where the supplier or service provider did not stipulate.
- 4.9 The preference points scored by a tenderer must be added to the points scored for price.
- 4.10 The points scored must be rounded off to the nearest two decimal places.
- 4.11 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 (80/20 system) (To be completed by the organ of state)	Number of points claimed (80/20 system) (To be completed by the tenderer)
BBBEE preference points system	10	
Promotion of enterprises located in the municipal area	10	

5. DECLARATION WITH REGARD TO COMPANY/FIRM

5.1 Name of company/firm.....

5.2 Company registration number:

5.3 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]

5.4 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:	
	
	
	
	



PART A: RESPONSIVENESS AND EVALUATION CRITERIA

1. RESPONSIVENESS CRITERIA

No bid will be considered by Langeberg Municipality unless it meets the following responsiveness criteria (for the bid to be considered responsive, the bid must meet the following requirements):

- a) Bidders must ensure that they are registered on the database of Langeberg Municipality, if they wish to conduct business with the Langeberg Municipality. If the bidder is not registered on the Langeberg Municipality's supplier database prior to the award of the bid, the registration form can be obtained as follows:
 - i. Supply Chain Management Unit, 28 Main Road, Ashton, 6715
- b) Langeberg Municipality will reject a bid in terms of the following:
 - i) If any municipal rates and taxes or municipal service charges owed by the bidder or any of its directors to this or any other municipality or municipal entity, are in arrears for more than three months.
 - ii) The name of the company of any of its director(s) names appear on the list of Tender Defaulters or restricted suppliers as published by National Treasury.
- c) The following completed documents must be submitted or provided as part of the bid submission:
 - i) Valid tax clearance certificate (MBD 2). A trust, consortium or joint venture must submit individual tax clearance certificates for each company.
 - ii) Copy or Certified valid B-BBEE Status Level Verification Certificate. Bidders who do not submit a B-BBEE Status Level Verification Certificate or are non-compliant contributors to B-BBEE do not qualify for preference points for B-BBEE, but will not be disqualified from the bidding process. A trust, consortium or joint venture must submit a consolidated B-BBEE Status Level Verification certificate for every separate bid.
 - iii) Copy of a billing account of your local municipality for the company or directors where applicable. Such account must not be older than 30 days.
 - iv) Completed and signed declaration of interest form (MBD 4).
- d) Bidders must acquaint themselves fully on the General Conditions of contract and special conditions of contract (if applicable).
- e) No bids will be accepted unless the bid documentation as issued by the municipality is utilised.
- f) No telephonic, faxed or e-mailed or late bids will be accepted.
- g) The awarding of this bid is subject to the following:
 - i) Relevant technical specifications / scope of works as stated in this bid document;
 - ii) Attendance of compulsory site or clarification meetings, if applicable;
 - iii) Attaining the minimum points for functionality, if applicable;
 - iv) Proper completion of this bid document and signing of declarations;
 - v) General conditions of contract that applies for this bid;
 - vi) Valid tax clearance certificate on the date of award;
 - vii) Any special conditions of contract as stipulated in this bid document.
- h) Persons aggrieved by decisions or actions taken in the implementation of this supply chain management system, may lodge within 14 days of the decision or action, a written objection or complaint against the decision or action.
- i) **Inducements, rewards, gifts and favours to municipalities, officials and other role players**
 - i) No person who is a provider or prospective provider of goods or services, or a recipient or prospective recipient of goods disposed or to be disposed of may either directly or through a representation intermediary promise, offer or grant any inducement or reward to the Langeberg Municipality for or in connection with the award of a contract;
 - ii) The accounting officer must promptly report any alleged contravention of subparagraph (1) to the National Treasury for considering whether the offending person, and any representative or intermediary through which such person is alleged to have acted, should be listed in the National Treasury's database of persons prohibited from doing business with the public sector.
- j) The bid must be properly received in a sealed envelope. The outside of the envelope must clearly indicate the quotation number and title (refer to invitation to bid for further details regarding submission)
- k) The bid must be deposited in the relevant quotation box as indicated in the invitation to bid (MBD1) on or before the closing date and time of the bid. **Telephonic, facsimile, electronic/ emailed and late bids will not be accepted.**
- l) Bids shall be declare invalid, and shall be endorsed and recorded as such in the bid opening record by the responsible official to open the bid, in the following instances:
 - i. If the bid is not sealed;
 - ii. if the bid including the bid price amount, where applicable is not submitted on the official pricing schedule;
 - iii. if the bid is not completed in non-erasable ink; or
 - iv. if the name of the bidder is not stated, or is indecipherable
- m) A bid will not be invalidated if the amount in words and the amount in figures do not correspond, in which case the amount in words shall be read out at the bid opening and shall be deemed to be the bid amount.

- n) The official bid document must be fully completed in indelible ink. Where information requested does not apply to the bidder and the space is left blank, the bidder must provide written clarification.
- o) All requested relevant and/ or additional documentation such as compliance certificates, professional registration, artisan qualification, etc., must be attached behind the bid document.
- p) Bidders must submit a certified statement signed by the bidder declaring that the bidder has no undisputed commitments for municipal services towards a municipality or other service provider in respect of which payment is overdue for more than 90 days.
- q) The bidder must be in good standing to do business with the public sector in terms of Regulation 38 of the Municipal Supply Chain Management Regulations (Government Gazette 27636 of 30 May 2005).
- r) If the entity submitting a bid is a joint venture or consortium or partnership, each party to that formation must submit all the above information.
- s) The bidder must adhere to the pricing instructions. **All prices must be exclusive of Value Added Tax stated in the bill of quantities. Value Added Tax will be added at the end of the schedule.**
- t) The Bidder's details must be provided.
- u) The necessary document authorising the representative to sign and submit the bid on the bidder's behalf must be completed and signed.
- v) The declaration of interest by the bidder must be completed and signed.
- w) The bid must comply with all the minimum technical specifications.
- x) The MBD 9 (certificate of bid determination) must be completed and signed.
- y) Alternative offers may be submitted by the bidder. The municipality is under no obligation to accept alternative offers.

2. EVALUATION OF BIDS

- a) All bids received shall be evaluated in terms of the Municipal Supply Chain Management Regulations, the Preferential Procurement Policy Framework Act no 5 of 2000 and the Preferential Procurement Regulations of 2022
- b) The municipality reserves the right to accept all, some, or none of the bids submitted — either wholly or in part — and it is not obligated to accept the lowest bid.
- c) In terms of Regulation 11 of the Preferential Procurement Regulations 2022, a contract may be awarded to a tenderer that did not score the highest points, only in accordance with section 2(1)(f) of the Preferential Procurement Policy Framework Act (Act no 5 of 2000) and Regulation 11 of the Preferential Procurement Regulations 2022.

Part C1: Agreements and Contract Data

- C1.1 Form of Offer and Acceptance (Agreement)**
- C1.2 Contract Data**
- C1.3 Form of Guarantee**
- C1.4 Occupational Health and Safety Agreement**



FORM OF OFFER AND ACCEPTANCE**(Contract Agreement)****Offer**

The Employer, identified in the Acceptance signature block, has solicited offers to enter into a Contract in respect of the following works:

TENDER NO: 28/2023: CONSTRUCTION OF DIVERSION WEIR UPGRADE AND ASSOCIATED WORKS IN NKQUBELA, ROBERTSON

The Tenderer, identified in the Offer signature block below, has examined the documents listed in the Tender Data and addenda thereto as listed in the Tender Schedules, and by submitting this Offer has accepted the Conditions of Tender.

By the representative of the Tendered, deemed to be duly authorised, signing this part of this Form of Offer and Acceptance (hereinafter the "Contract Agreement"), 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 the 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 Contract Agreement and returning one fully completed original copy of this Contract Agreement 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.

For the Tenderer:

Signature:

Name:

Capacity:

Name and address of organization:

(Name and address of organization/
tenderer)

Signature and name of witness:

Signature:

Name:

Date:

Acceptance

By signing this part of this Contract Agreement, 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 agreement binding Contract between the Employer and the Tenderer upon the terms and conditions contained in this Contract Agreement and in the Contract that is the subject of this Contract Agreement.

The terms of the Contract are contained in:

Part C1: Contract Agreements and Contract Data
Part C2: Pricing Data
Part C3: Scope of Work
Part C4: Site Information
Part C5: Health and Safety Specification
Part C6: Drawings

and drawings and documents or parts thereof, which may be incorporated by reference into Part 1 to 4 above.

Deviations from and amendments to the documents listed in the Tender Data and any addenda thereto as listed in the Tender Schedules as well as any changes to the terms of the Offer agreed by the Tenderer and the Employer during this process of offer and acceptance, are contained in the Schedule of Deviations attached to and forming part of this Contract Agreement. No amendments to or deviations from said documents are valid unless contained in this Schedule of Deviations, which must be duly signed by the authorised representative(s) of both parties.

Notwithstanding anything contained herein, this Agreement comes into effect on the date when the Tenderer receives one fully completed original copy of this Contract Agreement, including the Schedule of Deviations (if any). Unless the Tenderer (now Contractor) within five days of the date of such receipt notifies the Employer in writing of any reason why he cannot accept the contents of this Contract Agreement, this Contract Agreement shall constitute a binding Contract between the parties.

For the Employer:

Signature(s)

Name(s)

Capacity

Name and address of organization:

LANGEBERG MUNICIPALITY
28 Main Road
Ashton 6715

Signature and name of witness:

Signature:

Name:

Date:

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 arises 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

.....

5 Subject

Details

.....

By the duly authorized representatives signing this Schedule of Deviations, the Employer and the Tenderer agree to and accept the foregoing Schedule of Deviations as the only deviations from and amendments to the documents listed in the Tender Data and addenda thereto as listed in the Tender Schedules, as well as any confirmation, clarification or changes to the terms of the offer agreed by the Tenderer and the Employer during this process of offer and acceptance.

CONSTRUCTION OF DIVERSION WEIR UPGRADE AND ASSOCIATED WORKS IN NKQUBELA, ROBERTSON

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 fully completed original copy of this Agreement shall have any meaning or effect in the Contract between the parties arising from this Agreement.

For the Tenderer:

Signature(s)

Name(s)

Capacity

(Name and
address of
organization/
tenderer)

Name and
signature
of witness

Date

For the Employer:

Signature(s)

Name(s)

Capacity

(Name and
address of
organization)

Name and
signature
of witness

Date

CONFIRMATION OF RECEIPT

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

the.....(day)

of(month)

20.....(year)

at(place)

For the Contractor:

.....
Signature

.....
Name

.....
Capacity

Signature and name of witness:

.....
Signature

.....
Name

C1.2 Contract Data

Part 1: Contract Data provided by the Employer

GENERAL CONDITIONS OF CONTRACT

The following standardized General Conditions of Contract:

General Conditions of Contract for Construction Works (Third Edition) 2015

Prepared by the South African Institution of Civil Engineer'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 Engineer'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. Project Specifications
3. Drawings
4. Bill of Quantities

LANGEBERG
MUNISIPALITEIT MUNICIPALITY MASIPALA

1.2.1 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 authorised 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.

The Contractor shall only employ persons with the minimum number years applicable experience as shown below for the execution of work on this Contract : (Years experience after obtaining qualifications)

Contract Manager	-	minimum 5 years applicable experience
Construction Manager	-	minimum 4 years applicable experience
General Foreman	-	minimum 3 years applicable experience
Surveyor	-	minimum 3 years applicable experience
All other key personnel	-	minimum 3 years applicable experience

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 reflect 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 The Contract Price shall **not** be subject to any contract price adjustment and the rates and prices tendered in the bill of quantities shall be final and binding throughout the period of the Contract.

Notwithstanding the above, if special materials are specified in the Contract Data then the provisions of Clause 6.8.3 of the General Conditions of Contract shall apply to such special materials.

Furthermore 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.

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.

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, or failing agreement, 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.

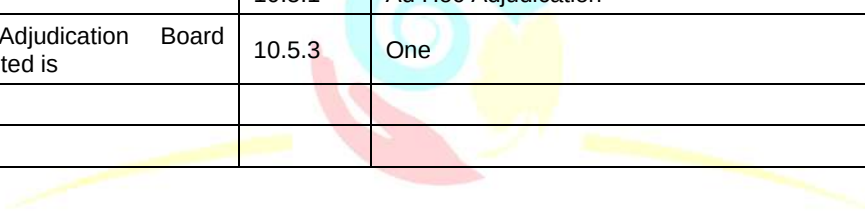
10.10.3 The Adjudication Board, arbitrator and the court shall have full power to open up, review and revise any ruling, decision, order, instruction, certificate or valuation of the Employer's Agent. The Arbitrator and the court shall have full power to and to reconsider any decision by the Adjudication 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	4 months – 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
Address, telephone and fax number of Employer	1.2.1.2	28 Main Road, Asthon, (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 10 000/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 10 000 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%
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) or alternatively 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 20 000 000-00 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



LANGEBERG

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Part 2: Data provided by the Contractor**Clause 1.1.1.9:**

The name of the Contractor is

Clause 1.2.1.2:

The address of the Contractor is

Physical : Postal :
Address Address

.....

.....

.....

.....

Telephone : Fax:

email :

SIGNED ON BEHALF OF TENDERER:

C1.3 Form of Guarantee

PERFORMANCE GUARANTEE

For use with the General Conditions of Contract for Construction Works, Third Edition, 2015.

GUARANTOR DETAILS AND DEFINITIONS

"Guarantor" means:

"Physical address:

"Employer" means: Langeberg Municipality

"Contractor" means:

"Engineer" means:

"Works" means: **CONTRACT NO. 28/2023: CONSTRUCTION OF DIVERSION WEIR UPGRADE AND ASSOCIATED WORKS IN NKQUBELA, ROBERTSON**

"Site" means: The site as defined in Clause 1.1.1.29 of the General Conditions of Contract.....

"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 Engineer of the Certificate of Completion of the Works.....

CONTRACT DETAILS

Engineer 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 issue by the Engineer of the Certificate of Completion of the Works or the date of payment in full of the Guaranteed Sum, whichever occurs first. The Engineer 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 Engineer 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. Payment by the Guarantor in terms of 5 will only be made against the return of the original Performance Guarantee by the Employer.
10. 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.
11. The Guarantor chooses the physical address as stated above for the service of all notices for all purposes in connection herewith.
12. 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.
13. 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.

14. 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 25th January 2015) approved for issue of contract guarantees to the Municipality:

National Banks:

ABSA Bank Ltd.
Development Bank of Southern Africa
FirstRand Bank Ltd.
Gensec Bank Ltd.
Investec Bank Ltd.
Land & Agricultural Bank of SA
Nedbank Ltd.
Standard Bank of SA Ltd.

International Banks (with branches in SA):

Barclays Bank plc.
Citibank n.a.
Commerzbank Aktiengesellschaft
Credit Agricole Corporate and Investment Bank
Deutsche Bank AG
HSBC Bank : Johannesburg
JP Morgan Chase Bank
Societe Generale
Standard Chartered Bank

Insurance companies:

ABSA Insurance
AIG South Africa
Coface s.a.
Compass Insurance Co.
Constantia Insurance Co.
Credit Guarantee Insurance Co.
Guardrisk Insurance Co.
Hollard Insurance Company Ltd.
Home Loan Guarantee Co.
Infiniti Insurance Limited
Lombard Insurance
Mutual & Federal Insurance Co.
New National Assurance Co.
Regent Insurance Co.
Renasa Insurance Company Ltd.
Santam Limited
Zurich Insurance Co.

C1.4 Occupational Health and Safety Agreement

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

.....,
(Contractor/Mandatar/Company/CC Name)

IN TERMS OF SECTION 37(2) OF THE OCCUPATIONAL HEALTH AND SAFETY ACT, ACT No. 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 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 appended Occupational Health and Safety Conditions and undertake to comply therewith at all times.

I hereby also undertake to comply with the Occupational Health and Safety Specification and Plan.

Signed at on the day of 20....

Witness

Mandatar

Signed at on the day of 20

Witness

for and on behalf of
LANGEBERG MUNICIPALITY

OCCUPATIONAL HEALTH AND SAFETY CONDITIONS

1. The Chief Executive Officer of the Contractor shall assume the responsibility in terms of Section 16(1) of the Occupational Health and Safety Act (as amended). Should the Contractor assign any duty in terms of Section 16(2), a copy of such assignment shall immediately be provided to the representative of the Employer as defined in the Contract.
2. All work performed on the Employer's premises shall be performed under the supervision of the construction supervisor who understand the hazards associated with any work that the Contractor performs on the site in terms of Construction Regulations 2014.
3. The Contractor shall appoint a Competent Person who shall be trained on any occupational health and safety aspect pertaining to them or to the work that is to be performed.
4. The Contractor shall ensure that he familiarises himself with the requirements of the Occupational Health and Safety Act and that he, his employees, and any sub-contractors, comply with them.
5. Discipline in the interests of occupational health and safety shall be strictly enforced.
6. Personal protective equipment shall be issued by the Contractor as required and shall be worn at all times where necessary.
7. Written safe work procedures and appropriate precautionary measures shall be available and enforced, and all employees shall be made conversant with the contents of these practices.
8. No substandard equipment/machinery/articles or substances shall be used on the site.
9. All incidents referred to in terms of Section 24 of the Occupational Health and Safety Act shall be reported by the Contractor to the Department of Labour and the Employer.
10. The Employer hereby obtains an interest in the issue of any formal inquiry conducted in terms of Section 32 of the Occupational Health and Safety Act and into any incident involving a Contractor and/or his employees and/or his sub-contractor/s.
11. No use shall be made of any of the Employer's machinery / plant / equipment / substance / personal protective equipment or any other article without prior arrangement and written approval.
12. No alcohol or any other intoxicating substance shall be allowed on the site. Any person suspected of being under the influence of alcohol or any other intoxicating substance shall not be permitted access to, or allowed to remain on the site.
13. Prior to commencement of any work, verified copies of all documents mentioned in the agreement, must be presented to the Employer.

Part C2: Pricing Data

C2.1 Pricing Instructions

C2.2 Bill / Schedule of Quantities



C2.1 Pricing Instructions

- Measurement and payment shall be in accordance with the relevant provisions of the SANS 1200 as amended in the Scope of Works.
- The units of measurement described in the Bill of Quantities are metric units. Abbreviations used in the Bill of Quantities are as follows:

%	=	percent
h	=	hour
ha	=	hectare
kg	=	kilogram
kl	=	kilolitre
km	=	kilometre
km-pass	=	kilometre-pass
kPa	=	kilopascal
kW	=	kilowatt
l	=	litre
m	=	metre
mm	=	millimetre
m ²	=	square metre
m ² -pass	=	square metre-pass
m ³	=	cubic metre
m ³ -km	=	cubic metre-kilometre
MN	=	meganewton
MN.m	=	meganewton-metre
MPa	=	megapascal
No.	=	number
Prov sum	=	Provisional sum
PC sum	=	Prime Cost sum
R/only	=	Rate only
sum	=	lump sum
t	=	ton (1000 kg)
W/day	=	Work day

- For the purpose of the Bill of Quantities, the following words shall have the meanings hereby assigned to them:

Unit:	The unit of measurement for each item of work as defined in the SANS 1200 and/or Project Specifications
Quantity:	The number of units of work for each item.
Rate:	The agreed payment per unit of measurement.
Amount:	The product of the quantity and the agreed rate for an item.
Lump sum:	An agreed amount for an item, the extent of which is described in the Bill of Quantities but the quantity of work of which is not measured in any units.
- Unless otherwise stated, items are measured net in accordance with the drawings, and no allowance is made for waste.
- It will be assumed that prices included in the bills of quantities are based on Acts, Ordinances, Regulations, By-laws, International Standards and National Standards that were published 28 days before the closing date for tenders. (Refer to www.stanza.org.za or www.iso.org for information on standards)
- The prices and rates in the Bill of Quantities are to be fully inclusive prices for the work described under the several items. Such prices and rates cover all costs and expenses that may be required in and for the execution of the work described in accordance with the provisions of the Scope of Work, and shall cover the cost of all general risks, liabilities, and obligations set forth or implied in the Contract Data, 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.
- Where the Scope of Work requires detailed drawings and designs or other information to be provided, all costs associated therewith are deemed to have been provided for and included in the unit rates and sum amount tendered such items.

8. The short descriptions of the items of payment given in the Bill of Quantities are only for the purposes of identifying the items. More details regarding the extent of the work entailed under each item appear in the Scope of Work. The description may also contain the relevant specification for the specific item to be priced.
9. The item numbers appearing in the Bill of Quantities refer to the corresponding item numbers in COLTO, if applicable.
10. **A price or rate shall be entered against each item in the Bill / Schedule of Quantities.** Should the Tenderer not wish to make any charge in respect of an item, a rate of zero "R0.00" or "Nil" shall be entered. The Tenderer may not group a number of items together and tender one lump sum for such group of items.

The tendered rates shall be valid irrespective of any change in the quantities during the execution of the works projects under the contract.

No unauthorized amendment shall be made to the Schedule of Rates / Bill of Quantities or any part of the Pricing Data. If such amendment is made or if the Schedule of Rates / Bill of Quantities is not properly completed, the tender will be rejected.

11. The quantities set out in the Bill of Quantities are approximate and do not necessarily represent the actual amount of work to be done. The quantities of work accepted and certified for payment will be used for determining payments due and not the quantities given in the Bill of Quantities.
12. Reasonable compensation will be received where no pay item appears in the Bill of Quantities in respect of work required in terms of the Contract and which is not covered in any other pay item.
13. Those parts of the contract to be constructed using labour-intensive methods have been marked in the Bills of Quantities with the letters L in a separate column filled in against every item so designated. The works, or parts of the works so designated are to be constructed using labour-intensive methods only. The use of plant to provide such works, other than plant specifically provided for in the scope of work, is a variation to the contract. The items marked with the letters L are not necessarily an exhaustive list of all the activities which must be done by hand, and this clause does not over-ride any of the requirements in the generic labour intensive specification in the Scope of Works.
14. Payment for items which are designated to be constructed labour-intensively (either in this schedule or in the Scope of Works) will not be made unless they are constructed using labour-intensive methods. Any unauthorised use of plant to carry out work which was to be done labour-intensively will not be condoned and any works so constructed will not be certified for payment.
15. Whether or not a PS is referenced in the payment column of the bill of quantities, and there is an amended clause in the project specifications, the price tendered will be deemed to include all relevant amended project specifications.
16. Where the project specifications amends or replaces the standard specifications, the price tendered will be deemed to be based on all the project specifications, whether a PS is referenced in the bill of quantities or not.

C2.2 Bill of Quantities

CONTENTS

BILLS / SCHEDULES OF QUANTITIES

Section A : Preliminary and General

Section B : Stormwater Detention Pond

Section C : Sewer Rising Main



LANGEBERG MUNICIPALITY, NKQUBELA
DIVERSION WEIR, PUMP STATION AND DETENTION POND
SCHEDULE A: PRELIMINARY AND GENERAL

SECTION 1200 A : PRELIMINARY AND GENERAL

ITEM NO	PAYMENT	DESCRIPTION	UNIT	QTY	RATE	AMOUNT R
A.1	SABS 1200 A	GENERAL				
		as specified in SABS 1200 A and in the project specifications				
	8.3	FIXED CHARGES AND VALUE RELATED ITEMS				
A.2	PSA 8.3.1	Fixed preliminary and general charges	Sum	1		
A.3	PSA 8.3.2	Value related preliminary and general charges	Sum	1		
	PSA 8.3.5	Cost of survey in terms of Land Survey Act:				
A.4		Locate, record, protect and reinstate pegs	Sum	1		
	PSA 8.4	SCHEDULED TIME RELATED ITEMS				
	PSA 8.4.1	Time related preliminary and general charges :				
A.5	8.4.1.1	The contract period during the normal industry working period (outside public holidays and the industry shutdown period during December and January)	Sum	1		
A.6	8.4.1.2	Public Holidays	No	5		
A.7	8.4.1.3	SAFCEC recommended shutdown period during December and January	Sum	1		
	PSA 8.6	PRIME COST SUMS				
		(1) Communication allowances:				
A.8		(a) The cost of calls in connection with contract administration and telephone and cellular telephone rental	PCSum	1		6,000.00
A.9		(b) Charge required by Contractor on sub-item (a) above	%	6,000.00		
		(2) Additional testing of materials required by Engineer:				
A.10		(a) Cost of testing	PCSum	1		10,000.00
TOTAL CARRIED FORWARD						

LANGEBERG MUNICIPALITY, NKQUBELA
DIVERSION WEIR, PUMP STATION AND DETENTION POND
SCHEDULE A: PRELIMINARY AND GENERAL

SECTION 1200 A : PRELIMINARY AND GENERAL

ITEM NO	PAYMENT	DESCRIPTION	UNIT	QTY	RATE	AMOUNT R
BROUGHT FORWARD						
A.11		(b) Charge required by Contractor on sub-item (a) above	x100%	10,000		
		(4) As built surveys:				
A.12		(a) Cost of as built surveys	PCSum	1		15,000.00
A.13		(b) Charge required by Contractor on sub-item (a) above	x100%	15,000		
	PSA 8.7	DAYWORK				
	PSA 8.7.1	Dayworks:				
		(a) Vehicles, plant and equipment:				
		(3) Hydraulic excavator with bucket at least 500 mm wide				
A.14		20 Ton (> 115kW @ 1800 rpm)	h	8		
A.15		25 Ton (> 130 kW @ 2000 rpm)	h	8		
A.16		30 Ton (>145 kW @ 1800 rpm)	h	8		
A.17		(4) Loader Backhoe	h	10		
A.18		(5) Dumper (> 10m³ capacity)	h	10		
A.19		(6) Tipper truck, more than 5m³ capacity	h	5		
A.20		(8) Flat bed truck equipped with hydraulic crane of more than 2 t capacity	h	5		
		(9) Water trucks:				
A.21		(i) 12 kℓ capacity	h	20		
		(11) Compressors:				
A.22		(i) Up to 10m³/minute	h	5		
		(12) Concrete mixer:				
A.23		(ii) Over 400 l capacity	h	100		
		(13) Water pump:				
A.24		(i) 200 ℓ/min capacity @10m head	h	20		
A.25		(ii) 600 ℓ/minute capacity @ 10m head	h	20		
TOTAL CARRIED FORWARD						

LANGEBERG MUNICIPALITY, NKQUBELA
DIVERSION WEIR, PUMP STATION AND DETENTION POND
SCHEDULE A: PRELIMINARY AND GENERAL
SECTION 1200 A : PRELIMINARY AND GENERAL

ITEM NO	PAYMENT	DESCRIPTION	UNIT	QTY	RATE	AMOUNT R
BROUGHT FORWARD						
A.26		(iii) 1200 l/minute capacity @10m head)	h	20		
		Labour:				
		(a) Labour:				
A.27		(1) Labourer	h	40		
A.28		(2) Semi-skilled labourer	h	10		
A.29		(3) Skilled labourer	h	10		
A.30		(4) Artisan	h	10		
A.31		(5) Team Leader	h	5		
A.32		(6) Foreman	h	5		
A.33		(7) Surveyor	h	10		
	PSA 8.8	TEMPORARY WORKS				
A.34	PSA 8.8.2	Accommodation of traffic	Sum	1		
	PSA 8.8.4	Location and protection of existing services:				
	PSA 8.8.4.1	Provision of detecting devices for:				
A.35		(a) Water and sewer pipes	Sum	1		
A.36		(b) Electrical and other cables	Sum	1		
	PSA 8.8.4.2	Hand excavation necessary for locating and exposing existing services in all materials:				
A.37		(a) In roadways	m ³	20		
A.38		(b) In all other areas	m ³	20		
	PSA 8.8.7	Dealing with water:				
A.39		(a) Dealing with subsurface water	Sum	1		
A.40		(b) Dealing with surface water	Sum	1		
	PSA 8.8.8	Temporary fence minimum 1,2 m high				
A.41		(a) 1,2 m high	m	330		
TOTAL CARRIED FORWARD						

SECTION 1200 A : PRELIMINARY AND GENERAL

[illegible]

C 2.7

LANGEBERG MUNICIPALITY, NKQUBELA

DIVERSION WEIR, PUMP STATION AND DETENTION POND SCHEDULE A: PRELIMINARY AND GENERAL

SUMMARY OF SECTIONS

[illegible]

[illegible]

LANGEBERG MUNICIPALITY, NKQUBELA
DIVERSION WEIR, PUMP STATION AND DETENTION POND
SCHEDULE B: STORMWATER DETENTION POND

SECTION 1200 D : EARTHWORKS

ITEM NO	PAYMENT	DESCRIPTION	UNIT	QTY	RATE	AMOUNT R
	SABS 1200 D	EARTHWORKS				
		as specified in SABS 1200 D and in the project specifications				
	PSD 8.3	SCHEDULED ITEMS				
	8.3.2	Bulk Excavation:				
B.7	PSD 8.3.2.2	Cut to spoil (Bottom of pond)	m ³	470		
	PSD 8.3.2.3	(b)Extra over items 8.3.2.1 and 8.3.2.2 above for:				
B.8		(1) Intermediate excavation	m ³	5		
B.9		(2) Hard rock excavation	m ³	10		
B.10		(3) Boulder excavation Class A	m ³	235		
B.11		(4) Boulder excavation Class B	m ³	235		
	PSD 8.3.3	Restricted excavation:				
B.12		(a) Excavate for precast channel in all materials and use for backfill or embankment, or dispose:	m ³	200		
B.13		(b) Excavate for inlet/outlet structure in all materials, and use for backfill or embankment, or dispose	m ³	40		
		(c) Extra over items 8.3.3 above for:				
B.14		Intermediate excavation	m ³	10		
B.15		Hard rock excavation	m ³	5		
B.16		Boulder excavation Class A	m ³	100		
B.17		Boulder excavation Class B	m ³	100		
B.18	PSD 8.3.3 (c)	(d) Extra over item 8.3.3 (a) for hand excavation	m ³	5		
B.19	PSD 8.3.4	Importing of materials from commercial sources and use for fill (clean sand, G7, compacted to 100% Mod AASHTO)	m ³	100		
B.20	PSD 8.3.10	Topsoiling	m ³	630		
TOTAL CARRIED FORWARD						

**LANGE BERG MUNICIPALITY, NKQUBELA
DIVERSION WEIR, PUMP STATION AND DETENTION POND
SCHEDULE B: STORMWATER DETENTION POND**

SECTION 1200 D : EARTHWORKS

[illegible]

LANGEBERG MUNICIPALITY, NKQUBELA
DIVERSION WEIR, PUMP STATION AND DETENTION POND
SCHEDULE B: STORMWATER DETENTION POND

SECTION 1200 DB : EARTHWORKS (PIPE TRENCHES)

ITEM NO	PAYMENT	DESCRIPTION	UNIT	QTY	RATE	AMOUNT R
	SABS 1200 DB	EARTHWORKS (PIPE TRENCHES)				
		as specified in SABS 1200 DB and in the project specifications				
		PIPELINE TRENCHES				
		Excavation:				
	PSDB 8.3.2	Excavate in all materials for trenches, backfill, compact and dispose of surplus material:				
		(2) Pipes over 125 mm dia up to 400 mm dia for depths:				
B.23		Up to 1,5 m	m	5		
B.24		Over 1,5 m up to 2,5 m	m	10		
	PSDB 8.3.2	(b) Extra over item (a) above for:				
B.25		(1) Intermediate excavation	m ³	2		
B.26		(2) Hard rock excavation	m ³	2		
B.27		(3) Hand excavation and backfill where directed by the Employer's Agent	m ³	2		
B.28		(a) Soft material	m ³	2		
B.29		(b) Intermediate material	m ³	2		
B.30		(4) Backfill stabilized with 5% cement where directed by the Engineer	m ³	5		
B.31	8.3.2	(c) Excavate and dispose of unsuitable material from trench bottom	m ³	2		
	PSDB 8.3.3	Excavation ancillaries:				
	8.3.3.1	Make up deficiency in backfill material:				
B.32		(a) from other necessary excavations on site	m ³	2		
B.33		(c) by importation from commercial or off site sources selected by the Contractor (sand compacted to 100% Mod AASHTO)	m ³	10		
	8.3.4	Particular items:				
TOTAL CARRIED FORWARD						

LANGEBERG MUNICIPALITY, NKQUBELA
DIVERSION WEIR, PUMP STATION AND DETENTION POND
SCHEDULE B: STORMWATER DETENTION POND

SECTION 1200 DB : EARTHWORKS (PIPE TRENCHES)

ITEM NO	PAYMENT	DESCRIPTION	UNIT	QTY	RATE	AMOUNT R
BROUGHT FORWARD						
		(a) Shore trench opposite structure or service or in restricted work space				
B.34		Over 1.0m up to 2.0m	m	10		
B.35		Over 2.0m up to 3.0m	m	25		
	8.3.5	Existing services that intersect or adjoin a pipe trench:				
		(a) Services that intersect a pipe trench:				
B.36		(1) LT electricity cables	No	1		
B.37		(2) HT electricity cables	No	1		
B.38		(3) Telkom	No	1		
B.39		(4) Watermains	No	1		
B.40		(5) Stormwater	No	1		
B.41		(6) Sewer	No	1		
		(b) Services that adjoin a trench:				
B.42		(1) Foul sewer	m	5		
B.43		(2) HT electrical cables	m	5		
B.44		(3) Watermains	m	5		
B.45	PSDB 8.3.16	Compaction of trench invert in situ material to a depth of 300mm	m ³	5		
	PSDB 8.3.17	Testing of trench related work				
		Insitu material at trench invert. (Test up to 1,5m below invert)				
B.46		1) DCP test by Contractor	No	2		
B.47		2) DCP test by Independent laboratory	No	1		
		Bedding layer				
B.48		1) DCP test by Contractor	No	2		
B.49		2) DCP test by Independent laboratory	No	1		
B.50		3) Troxler test by independent laboratory	No	1		
TOTAL CARRIED FORWARD						

[illegible]

LANGEBERG MUNICIPALITY, NKQUBELA
DIVERSION WEIR, PUMP STATION AND DETENTION POND
SCHEDULE B: STORMWATER DETENTION POND

CONCRETE (STRUCTURAL)

ITEM NO	PAYMENT	DESCRIPTION	UNIT	QTY	RATE	AMOUNT R
	SABS 1200 G	CONCRETE (STRUCTURAL)				
		<u>INLET/OUTLET STRUCTURE</u>				
		as specified in SABS 1200 G and in the project specifications				
	8.2	FORMWORK				
	8.2.1	Rough:				
B.55		Vertical plane foundation	m ²	8		
	8.2.2	Smooth:				
		Walls:				
B.56		RC walls	m ²	55		
	8.2.6	Box out holes/form voids:				
		(a) Small, circular, of diameter up to and including 0,35 m:				
B.57		(5) 2,0 m to 3,0 m deep	No	2		
	8.3	REINFORCEMENT				
	PSG 8.3.1	High tensile steel bars				
B.58		Y12	t	0.6		
B.59		(a) Extra over item 8.3.1 for FISCHER EM epoxy mortar or HILTI RE 500 to chemically anchor Y12 bars into existing mass concrete spillway structure as per dwg no. 22098-C-104	No	50		
	PSG 8.3.2	High-tensile welded mesh:				
B.60		Type reference 395	m ²	12		
	8.4	CONCRETE				
	8.4.2	Blinding layer in 20MPa/40 mm concrete:				
		50 mm minimum thickness:				
B.61		Horizontal surfaces	m ²	9		
	PSG 8.4.3	Strength concrete :				
TOTAL CARRIED FORWARD						

LANGEBERG MUNICIPALITY, NKQUBELA
DIVERSION WEIR, PUMP STATION AND DETENTION POND
SCHEDULE B: STORMWATER DETENTION POND

CONCRETE (STRUCTURAL)

ITEM NO	PAYMENT	DESCRIPTION	UNIT	QTY	RATE	AMOUNT R
BROUGHT FORWARD						
B.62		30MPa/19mm: Mass	m ³	8		
B.63		30MPa/19mm:	m ³	1		
	PSG 8.4.4	Unformed surface finishes: "(a) Wood-floated finish (see PSG 7.1)				
B.64		Inverts of culverts	m ³	75		
	PSG 8.5	JOINTS				
B.65		Detail 2, as shown on Dwg. No. 22098-C-104	m	5		
B.66		Detail 3, as shown on Dwg. No. 22098-C-104	m	15		
	8.8	HD BOLTS AND MISCELLANEOUS METAL WORK				
B.67		"Provide and install M12 HD bolts	No	6		
B.68	PSG 8.9	Apply Sika Mono Top - 620 to channel wall and floor	m ²	160		
B.69		Stainless steel grade 304 hand rake screen with 12mm thick bars and 30mm wide gaps as per dwg no. 22098-C-100	Sum	1		
	PSG 8.10	Testing for watertightness:				
B.70		(a) Inlet/outlet structure as shown in Detail 2 & 3 on dwg no. 22098-C-100	Sum	1		
B.71	PSG 8.14	Preparation of existing concrete surface	m ²	1		
	PSG 8.17	Cast in of pipes with or without puddle flanges: (a) Up to 300 mm nominal bore:				
B.72		(i) Through 200mm thick 30MPa/19mm RC wall	No	2		
TOTAL CARRIED FORWARD						

LANGEBERG MUNICIPALITY, NKQUBELA
DIVERSION WEIR, PUMP STATION AND DETENTION POND
SCHEDULE B: STORMWATER DETENTION POND

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LANGEBERG MUNICIPALITY, NKQUBELA
DIVERSION WEIR, PUMP STATION AND DETENTION POND
SCHEDULE B: STORMWATER DETENTION POND

FENCING

ITEM NO	PAYMENT	DESCRIPTION	UNIT	QTY	RATE	AMOUNT R
	PA 00	FENCING				
		as in the particular specification PA and as shown on drawing 22098-C-102				
		Foundations:				
		Excavate in all materials, dispose of surplus material, supply and cast 25/19 MPa Concrete foundations as per detail drawing.				
B.91		(b) 2.780m long square posts; manufactured from 60 x 60 x 1.6mm pre galvanized tube and pvc coated. RAL 600	No	110		
B.92		- Gate/corner posts	No	6		
		Posts:				
B.93		Supply and install Bekafix tubular posts profiled in "H" shape, 70 x 44mm, with predrilled holes for fixing of the metal security clips, punched holes for positioning and fixing of panels by means of fixing clips. Posts fixed with plastic coated metal clips with stainless steel bolts and shear butts. Green RAL 6005. Including metal fixators. Length 2,2m.	No	110		
		Panels:				
B.94		Supply and install Nylofor Medium Panel 2.500m x 2.030m high. The panels have vertical barbs of 30mm at the one side, the barb must be placed at the top. Panels made of galvanized wires and plastic coated mesh apertures of 100mm x 50mm. (Wire diameter 4,5mm)	No	110		
		Accessories:				
B.95		Bekafix tong	No	4		
		Bar Type Swing Gates:				
		(60mm x 60mm x 3mm square tubing frame with 25mm x 2mm infills spaced at 110mm c/c)				
TOTAL CARRIED FORWARD						

LANGEBERG MUNICIPALITY, NKQUBELA
DIVERSION WEIR, PUMP STATION AND DETENTION POND
SCHEDULE B: STORMWATER DETENTION POND

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SUMMARY OF SECTIONS

[illegible]

[illegible]

SECTION 1200 D : EARTHWORKS

[illegible]

SECTION 1200 DB : EARTHWORKS (PIPE TRENCHES)

ITEM NO	PAYMENT	DESCRIPTION	UNIT	QTY	RATE	AMOUNT R
	SABS 1200 DB	EARTHWORKS (PIPE TRENCHES)				
		as specified in SABS 1200 DB and in the project specifications				
		PIPELINE TRENCHES				
		Excavation:				
	PSDB 8.3.2	Excavate in all materials for trenches, backfill, compact and dispose of surplus material:				
		(2) Pipes over 125 mm dia up to 400 mm dia for depths:				
C.10		Up to 1,5 m	m	520		
	PSDB 8.3.2	(b) Extra over item (a) above for:				
C.11		(1) Intermediate excavation	m ³	50		
C.12		(2) Hard rock excavation	m ³	5		
C.13		(3) Hand excavation and backfill where directed by the Employer's Agent	m ³	25		
C.14		(a) Soft material	m ³	5		
C.15		(b) Intermediate material	m ³	2		
C.16		(4) Backfill stabilized with 5% cement where directed by the Engineer	m ³	5		
C.17	8.3.2	(c) Excavate and dispose of unsuitable material from trench bottom	m ³	60		
C.18		(1) Intermediate material	m ³	5		
C.19		(2) Hard rock material	m ³	5		
	PSDB 8.3.3	Excavation ancillaries:				
	8.3.3.1	Make up deficiency in backfill material:				
C.20		(a) from other necessary excavations on site	m ³	115		
C.21		(c) by importation from commercial or off site sources selected by the Contractor (sand compacted to 100% Mod AASHTO)	m ³	115		
TOTAL CARRIED FORWARD						

SECTION 1200 DB : EARTHWORKS (PIPE TRENCHES)

ITEM NO	PAYMENT	DESCRIPTION	UNIT	QTY	RATE	AMOUNT R
BROUGHT FORWARD						
	8.3.5	Existing services that intersect or adjoin a pipe trench:				
		(a) Services that intersect a pipe trench:				
C.22		(1) LT electricity cables	No	5		
C.23		(2) HT electricity cables	No	5		
C.24		(3) Telkom	No	1		
C.25		(4) Watermains	No	1		
C.26		(5) Stormwater	No	1		
C.27		(6) Sewer	No	1		
		(b) Services that adjoin a trench:				
C.28		(1) Foul sewer	m	5		
C.29		(2) HT electrical cables	m	5		
C.30		(3) Watermains	m	5		
C.31	PSDB 8.3.16	Compaction of trench invert in situ material to a depth of 300mm	m ³	120		
	PSDB 8.3.17	Testing of trench related work				
		Insitu material at trench invert. (Test up to 1,5m below invert)				
C.32		1) DCP test by Contractor	No	20		
C.33		2) DCP test by Independent laboratory	No	6		
		Bedding layer				
C.34		1) DCP test by Contractor	No	20		
C.35		2) DCP test by Independent laboratory	No	6		
C.36		3) Troxler test by independent laboratory	No	6		
C.37		4) Material classification analysis including CBR and grading analysis	No	4		
		Backfill of trenchess				
C.38		1) DCP test by Contractor	No	20		
C.39		2) DCP test by Independent laboratory	No	6		
TOTAL CARRIED FORWARD						

C 2.7

LANGEBERG MUNICIPALITY, NKQUBELA
SCHEDULE C: SEWER RISING MAIN

SECTION 1200 DB : EARTHWORKS (PIPE TRENCHES)

[illegible]

SECTION 1200 L : MEDIUM PRESSURE PIPELINES

ITEM NO	PAYMENT	DESCRIPTION	UNIT	QTY	RATE	AMOUNT R
	SABS 1200 L	MEDIUM PRESSURE PIPELINES				
		<u>PVC-U PIPES</u>				
		as specified in SABS 1200 L and in the project specifications				
	PSL 8.2.1	Supply, lay and bed on bedding for flexible pipes, complete with couplings:				
		PVC-U Class/PN16 (SANS 966 : PART 1:2000 (PVC-U)) using spigot and socket rubber ring joints				
		<u>Supply:</u>				
C.41		160 mm dia	m	520		
		<u>Lay and bed::</u>				
C.42		160 mm dia	m	520		
	PSL 8.2.2	Extra over item 8.2.1 for the supplying, laying and bedding of Ductile iron (including Plascoat PPA 571 HES coating) specials with a spigot and socket rubber ring joints complete with couplings for PVC-U pipes.				
		22,5 degree bends				
		<u>Supply:</u>				
C.43		160 mm dia	No	1		
		<u>Lay and bed::</u>				
C.44		160 mm dia	No	1		
		45 degree bends				
		<u>Supply:</u>				
C.45		160 mm dia	No	1		
		<u>Lay and bed::</u>				
C.46		160 mm dia	No	1		
		90 degree bends				
		<u>Supply:</u>				
C.47		160 mm dia	No	1		
		<u>Lay and bed::</u>				
TOTAL CARRIED FORWARD						

[illegible]

SECTION 1200 LB : BEDDING (PIPES)

[illegible]

SUMMARY OF SECTIONS

[illegible]

SUMMARY OF SCHEDULES

[illegible]

CONTRACT NO.: 28/2023CONSTRUCTION OF DIVERSION WEIR UPGRADE AND ASSOCIATED WORKS IN
NKQUBELA, ROBERTSON**BILL OF QUANTITIES**

SUMMARY OF SCHEDULE OF QUANTITIES		AMOUNT R
SECTION	DESCRIPTION	
A	PRELIMINARY AND GENERAL	
B	STORMWATER DETENTION POND	
C	SEWER RISING MAIN	
TOTAL CARRIED FORWARD TO CONTRACT PRICE		

CALCULATION OF CONTRACT PRICE

E : TOTAL OF SCHEDULE(S) A + B + C + D

= R

F : CONTINGENCIES

(The sum provided is under the direct control of the Engineer
and may be partially or totally excluded) (10% of TOTAL E above) R

G : CONTRACT PRICE ADJUSTMENT

(The sum provided is in terms of Subclause 6.8.2 of the General Conditions of Contract) R NIL

H : TOTAL (E + F + G)

R

I : TOTAL VALUE ADDED TAX (15%) ON H ABOVE

R

J : CONTRACT PRICE CARRIED FORWARD TO C1.1 FORM OF OFFER (H+ I)

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. 28/2023: CONSTRUCTION OF DIVERSION WEIR UPGRADE AND ASSOCIATED WORKS IN NKQUBELA, ROBERTSON** has been based.

My/our total Contract Price for this work and above items (Total J) is (in words)

.....

.....

SIGNED ON BEHALF OF TENDERER:

.....

Part C3: Scope of Work

- C3.1 Description of the works**
- C3.2 Engineering**
- C3.3 Procurement**
- C3.4 Construction – Works specifications**
- C3.5 Management**
- C3.6 Annexes**



C3.1 Description of the Works

CONTENTS

1. EMPLOYER'S OBJECTIVES
2. OVERVIEW OF THE WORKS
3. EXTENT OF THE WORKS
4. CONSTRUCTION TIME PERIOD
5. CONTRACTOR'S CAMP SITE, POWER SUPPLY AND SERVICES
6. CONSTRUCTION IN CONFINED AREAS
7. WATER FOR CONSTRUCTION PURPOSES
8. FEATURES REQUIRING SPECIAL ATTENTION
9. ACCOMMODATION OF TRAFFIC
10. ENVIRONMENTAL REQUIREMENTS
11. LIMITED FUNDS
12. ASSET REGISTER

1 EMPLOYER'S OBJECTIVES

The Employer's objective is to mitigate the contamination of the stormwater inflow into the existing stormwater detention pond to the south of the informal settlement of Nkqubela by upgrading the existing stormwater detention pond and re-routing the existing sewer rising main to the outside of the residential properties.

The works include the following:

- Upgrading of existing stormwater detention pond including bulk earthworks, concrete works, associated pipeworks and installation of new fencing around the existing stormwater detention pond.
- Installation of 520m of 160mm diameter sewer rising main.

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.

2 OVERVIEW OF THE WORKS

2.1 General Description

Work items under this tender shall include any one or more of the following:

- i) Establishment on site
- ii) Clearing and grubbing
- iii) Bulk Earthworks
- iv) Accommodation of traffic during construction
- v) Installation of Sewer Rising Mains
- vi) Stormwater drainage and associated structures

2.2 Work Areas

The location of the works envisaged for the Project will be shown on the drawings bound into C6 of the Project document.

2.3 Boundaries of the site

The site will be confined to the areas of construction, including the site camp of the contractor (if applicable).

2.4 Occupation of the site

Access to the site of the works will be given to the Contractor on the Commencement Date.

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.

4 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 **as per the approved initial programme** exclusive 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.

4.1 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.

5. CONTRACTOR'S CAMP SITE, POWER SUPPLY AND OTHER SERVICES

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.

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.

6. 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 depend 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.**

7. 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. Water standpipe to be procured from the Municipality at the Contractors cost. Standard fees for standpipe (consumer deposit applicable) and standard water consumption tariffs are applicable.

8. FEATURES REQUIRING SPECIAL ATTENTION

8.1 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.

8.2 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 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.

8.3 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.

8.4 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.

8.5 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:

- e) No work allowed after 18:00 on weekdays.
- f) Working times for Saturdays are 08:00 - 14:00.
- g) No work allowed on Sundays, Public Holidays and year end break as published by SAFCEC.
- h) Approval for work outside of normal working hours to be obtained from Employer.

Penalty for the transgression of above conditions is R10 000 per transgression.

8.6 Other Contractors

The Contractor's attention is drawn to the fact that there could be other contractors working on the Site of the Works. In accordance with Clause 4.8 of the General Conditions of Contract, the Contractor shall note and make due allowance for reasonable access to and for the adjacent operations of these other contractors on the site of the works.

9. ACCOMMODATION OF TRAFFIC

- (i) The safety and convenience of the travelling public is to be considered of utmost importance and every effort must be made to ensure that all temporary road signs, cones, flagmen and speed controls are maintained and effective, and that courtesy is extended to the public at all times.
- (ii) It is important that the traffic accommodation requirements described in these specifications are adhered to and that all installations meet with the approval of the relevant traffic authority ie the Traffic Manager of Langeberg Municipality and Provincial Department of Roads and Transport.
- (iii) Work, including the erection and removal of traffic control facilities, shall be executed between sunrise and sunset on Monday to Saturday, inclusive. Occupation of existing traffic lanes will only be allowed during daylight hours on normal working days, which are defined as Monday to Saturday, inclusive. The existing number of lanes for each traffic movement affected by construction shall not be reduced without the written authorization of the Engineer.
- (iv) It should be noted that Sundays are specified as "Special non-working days" in the Contract Data. In terms of Clause 5.8 of the General Conditions of Contract the Engineer's permission has to be obtained for work to be carried out on special non-working days, for which permission shall be applied for at least one (1) week prior to the day.
- (v) The travelling public has the right of way on public roads, and the Contractor shall make use of approved methods to control the movement of his equipment and vehicles so as not to constitute a hazard on public roads.
- (vi) Failure to maintain road signs, warning signs or flicker lights, etc, in good condition shall constitute ample reason for the Engineer to bring the works to a stop until the road signs, etc, have been repaired to his satisfaction.
- (vii) The Contractor may not commence constructional activities before adequate provision has been made to accommodate traffic in accordance with the requirements of these specifications and Chapter 13 of Volume 2 of the South African Road Traffic Signs Manual (SARTSM).
- (viii) The Contractor shall submit proposals in connection with all signs and accommodation of traffic to the Engineer for approval.

The traffic shall be accommodated on the existing surfaced carriageway and shoulders. No bypasses or temporary deviations shall be constructed. Accommodation of traffic will generally be carried out by closing off one lane of traffic at a time and accommodating the traffic on the other lane(s). During non-working days and the period from the 16th December to 6th January, the Contractor will be required to shut down normal construction activities and only emergency work will be allowed. The traffic safety officer will be required to patrol during these non-working periods and ensure that all temporary traffic-control facilities are in place and functional.

10. ENVIRONMENTAL REQUIREMENTS

Personnel and plant shall not enter property beyond the road reserve boundary outside of the site irrespective of whether or not the boundary is fenced. The Contractor shall take every precaution to avoid damage to vegetation within that area of the road reserve 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 within the road reserve 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.

11. 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 financial year for the Employer closes on 30 June each year.

The maximum total expenditure, excluding contract price adjustment and extra work, for any financial year or part thereof during which this contract is being executed, shall be limited to the estimated expenditure (as submitted in Schedule 7 : Schedule of Estimated Monthly Expenditure of T2.2 : Returnable Schedules completed by the tenderer) approved by the Engineer plus ten (10) percent for that specific financial year.

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.

12. ASSET REGISTER

On practical completion date, a report or certificate should be issued by the Contractor indicating the total costs of the project attributable to each significant component as identified within the lowest asset hierarchy level (4) as specified within the infrastructure catalogue or Annexure A of the Langeberg Municipality's asset management policy as approved in 2014, if not contained in the catalogue.

If construction is still in progress over the year-end period of the Langeberg Municipality, being 30 June of each year, the Municipality should be furnished with a report / certificate at year-end (30 June), which details (a) The cumulative expenditure incurred up to 30 June for the project. (b) any details if the project is taking a significant longer period of time to complete than expected, including reasons for any delays. (c) details where construction or development has been halted either during the current or previous reporting period(s), including reasons for halting the construction or development of the asset/project.



C3.2 Engineering

C3.2.1 Design

- a) The Employer is responsible for the design of the permanent Works as reflected in the Contract Documents unless otherwise stated.
- b) The Contractor is responsible for the design of the temporary Works and their compatibility with the permanent Works.

The design responsibility per stage is summarized as follows:

- Concept, feasibility and overall process: - Employer
- Basic Engineering and detail layouts to tender stage: - Employer
- Final design to approved for construction stage: - Employer
- Temporary works: - Contractor
- Preparation of as built drawings: - Contractor

Amendments to the design, if necessary, will be issued during the construction phase.

C 3.2.2 Employer's Design

All work in this contract has been designed and is specified in the document. Some provisional sums have been allowed for, of which the works will be designed and quantities together with drawings will be provided to the successful tenderer. These provisional sums include:

- **Removal of unknown existing services not indicated on drawings**
- **Relocation of existing services not indicated on drawings**
- **Supply of Maintenance and Office Equipment/Tools**
- **Refurbishment and conversion of existing buildings**

C 3.2.3 Contractor's Design

Where the Contractor is to supply the design of designated parts of the permanent Works or temporary Works, he shall supply full working drawings supported by a professional engineer's design certificate.

The design of the temporary works shall be carried out in accordance with all relevant standards and codes of practice, with particular emphasis on the requirements of the OHS Act.

These drawings will have to be submitted for approval to the relevant authorities (Employer / Employer's Agent / H&S Agent/Local Authority) prior to commencement of the Works.

C 3.2.4 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 C6 of the tender documents and included in Part C6 : 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.



C3.3 Procurement

CONTENTS

3.3.1. TARGETED CONSTRUCTION PROCUREMENT.....	8
3.3.2. SUBCONTRACTING	8
3.3.3. TARGETED CONSTRUCTION PROCUREMENT SPECIFICATIONS.....	11

3.3.1. TARGETED CONSTRUCTION PROCUREMENT

3.3.1.1 Objective

The Employer applies and 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.
- the maximising of job creation by adopting labour-intensive construction methods wherever physically feasible and economically justifiable.

3.3.1.2 Contract requirements

The Targeted Construction Procurement : Participation of Targeted Enterprises and Targeted Labour Standard Specifications is included in Part 3.3.3 of this section C3.3 of the Scope of Works and shall apply as additional Works Specifications to this contract.

For this contract, the Employer has set minimum contract participation goals, calculated as a percentage of the net amount (as defined in clause 3.2.14 below), which are specified in Schedule 21 : Preferencing Schedule in Part T2.2: Returnable Schedules.

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 (ward 3 & 6 in Robertson) 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 to enable the contractor to comply with the minimum contract participation goals for targeted labour set by the employer for the contract.

3.3.1.4 Labour-intensive construction

Construction work must be undertaken using labour-intensive methods. The Contractor shall employ labourers, artisans and subcontractors for the execution and completion of this work.

Some of the activities, which must be considered as being suitable to be undertaken by labour-intensive methods include the following:

- cleaning and trimming of site
- laying of kerbs
- laying of pipes
- laying of paving
- manhole chambers, inlet structures & headwalls
- traffic accommodation

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 and can also be used to secure contract participation goal credits for HDI participation or other specific goals, where applicable.

Where participation credits are claimed by the Contractor in respect of subcontractors, suppliers, manufacturers and/or service providers, the Contractor shall ensure that all such are registered and verified on the Western Cape

Supplier Database. The Employer shall not accept any claim for participation in respect of subcontractors, etc. unless they are registered and verified.

Notwithstanding the above, contract participation goal credits may not be claimed for work undertaken in respect of provisional sums and prime cost items.

Where monetary allowances for provisional sums or prime costs items have been allowed and the monetary allowance is less than R200 000, the Contractor shall invite three quotations from suitably qualified subcontractors, etc. for the required scope of works. The selection of the Subcontractors, etc. shall be approved by the Engineer.

Where monetary allowances for provisional sums or prime cost items have been allowed and the monetary allowance is greater than R200 000, an open tender process will have to be followed in respect of a subcontractor for this work. In such cases the tender will be issued by the Engineer on behalf of the Contractor.

3.3.2.2 Selected Subcontractors

With reference to subcontractors selected by the Contractor in consultation with the Employer, Clause 4.4.3 (GCC 2015) of the General Conditions of Contract states that this shall be done in accordance with the requirements of "a procedure set out in the Scope of Work."

The procedure for Selected Sub-contractors as referred to in Subclause 4.4.3 (GCC 2015) of the General Conditions of Contract and Contract Data shall be:

All specialist merchants, tradesmen and others executing any work or supplying any goods for which provisional or prime cost sums are provided in the Bill / Schedule of Quantities and who are selected for this purpose by the Contractor as specified hereafter, shall in the execution of such work be subcontractors of the Contractor and are herein referred to as "Selected Subcontractors".

Unless another procedure is specified, Selected Subcontractors are chosen and appointed as follows. The Employer and the Contractor shall compile a list of firms or persons acceptable to both and who will be invited to submit tenders for certain work or goods to be supplied by Selected Subcontractors. Before the closing date of such tenders the Contractor shall furnish the Employer with a sealed list in which is indicated the price increase required by the Contractor regarding the handling and appointment of every tenderer as Selected Subcontractor. No price increase requested by the Contractor in such list may be higher than the percentage or amount the Contractor has tendered in the main Contract against the provisional or prime cost item concerned. The list is then opened with the tenders and on the basis thereof the Employer shall indicate which tender he wishes to accept. The Contractor shall accept the tenderer and appoint him as Selected Subcontractor.

The Contractor shall incorporate in the subcontract provisions that:

- (a) In respect of the work or the goods that are the subject of the subcontract the Selected Subcontractor undertakes to the Contractor mutatis mutandis the obligations and liabilities as are imposed upon the Contractor to the Employer in terms of the Contract, and holds the Contractor harmless from and indemnifies him against the same and in respect of all claims, demands, lawsuits, damages, costs, charges and expenses whatsoever arising out of or in connection therewith, or arising out of or in connection with any failure to perform such obligations or to fulfil such liabilities, and,
- (b) The Selected Subcontractor holds the Contractor harmless and indemnifies him against:
 - (i) Shortcomings in the subcontract works if and where the works were designed by the Selected Subcontractor;
 - (ii) defects in the goods if and where the goods were manufactured and/or supplied by the Selected Subcontractor;
 - (iii) any negligence by the Selected Subcontractor, his agents, workmen and servants;
 - (iv) any misuse by the Selected Subcontractor of any Constructional Plant, Temporary Works or materials provided by the Contractor for the purposes of the Contract;
 - (v) any claims as aforesaid.

3.3.2.3 Appointment of targeted enterprise subcontractors

The Contractor is required to appoint domestic subcontractors in order to meet the participation goal for targeted enterprises as indicated in Schedule 22 of T2.2: Returnable Schedules.

The Contractor will be allowed to subcontract any portion of work that he wants to count towards his participation goal and make an award on a domestic subcontract basis, subject to the requirements of Clause 6 of the General Conditions of Contract. The Contractor may procure these subcontractors using his own subcontract selection methodology.

Prior to the appointment of any domestic subcontractor, whose work is to contribute to the participation goal, the Contractor shall submit to the Employer details of the scope of the work subcontracted including the relevant items in the Bill of Quantities, what the subcontract total sum is and what the Contractor's corresponding tender amount is for the same scope of work is including all the relevant Establishment and General sums and any other allowable sums.

In the event that the subcontract total sum is less than 85% of the corresponding Contractor's sum indicated above, or the subcontract total sum is less than 65% of the Employer's internal estimate, the Contractor shall undertake to allow the subcontractor to submit any explanatory information regarding the subcontract to the Employer, and the subcontractor shall agree be interviewed by the Employer or the Employer's Agent to discuss the breakdown of the subcontract sum in order to satisfy the Employer that the subcontractor can complete the work at the amount submitted on a reasonable sustainable commercial basis. If there are concerns about the subcontractor's tender sum the subcontractor shall have the right to withdraw their tender without any sanction of any nature by the Contractor.

If the subcontractor withdraws the Contractor may have to select a different package of work to contribute to his subcontract target or choose and propose to appoint a different subcontractor for the same scope of work, or the Contractor will have to present, for the same subcontractor a re-negotiated subcontract sum that will be acceptable to the Employer. All additional costs that may arise as a result of such a re-negotiation or re-tendering/re-appointment shall be borne by the Contractor.

If a suitable subcontractor cannot be identified for the envisaged scope of works the Contractor shall complete the work at his tendered rates and the associated part of the works shall form part of the works executed by the Contractor and be excluded from counting towards the subcontract participation goal(s).

3.3.3. **TARGETED CONSTRUCTION PROCUREMENT SPECIFICATIONS**

The following South African National Standard Resource Specifications for the implementation of Targeted Construction Procurement issued and published by Standards South Africa:

South African National Standard SANS 1914-4 : 2002 (Edition 1)
Targeted Construction Procurement : Part 4 : Participation of Targeted Enterprises and Targeted Labour (Local Resources)
 shall apply to and form part of this Contract (see Schedule 22 of T2.2 : Returnable Schedules).

Where the South African National Standard SANS 1914-Specification is not bound in this document, it may be obtained from South African Standards (website www.sansa.co.za) or inspected, by appointment, at the offices of the Employer's representative during normal working hours.

The South African National Standard Specification makes provision defining targeted enterprises and targeted labour, weightings for different subcategories, for factors and additional requirements to be specified to suit a particular contract. Details of such factors or additional requirements applicable to this contract are contained in this part of the Scope of Work.

Preferences granted in terms of Targeted Enterprises and Targeted Labour (Local Resources) shall be executed in accordance with the conditions specified below and included in **Schedule 21 : Preferencing Schedule where preferences are granted in respect of Targeted Enterprises and Targeted Labour (Local Resources) in Part T2.2, Returnable Schedules.**

VARIATIONS TO THE STANDARDISED SANS 1914-4: 2002 SPECIFICATION

Variations, amendments and additions to the SANS 1914-4: 2002 : Part 4 : Participation of Targeted Enterprises and Targeted Labour (Local Resources) Standardised Specification are as set out below. Should any requirements of the variations conflict with other requirements of the SANS 1914-4: 2002 Specification, the requirements of the variation shall prevail.

The number of each clause and each payment item in this part of the project specifications consists of the prefix TP4 (Targeted Procurement – Part 4) followed by a number corresponding to the number of the relevant clause or item in the SANS Specification. The number of a new clause or item which does not form part of a clause or item in the standard SANS Specification and which is included here, is also prefixed by TP4 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.

TP4-2. DEFINITIONS (CLAUSE 2)

TP4-2.10 Target Area (Clause 2.10):

Add the following:

For this Contract the following Target Areas shall apply:

1. The geographical area located within **Ward 2, Robertson, labour should be from Ward 2 in Robertson, Langeberg Municipality - Target Area 1 is defined as the Local Area for this Contract.**
2. The geographical area, excluding Target Area 1, located within the boundaries of the Langeberg Municipal District.

3. The geographical area, excluding Target Areas 1 and 2, located within the Western Cape Province.

TP4-2.11 Targeted Enterprise (Clause 2.11):

Add the following :

Targeted Enterprises for this Contract shall be a sole trader, partnership or legal entity from the Local Area.

TP4-2.12 Targeted Labour (Clause 2.12):

Add the following :

The following individuals are defined as the target group for this Contract:

All unskilled labour (100%) to be from Target Area. South African citizens, temporarily employed by the contractor and his subcontractors in the performance of the contract, who permanently reside within the boundaries of Target Area (ward 2, Nkqubela) as specified. It is incumbent on individuals to demonstrate their claims to such residency on the basis of identification and association with and recognition by members of the community residing within the aforementioned area. It is incumbent on individuals to provide evidence of qualifying for the target groups.

TP4-2.15 Weightings (Clause 2.15):

Add the following :

In terms of Targeted Labour Goal Credit calculations (Section 3.3 of SANS 1914-4) the Weighting Factor for all contributions shall be taken as 1,0.

Add the following new subclause :

TP4-2.16 (new subclause 2.16):

Wages:

The actual amount paid periodically to targeted labour employed by the main contractor and his subcontractors after all deductions made in terms of the law (e.g. UIF) and exclusive of all company overheads and other benefits such as protective clothing, transport etc.

TP4-3. REQUIREMENTS (CLAUSE 3)

TP4-3.1 Contract Participation Goal (Clause 3.1):

Add the following to Subclause 3.1.1:

For this Contract the minimum Contract Participation Goals set by the Employer are.

Contract Participation Goal	CPG _{2min}	Minimum set by Employer
Targeted Enterprises SANS 1914-4 Annex A Method 2 Clause A.2.2.1	CPG _{2Emin}	25 %
Targeted Labour SANS 1914-4 Annex A Method 2 Clause A.2.2.2	CPG _{2Lmin}	3 %
Total Contract Participation Goal SANS 1914-4 Annex A Clause A.3	CPG _{2Emin} + CPG _{2Lmin} = CPG _{2min}	28 %

Tenders that do not meet each of the individual abovementioned minimum Contract Participation Goals (CPG_{2min}) set by the Employer will not be considered (not applicable if minimum percentage specified is 0%).

TP4-3.2 Achieving the Contract Participation Goal (Clause 3.2):**3.2.1 General****(a) Method 1**

In the first paragraph numbered (1) replace the words “not less than 50% of the wages and allowances” with the words “not less than 30% of the wages and allowances”.

Delete subclauses (1) and (2) and add the following to Subclause 3.2.1:

For this Contract the Contractor may achieve the specified contract participation goal by the engagement and use of targeted enterprises and targeted labour as outlined in SANS 1914-4 and measured **by using Method 2 only**. The engagement and use of targeted enterprises and targeted labour as outlined in SANS 1914-4, will not be measured by using Method 1 - **Method 1 will therefore not be applicable**.

TP4-3.3 Contract Participation Goal Credits (Clause 3.3):

Add the following new subclause after subclause 3.3.3

3.3.4 Further to the requirements of 3.3.3, credit will be denied should the Contractor not employ Targeted Labour in accordance with comply with the following relevant statutory legislation:

- Basic Conditions of Employment Act 75 of 1997
- Labour Relations Act 66 of 1995
- Employment Equity Act 55 of 1998 (Chapters 1 and 2)
- Occupational Health and Safety Act 85 of 1993
- Compensation for Occupational Injuries and Diseases Act 130 of 1993
- Skills Development Act of 1998

The statutory Department of Labour Government Notice No. R204 of 2 March 2001 : Basic Conditions of Employment Act (No. 75 of 1997) : Sectoral Determination 2 : Civil Engineering Sector, South Africa as amended shall apply in respect of any employer or employee associated with the contract.

In particular the Contractor shall pay his Labour workers at least the minimum wage prescribed in the statutory legislation.

The prime or main contractor who does not meet each of the individual minimum contract participation goals set by the Employer faces the possibility of being sanctioned. (See clause TP4-6 below)

Credits towards the contract participation goal for targeted enterprises will only be accorded to subcontractors / suppliers / manufacturers / service providers who undertake work directly for / to the main contractor. No credits will be accorded to targeted enterprises who are engaged by subcontractors / suppliers / manufacturers / service providers working under the main contractor.

Similarly, credits towards the contract participation goal for targeted labour will be granted for targeted labour employed by subcontractors only if they undertake work directly for / to the main contractor in the performance of the contract. However, in the case of subcontractors who are also targeted enterprises, the value of their targeted labour will, at the contractor's choice, count either towards the CPG for labour or the CPG for enterprise, but not both.

TP4-6. SANCTIONS (CLAUSE 6)

Add the following:

In the event that the Contractor fails to substantiate that any failure to achieve the Contract Participation Goal (CPG_{2E} and/or CPG_{2L}) relating to the granting of a preference was due to quantitative underruns, the elimination of items, or any other reason beyond the Contractor's control which may be acceptable to the Employer, the Contractor shall pay to the Employer penalties (P) in an amount determined in accordance with the following formula :

$$P = \frac{0,15 \times (D - D_0)}{100} \times N_A$$

where D = tendered Contract Participation Goal (CPG₂) percentage.

D₀ = the Contract Participation Goal (CPG₂) which the Employer's Representative, based on the credits passed, certifies as being achieved upon completion of the Contract.

N_A = Net Amount

P = Rand value of penalty payable

In applying the above formula the employer may give consideration to the following rules:

- a) In the event of the CPG for a sub category item not being achieved, credit may be given to reduce the penalty to the extent that other sub category items under the same main category have exceeded their CPG targets provided that at least 50% of the CPG target for the offending sub category item has been achieved.
- b) Where, after applying rule a), one or more of the sub category items still warrant a penalty and the CPG target for the relevant main category has also not been achieved, then only the penalty applicable to the main category item will apply.
- c) No credit will be given for exceeding the CPG target of any of the three main categories (Subcontractors, Suppliers/Manufacturers and Targeted Labour)



C3.4 Construction

Works Specifications

CONTENTS

PART A: STANDARD SPECIFICATIONS

PART B: PROJECT SPECIFICATIONS REFERRING TO THE STANDARD SPECIFICATIONS

PART C: HEALTH AND SAFETY REQUIREMENTS



PART A: STANDARD SPECIFICATIONS**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'

CERTIFICATION BY RECOGNIZED BODIES

Not applicable to this contract.

AGRÉMENT CERTIFICATES

Not applicable to this contract.

3.4.2 APPLICABLE STANDARDISED SPECIFICATIONS

SANS 1200A	1986	General
SANS 1200C	1982	Site Clearance
SANS 1200D	1990	Earthworks
SANS 1200DB	1989	Earthworks (Pipe Trenches)
SANS 1200G	1982	Concrete (Structural)
SANS 1200 HA	1990	Structural Steelwork (Small Works)
SANS 1200L	1983	Medium Pressure Pipelines
SANS 1200LB	1983	Bedding (Pipes)
SANS 1200LD	1982	Sewers
SANS 1200LE	1982	Stormwater Drainage
SANS 1200MF	1981	Base

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 is 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 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.



PART B: PROJECT PARTICULAR SPECIFICATIONS**PROJECT SPECIFICATIONS REFERRING TO THE STANDARD SPECIFICATIONS**

In certain instances, the Standard Specifications listed in Part A 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 or 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.



PSA GENERAL (1986)**PSA 1 SCOPE**

Replace subclause 1.1 with the following:

"1.1 This specification covers requirements, principles and responsibilities of a general nature which are normally applicable to all civil engineering contracts as well as the requirements for the contractor's establishment on site."

PSA 2 INTERPRETATIONS**PSA 2.3 DEFINITIONS**

In the opening phrase between the words "specification" and "the following", insert the words "the definitions given in the conditions of contract and "

(a) General

Add the following definitions:

"General conditions: The general conditions of contract specified for use with this contract and the special conditions of contract as applicable.

Specified: As specified in the standardised specifications, the drawings or the project specifications. Specifications shall have the corresponding meaning."

(c) Measurement and payment

Replace the definitions for fixed charge and time-related charge with the following:

"Fixed charge: A charge that is not subject to adjustment on account of variation in the value of the contract amount or the contract time of completion.

Time-related charge: A charge, the amount of which is varied in accordance with the time for completion of the work as adjusted in accordance with the provisions of the contract.

PSA 2.4 ABBREVIATIONS

(a) Abbreviations relating to standard documents

Add the following abbreviation:

"CKS : SABS Co-ordinating Specification."

PSA 3 MATERIALS**PSA 3.1 QUALITY**

Add the following:

"All manufactured materials supplied shall be new materials unless the contrary is specified. All materials specified in accordance with SABS specifications shall bear the SABS mark, whether so specified or not. Copies of SABS Certificates of all materials used must be submitted to the Employer's Agent."

Add the following:

"The Contractor must provide the Employer's Agent with at least 48 hours notice prior to control testing being required. Furthermore, the contractor must make provision in his programme for the undertaking, and calculation of results, of such testing. Construction of layer works over areas for which test results are not available will be undertaken at the contractors own risk."

Add the following subclause(s)

"PSA 3.3

ORDERING OF MATERIALS

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

PSA 4**PLANT**

Replace the heading of PSA 4 with :

"PSA 4 Construction Equipment".

PSA 4.1

SILENCING OF PLANT

Replace the heading of "PSA 4.1 Silencing of plant" with :

"PSA 4.1 Silencing of Construction Equipment".

Replace the contents of subclause 4.1 with the following :

"The Contractor's attention is drawn to the applicable regulations pertaining to noise and hearing conservation, framed under the Occupational Health and Safety Act (Act No. 85 of 1993) as amended.

The Contractor shall at all times and at its 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 Construction Equipment 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."

PSA 4.2

CONTRACTOR'S OFFICES, STORES AND SERVICES

Add the following paragraph before the first paragraph:

"The Contractor's construction camp shall be fenced off and shall contain all offices, stores, workshops, testing laboratories, toilet facilities, etc. The camp shall always be kept in a neat and tidy condition.

No personnel will be allowed to reside on the site. Only night-watchmen may be on the site after hours."

Add the following to the second paragraph:

"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.

The contractor shall, where applicable, make all necessary arrangements and pay for the removal of night soil."

"PSA 4.3

SITE SECURITY

The area within the area used by the Contractor for the establishment of his camp site may be subject to a security risk. The Contractor must assess the additional risk 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 PSA 8.3 and PSA 8.4. Should the Contractor feel that he needs additional insurance to cover these risks, the cost of such insurance will also be deemed to be included in the tendered rates."

PSA 5 CONSTRUCTION**PSA 5.1 SURVEY****PSA 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 Subclause 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 Subclause 5.1.2 :

"The Contractor and the Employer's Agent 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."

Replace the third sentence of Subclause 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 Surveyor's check reveals have become disturbed or damaged. The Contractor shall, as a precedent to the issue of the Certificate of Completion, provide to the Employer's Agent, a certificate from the registered land surveyor, certifying that all the pegs listed at the commencement of construction in accordance with the provisions 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 Contractor's account. This, with the provision always that the Contractor shall not be 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 Employer's Agent, were disturbed, damaged or destroyed by others beyond his control."

PSA 5.3 PROTECTION OF EXISTING STRUCTURES

Replace :

"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 the following after "(Act No. 27 of 1956)" : "as amended".

PSA 5.4 PROTECTION OF OVERHEAD AND UNDERGROUND SERVICES

Replace the heading and the contents of this subclause with the following:

"PSA 5.4 LOCATION AND PROTECTION OF EXISTING SERVICES**PSA 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 that can reasonably be expected by an experienced and competent Contractor to be present on, under, over or within the Site.

Without in any way limiting its liability in terms of the Conditions of Contract in relation to damage to property and interference with services, the Contractor shall, in collaboration with the Employer's Agent, obtain the most up-to-date plans as are available, showing the positions of services existing in the area where it intends to work. Neither the Employer nor the Employer's Agent offer 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 and the provision and utilisation of suitable detecting and testing equipment.

Thereafter, the Contractor shall, by the use of appropriate methodologies carefully expose the services at such positions as are agreed to by the Employer's Agent, 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 Sub-clauses 4.4 and 5.1.2.2 of SABS 1200D (as amended) shall apply.

The aforesaid procedure shall also be followed in respect of services not shown on the plans but which may reasonably be anticipated by an experienced Contractor to be present or potentially present on the site.

All services, the positions of which have been determined as aforesaid at the critical points, shall henceforth be designated as 'Known 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 Employer's Agent without delay.

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 Employer's Agent immediately any such service is encountered or discovered on the Site.

Whilst it 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 cognisance being taken of such deviations in line and level which may reasonably be anticipated ; and
- (b) any other services which ought reasonably to have been a Known Service in accordance with the provisions of this clause ;

as well as for consequential damage, whether caused directly by the Contractor's operations or by the lack of proper protection ;

Provided always that the Contractor will not be held liable in respect of damages occurring to services not being Known Services.

No separate payment will be made to the Contractor in respect of its 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 Employer's Agent, the Drawings as aforesaid and these costs shall be deemed included in the Contractor's other tendered rates and prices included in the Contract.

Payment to the Contractor's in respect of exposing services at the positions agreed by the Employer's Agent and as described above will be made under the payment items (if any) as may be provided therefor in the respective sections of the Specifications pertaining to the type of work involved.

PSA 5.4.2 Protection during construction

The contractor shall exercise all the necessary care to prevent damage to known services during construction operations. Major excavating equipment and other plant shall not be operated in dangerously close proximity of these services. Where necessary, excavation in close proximity of these services shall be carefully carried out by means of suitable hand tools, excluding picks wherever their use could cause damage to the services.

Services left exposed shall be suitably protected from damage.

PSA 5.4.3 Alterations and repairs to existing services

Unless the contrary is clearly specified or ordered, the contractor shall not carry out any alterations to existing services. Where this may be necessary, the contractor shall inform the Employer's Agent, who will either make arrangements for such work to be executed by the owner of the service or instruct the contractor to make such arrangements himself.

Where existing services are damaged by the contractor, he shall immediately inform the Employer's Agent, or when this is not possible, the relevant authority, and shall obtain instructions as to who should carry out repairs. In urgent cases the contractor shall take all necessary steps to minimize damage to and the interruption of the service. No repairs shall be attempted to telecommunication cables or electric power lines and cables.

No liability for damages arising from any delay in having such alterations or repairs effected will be accepted by the employer. The contractor shall provide all reasonable opportunity, access and assistance to persons doing alterations or repairs to existing services."

PSA 5.7 SAFETY

Replace the contents of subclause 5.7 with the following :

"Pursuant to the provisions of the Conditions of Contract, and without in any way limiting the Contractor's obligations thereunder, the Contractor shall at its 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):

- (a) Provide to its Employees on the Site of the Works, all safety materials, clothing and equipment necessary to ensure full compliance with the provisions of the Occupational Health and Safety Act (Act No 85 of 1993) and Construction Regulations 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; and

- (b) Provide, install and maintain on 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; and
- (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; and
- (d) Implement all necessary measures as to ensure compliance of the Act by all subcontractors engaged by the Contractor and their employees engaged on the Works; and
- (e) Comply fully with all other requirements pertaining to safety as may be specified in the Contract.

The Employer and the Employer's Agent shall be entitled, although not obliged, to make such inspections on the Site, as they shall deem appropriate, for the purpose of verifying the Contractor's 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 Employer's and/or Employer's Agent Representative may reasonably require.

Where any such investigations reveal, or where it comes to the Employer's Agent's 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 Employer's Agent shall, in accordance with the provisions of Clause 5.11 of the Conditions of Contract, 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 Employer's Agent, 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 Employer's Agent 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 of the Conditions of Contract should the Contractor fail to complete the Works on or before the specified Due Date for Completion 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 Employer's Agent to act in terms of Sub-Clause 9.2 of the Conditions of Contract and for the Employer to cancel the Contract in accordance with the further provisions of the said Clause.

Add the following subclause:

"PSA 5.9

SITE MEETINGS

The Contractor or its authorised agent will be required to attend regular site meetings, which shall normally be held twice a month on dates and at times determined by the Employer's Agent, but in any case whenever reasonably required by the Employer's Agent. Unless otherwise indicated in the Contract or instructed by the Employer's Agent, such meetings shall be held at the Contractor's offices on the Site. At such monthly meetings, matters such as general progress on the Works, quality of work, problems, claims, payments, and safety etc, shall be discussed, but not matters concerning the day-to-day running of the Contract."

PSA 6

TOLERANCES

Add the following subclause:

PSA 6.2

DEGREES OF ACCURACY

Add to the subclause:

"Degree of Accuracy 1 shall be applicable to the following parts of the Works unless stated to the contrary elsewhere; weirs, flanges at civil/mechanical interfaces."

"PSA 6.4

GENERAL

No guarantee is given that the full specified tolerances will be available independently of each other, and the contractor is cautioned in regard to the fact 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 shall for purpose of measurement and payment be determined from the 'authorised' dimensions. This shall be taken to mean the dimensions as specified or shown on the drawings or, if changed, as finally instructed by the Employer's Agent, without any allowance for the tolerances specified. Save as hereinafter specified to the contrary, all measurements for determining quantities for purposes of payment will be based on the "authorised" dimensions.

If the work is therefore constructed in compliance with the "authorised" dimensions plus or minus any tolerances allowed, 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 Employer's Agent 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."

PSA 7 TESTING

PSA 7.1.1 Checking

Replace the last sentence with the following:

"The contractor shall obtain the services of an independent testing laboratory at his own expense (Refer subclause PS 8.4 of portion 1 of the project specifications) to carry out such checks as are prescribed in the various standardised specifications."

PSA 7.1.2 Standard of finished work not to specification

Insert the words "or checks by an approved laboratory ..." after the words "Where the Employer's Agent's checks ..." in the first line of Subclause 7.1.2.

PSA 7.2 APPROVED LABORATORIES

REPLACE THE CONTENTS OF SUB-CLAUSE 7.2 WITH THE FOLLOWING:

"Unless otherwise specified in the relevant specification 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 Employer's Agent 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 Systems (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 Employer's Agent;
- (c) any testing laboratory established and operated on the Site by or on behalf of the Employer or the Employer's Agent.

PSA 8 MEASUREMENT AND PAYMENT

PSA 8.1 MEASUREMENT

PSA 8.1.1 Method of Measurement, All Sections of the Schedule

Delete the words : "and South West Africa".

PSA 8.1.2 Preliminary and general items or section

PSA 8.1.2.1 Contents

Delete item (c).

PSA 8.1.2.2 Tendered sums

Replace the contents of this subclause with the following:

"The contractor's tendered sums under items PSA 8.3 and PSA 8.4 shall collectively cover all charges for:

- Risks, costs and obligations in terms of the general conditions of contract and of this standardised specification, except to the extent that provision is made in these project specifications to cover compensation for any of these items of work.
- Head-office and site overheads and supervision.

- Profit and financing costs.
- Expenses of a general nature not specifically related to any item or items of permanent or temporary work.
- Providing facilities on site for the contractor's personnel, including offices, storage facilities, workshops, ablutions, for providing services such as water, electricity, sewerage, sewage and rubbish disposal, for access roads and all other facilities required as well as for the maintenance and removal on completion of the works of these facilities and the cleaning-up of the camp site on completion of the works.
- Providing and erecting two new contract name boards as shown on the drawings.
- Providing all the required documentation described in Portion 1 : The Works on a monthly basis.
- Adhering and complying with the client's Procurement requirements including the monthly completion of labour and remuneration records."

PSA 8.2 PAYMENT

PSA 8.2.1 Fixed-charge and value-related items

Replace the contents of this subclause 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 once the facilities have been provided and approved. The remaining twenty per cent (20%) will be paid once the works have been completed, the facilities removed and the camp-site cleared and cleaned.

Payment for the sum tendered under item 8.3.2 will be made in three separate instalments as follows:

- (a) The first instalment which is 40% of the sum, will be paid when the contractor has met all his obligations to date under this specification, the general conditions of contract and the special conditions of contract, and where the value of work certified for payment, excluding materials on site and any payments under preliminary and general items is equal to not less than 5% of the total value of the work 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 the second instalment referred to herein, 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 completed and the contractor has fulfilled all his obligations to date under this specification, the general conditions of contract and the special conditions of contract.

Should the value of the measured work finally completed by more or less than the tender sum, then the sum tendered under item 8.3.2 will be adjusted pro rata up or down and this adjustment shall be applied to the third instalment. No adjustment will apply to item 8.3.1 in respect of variations in the value of work done or the time for completion finally authorised."

PSA 8.2.2 Time-related items

Replace the contents of this subclause with the following:

"Three time related items shall be scheduled and shall be full compensation for all time related preliminary and general costs and shall include the following :

- Public holidays
- SAFCEC recommended shut down period during December and January; and
- The contract period during the normal industry working period outside public holidays and outside the industry shutdown period during December and January.

Subject to the provisions of 8.2.3 and 8.2.4, payment under item 8.4.1 (time-related item) will be made as follows:

PSA 8.2.2.1 The contract period during the normal industry working period payment..... **Unit : Sum**

Payment will be made monthly in equal amounts, calculated by dividing the sum tendered for the item by the tendered contract period in Days (excluding public holidays and the SAFCEC recommended industry shutdown period during December and January), provided always that the total of the monthly amounts so paid for the item is not more than in proportion to the progress of the work as a whole.

Should the Employer's Agent grant an extension of the time for completion of the works, the Contractor will be entitled to an increase in the sum tendered for the time-related item, which increase shall be in the same proportion to the original tendered sum as the extension of time is to the original time for completion of the works.

PSA 8.2.2.2 Public Holidays..... **Unit : No of Statutory Public Holidays**

The tendered amount per day will be payable for the number of statutory public holidays included in the contract period which replaces normal working days.

Should an extension of time be granted and a public holiday is within this period, the Contractor will be entitled to additional payment for each additional public holiday which replaces a working day.

PSA 8.2.2.3 Industry recommended shutdown period during December and January **Unit : Sum**

The tendered sum will be payable per the 15 working day industry recommended shutdown period during December and January which falls within the construction period. Should an extension of time be granted which extends the contract period beyond the industry recommended shutdown period during December and January, the Contractor will be entitled to payment as tendered for this item 8.2.2.3.

Payment for such increased amounts determined in accordance with PSA 8.2.2.1 to PSA 8.2.2.2 will be taken to be in full compensation for all additional time-related preliminary and general costs, that result from the circumstances pertaining to the extension of time granted."

PSA 8.3 SCHEDULED FIXED-CHARGE AND VALUE-RELATED ITEMS

Replace the items with the following:

"PSA 8.3.1 Fixed preliminary and general charges **Unit : Sum**

PSA 8.3.2 Value-related preliminary and general charges **Unit : Sum**

The sums tendered shall collectively include full compensation for all fixed and value-related preliminary and general charges as described in subclause PSA 8.1.2.2. Payment will be made as described in subclause PSA 8.2.1."

Add the following subclause:

"PSA 8.3.5 Locate, record, protect and reinstate pegs **Unit : Sum**

This item must cover all costs incurred to locate, record and protect pegs during the duration of the contract and the reinstatement of all disturbed pegs on completion of the contract in the manner as prescribed by the Land Survey Act."

PSA 8.4 SCHEDULED TIME-RELATED ITEMS

Replace the items with the following:

"PSA 8.4.1 Time-related preliminary and general charges

PSA 8.4.1.1 The contract period during the normal industry working period payment..... **Unit : Sum**

PSA 8.4.1.2 Public Holidays..... **Unit : No**

PSA 8.4.1.3 Industry recommended shutdown period during December and January **Unit : Sum**

The sums and rate tendered for items PSA 8.4.1.1 to PSA 8.4.1.3 shall include full compensation for all time-related preliminary and general charges as described in subclause PSA 8.1.2.2. Payment will be made as described in subclause PSA 8.2.2."

PSA 8.6 PRIME COST ITEMS

Replace Subclause 8.6 with the following :

"PSA 8.6 PRIME COST SUMS

(a) Description of Item to which Prime Cost Sum Applies Unit : PC Sum

(b) Charge required by Contractor on Sub-item (a) above Unit : %

Sub-items (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 sub-item(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 Contractor's labour, profit, carriage, establishment or other charges related to such goods, services or materials.

The Contractor shall be paid under sub-item (b), the respective percentage, as stated by the Contractor in its Tender, of the amount certified by the Employer's Agent for payment under the related sub-item (a). The percentages tendered by the Contractor for each respective sub-item (b) included in the Schedule of Quantities shall be deemed to 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 sub-item (a).

If the Contractor shall have omitted within its Tender to insert a tendered percentage under sub-item (b), or tendered a zero percentage, the Contractor's tendered rate for sub-item (b) shall be deemed to be zero and the Contractor shall not be entitled to any payment under sub-item (b)."

PSA 8.7 DAYWORK

Replace the contents of Subclause 8.7 with the following :

"Measurement and payment shall be in accordance with the provisions of Sub-clause 6.5 of the Conditions of Contract."

Add the following item:

PSA 8.8 TEMPORARY WORKS

PSA 8.8.2 Accommodation of traffic Unit : sum

Add the following:

"This amount shall cover all costs in respect of the provision, erection, moving, re-erection and maintenance of all barriers, road signs, lights and flagmen necessary for the protection of the works, for the construction, gravelling and maintenance of detours and entrance roads affected by the work, as well as the breaking up and removal thereof at the contract completion, and for compliance with all necessary traffic rules and regulations, liaising with the road authorities, and all other costs necessary in respect of accommodation of traffic."

Replace item 8.8.4 with the following:

"PSA 8.8.4 Location and protection of existing services

Where particular items are provided in other sections of the schedule the costs of detection, exposure, protection and alterations shall be covered by such particular items. Where no such particular items are provided and where there is reason to expect the presence of such a service or services, the following items will apply:

PSA 8.8.4.1 Provision of detecting devices for :

The tendered rate shall include full compensation to provide a scanner to detect steel pipes and a scanner to detect electrical cables and to mark the position of these services on site.

(a) Water and sewer pipes Unit : Sum

(b) Electrical and other cables Unit : Sum

(c) Other Unit : Sum

PSA 8.8.4.2 Hand excavation necessary for locating and exposing existing services in all materials:

(a) In roadways Unit : m³

(b) In all other areas Unit : m³

The rates shall cover the cost of excavating by means of hand tools within authorised dimensions, for all precautionary measures necessary to protect the services from damage during excavation and backfilling and for subsequent backfilling and compacting. Compaction of material in all areas except in roadways shall be to 93% of modified AASHTO density.

The rate for hand excavation in roadways shall also include compensation for compacting excavated or selected backfill material to 100% of modified AASHTO density. Reinstating layerworks and surfacing shall be measured and paid for under SABS 1200 DB.

The tendered rates shall also include for keeping excavations safe, for dealing with surface and subsurface water and for removal of surplus excavated material from the site."

Add the following items :

"PSA 8.8.7 Dealing with 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 surface and subsurface water anywhere on the Site as required in terms of Subclause 5.1.3 of SABS 1200 D and Subclause 5.1.2 of SABS 1200 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 the 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 Employer's Agent in which case the monthly payments will be made pro rata to the extension of time only if dealing with water is required."

PSA 8.8.8 Temporary fence minimum Unit : m

Various types will be scheduled.

The tendered rate shall include full compensation for the supply and erection of the temporary fence, the maintenance of the fence and the dismantling of the fence.

The contractor shall erect a temporary high visibility barrier fence at the positions as shown on the drawings or as instructed. The tendered rate shall include full compensation for the supply, erection and maintenance of the fence and the removal thereof on completion of the civil contract. It shall at all times be kept in an upright and neat condition.

PSA 8.8.9 Dismantle and re-erect temporary fence Unit : m

Various types will be scheduled.

The tendered rate shall include full compensation for the careful dismantling of the temporary high visibility barrier fence, the stacking, loading, transporting, off-loading and re-erection of the fence at a new required position. It will also include for the maintenance of the fence and the removal thereof at the end of the construction activities.

PSA 8.8.10 Dust control Unit : Sum

The tendered rate shall include full compensation for the provision of a water truck on site on a continuous basis during the construction of earthworks and layerworks period and the regular wetting of the construction area to prevent any dust disturbance to adjacent areas.

Add the following items :

"PSA 8.9 Standing Time Cost

- (a) Plant **Unit : Day**
- (b) Labour **Unit : Day**
- (c) Other.....

The sum tendered for this item shall allow for full compensation for all standing time costs of whatever nature, and approved by the Employer's Agent.

For purposes of calculating the standing time costs, a working week will be held to consist of five working days.

The amount by which the standing time costs is adjusted shall only apply to delays which, in the opinion of the Employer's Agent, are incurred as a result of a riot, commotion, politically motivated sabotage and acts of terrorism or disorder outside the Contractor's control.

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 terminate the Contract in terms of the provisions of Clause 9.1.2 of the General Conditions of Contract.

Variations in the Total Tender Sum resulting from payment for delays as a result of standing time costs as described herein shall be excluded from the total tender sum when Clause 6.4 of General Conditions of Contract is applied."

PSA 8.10 Accommodating Other Contractors Unit : Sum

The amount tendered shall cover the cost of accommodating civil, electrical and mechanical contractors on the site of the Works. Payment will be made in equal monthly amounts over the Contract period."

PSA 8.12 COMPLIANCE WITH THE OCCUPATIONAL HEALTH AND SAFETY ACT (ACT NO 85 OF 1993) AND CONSTRUCTION REGULATIONS AND SPECIFICATIONS INCLUDED IN PART C5..... Unit : Sum

The tendered rate shall include full compensation for compliance with the OHS Act and Construction Regulations and the Health and Safety requirements and specification included in this tender document.

Temporary barriers and fences for deep or trench excavations required in terms of the contract shall not be paid for separately.

Payment under this item will be made as follows :

- (a) The first instalment which is 30% of the sum tendered, will be paid once the contractors Health and Safety Plan is approved by the Employer or the Employers Agent and the Contractor has met all his obligations to date under this specification.
- (b) The remainder of the sum tendered will be paid in equal monthly amounts calculated by dividing the sum tendered (less 30%) divided by the contract period in months.

No additional payment will be made should an extension of the contract period be granted. Penalties for non-compliance will be deducted from payments due to the contractor.

PSA 8.13 Compliance with The Environmental Management Plan and Requirements Included in the Particular Specifications..... Unit : Sum

The tendered rate shall include full compensation for compliance with the environmental management requirements and specification included in this tender document.

Payment under this item will be made in equal monthly amounts calculated by dividing the sum tendered divided by the contract period in months.

No additional payment will be made should an extension of the contract period be granted. Penalties for non-compliance will be deducted from payments due to the contractor.

PSA 8.17 Photographic Record..... Unit : Sum

The Contractor must keep a photographic record of the condition of properties and structures within 30 m of the

proposed works. Photographs of every structure must be taken prior to construction and must be of high quality (3 mega pixel or higher to ascertain the condition of the property or structure. Structures will include (but are not limited to) boundary walls, fences, road surfaces, kerbing, stormwater structures and the surrounding area along the route of the pipeline. The preconstruction photographs must be handed to the Employer's Agent prior to any excavation is undertaken.

The structures and properties must again be photographed after construction to ascertain any possible damage to the structures or properties due to construction activities. This photographic record must be supplied to the Employer's Agent at the end of the contract and will form part of the record information to be provided by the Contractor.

The tendered sum shall include full compensation for the investigation and supply of the photographic record in electronic and colour hard copy format (standard photo size). Fifty percent of the sum tendered will be payable upon supply and approval by the Employer's Agent of the pre-construction photo record and the remaining 50% upon supply of the post-construction record.

PSA 8.19 Liaison with residents and the local authority.....Unit : Sum

The tendered rate shall include full compensation for all liaisons with the residents of each area and the Municipality regarding valve closures and issuing of public notices.

Residents must be informed of valve closures at least 48 hours prior to closing of valves.

The tendered rate must include :

- the preparation of an information page which must be delivered to each household to be affected, prior to working in the area.
- the delivery of a notice informing residents of a disruption in the water supply (three days prior to the disruption)
- obtaining a "happy letter" from all residents once the work is completed and gardens re-instated.
- direct liaison with residents should a complaint be received including a written account of the complaint and agreement reached with the resident.

No additional payment will be made for additional notices of disruption which must be issued as a result of failed connection attempts."

PSA 8.20 Record of Test Results and Related Administration..... Unit : Sum

The tendered rate shall include full compensation for all the requirements stipulated in PS 8.4 for the record keeping, updating of test positions, recording the test results in tabular format and providing additional copies with the marked on reference number on a monthly basis.

Upon completion of the contract a separate full set of test results must also be submitted to the Employer's Agent before a Certificate of Practical Completion shall be issued.

Twenty percent of the Time Related P&G amount will be withheld should the required information not be provided in the correct format.

PSC SITE CLEARANCE (1982)**PSC 3 MATERIALS****PSC 3.1 DISPOSAL OF MATERIAL**

Add the following:

"The contractor shall obtain his own dumping sites for the disposal of material and all transport costs shall be included in the rates tendered for site clearance."

PSC 5 CONSTRUCTION**PSC 5.1 AREAS TO BE CLEARED AND GRUBBED**

Add the following:

"Pipeline routes shall be cleared to a distance of 1,5 m on both sides of the pipeline centre line. Route pegs or markers shall not be destroyed or damaged during clearing operations."

PSC 5.2 CUTTING OF TREES**PSC 5.2.3 Preservation of trees****PSC 5.2.3.2 Individual trees**

Replace the last sentence with the following:

"An amount of **R500-00** will be deducted from moneys due to the Contractor as a penalty for every tree that is damaged or removed unnecessarily."

PSC 5.3 CLEARING

ADD THE FOLLOWING:

"The thickness of the layer that will unavoidably be stripped during clearing of vegetation will be taken as 100 mm. This implies that levels used in earthworks quantity calculations will be 100 mm lower than the original levels."

Add the following:

"The tenderers attention is drawn to the fact that all items described under subclause 5.3 which are not separately listed in the bill of quantities must be included in the price for item PSC 8.2.1."

PSC 5.5 RECLEARING OF VEGETATION

Add the following:

"Where areas have to be re-cleared on the written instructions of the Employer's Agent, such re-clearing shall be carried out at the contractor's own cost and the contractor is advised therefore, not to clear areas at such an early stage that re-clearing may become necessary."

PSC 8 MEASUREMENT AND PAYMENT**PSC 8.1 BASIC PRINCIPLES**

Add the following:

"Levels to be used for earthworks quantity calculations will be surveyed once the clearing operation have been completed."

PSC 8.2 SCHEDULED ITEMS**PSC 8.2.1 Clear and Grub**

Replace the first line with the following:

"The area designated by the Employer's Agent to be cleared and grubbed will be measured in m² to the nearest square metre or,"

PSC 8.2.7 Dismantle and remove pipelines, electricity transmission lines, cables, etc.

Replace the contents of this Subclause with :

"The tendered rates shall include full compensation for the detection, disconnection, removal, stockpiling, safeguarding, reinstatement and reconnection of services, including all necessary excavation, bedding, concrete bases and backfilling.

In the event of the contractor damaging any of the services he will replace it at his own cost".

"PSC 8.2.13 Take down and re-erect existing fences Unit : m

The rate shall cover the cost of taking down the fences, coiling wire, sorting, stacking and guarding all material, the cost of loading, transporting and off-loading such material, the cost of re-erecting the fence in its original position, or temporary position, using the dismantled material and the cost of temporary bracing the sections of fence not taken down.



PSD EARTHWORKS (1988) AS AMENDED 1990**PSD 2 INTERPRETATIONS****PSD 2.1 SUPPORTING SPECIFICATIONS**

Replace subclause 2.1.2 with the following:

"PSD 2.1.2 Any of the other SABS 1200 specifications may form part of the contract documents."

PSD 2.3 DEFINITIONS

Replace the definition "Borrow" with the following:

"Borrow material: Material, other than material obtained from excavations required for the works, obtained from sources such as borrow pits or the authorised widening of excavations. 'Borrow' shall have a corresponding meaning."

Replace the definition "Specified density" with the following:

"Specified density: The specified dry density expressed as a percentage of modified AASHTO dry density."

Replace the definition "Stockpile" with the following:

"Stockpile (Verb): The process of selecting and, as maybe necessary, loading, transporting and off-loading material in a designated area for later use and a specific purpose."

Add the following definitions:

"Fill: An embankment or terrace constructed from material obtained from excavations or borrow. In roads it includes the earthworks up to below the selected sub-grade level."

Fill (material): Material used for the construction of an embankment or terrace.

Roadbed: The in-situ material on which a fill is to be constructed.

Placing : Placing shall mean spreading of backfilling material, watering, mixing, compacting, final grading, complying with the required tolerances and providing for testing, all in accordance with the requirements of the specification."

PSD 3 MATERIALS**PSD 3.1 CLASSIFICATION FOR EXCAVATION PURPOSES****PSD 3.1.1 Method of classifying**

Add the following:

"Classification of material other than 'soft excavation' shall be agreed upon before excavation may be commenced. The contractor shall immediately inform the Employer's Agent if and when the nature of the material being excavated changes to the extent that a new classification for further excavation is warranted. Failure on the part of the contractor to advise the Employer's Agent thereof in good time shall entitle the Employer's Agent to classify, at his discretion, such excavation as may have been executed in material of a different nature."

PSD 3.2.3 Material suitable for backfill or fill against structures

Replace the contents of this sub-clause with the following :

"Material used for backfill behind structures shall generally be the material excavated, subject to the following conditions :

- (a) The material shall not contain an excessive number of stones retained on a 50 mm sieve; and
- (b) The material shall not contain large clay lumps that do not break up under the action of the compaction equipment; and
- (c) The liquid limit of the material shall not exceed 40, neither shall the PI exceed 18.
- (d) The minimum modified AASHTO density shall be 95%."

PSD 3.3 SELECTION**PSD 3.3.1 General**

Replace the second paragraph with the following :

"The Contractor shall deal selectively with materials from all excavations to ensure that no acceptable backfill or bedding material is contaminated by material unfit for use. No additional payment shall be made in this regard and all costs related to the above selection process shall be included in the applicable payment items. Should useful material be contaminated to such an extent that it is regarded as unfit for use the Contractor shall at his own cost dispose of this material and replace it with material of an equivalent standard to the acceptable in-situ material."

Add the following subclause:

PSD 3.3.3 Selection in borrow pits

The approval of a borrow area for a certain purpose does not necessarily mean that all material within the area is suitable for the specified purpose. What it does mean, is that the borrow area contains some suitable material. The onus is on the contractor to ensure that only material that is indeed suitable is removed and used for the specified purpose."

Where the contractor is required to select material from excavations for a specific purpose, the above provisions relating to borrow areas shall apply *mutatis mutandis* to excavations.

The contractor shall not waste or contaminate material that has been elected for a specific purpose.

PSD 4 PLANT**PSD 4.4 DETECTORS**

Replace the contents of Subclause 4.4 with the following :

"The Contractor shall, for the purposes of detecting and locating underground services in accordance with the provisions of Subclause 5.4 of SABS 1200 A and Subclause 5.1.2 of SABS 1200 D, at its own cost, provide and use detecting equipment which is suitable for the detection of underground cables and pipes."

PSD 5 CONSTRUCTION**PSD 5.1 PRECAUTIONS****PSD 5.1.1 Safety****PSD 5.1.1.1 Barricading and Lighting**

REPLACE "Machinery and Occupational Safety Act, 1983 (Act 6 of 1983)" WITH "Occupational Health and Safety Act, 1993 (Act 85 of 1993)."

PSD 5.1.1.2 Safeguarding of Excavations

REPLACE "Machinery and Occupational Safety Act" WITH "Occupational Health and Safety Act, 1993 (Act 85 of 1993)."

Add the following to paragraph (B)(1) :

"Payment for supporting the sides of excavations and trenches shall be deemed to be included in the rates tendered for excavations. No separate payment will be made in this regard and it will be the Contractor's responsibility to ensure the safety and stability of all excavations.

Where trenches have to be widened to accommodate manholes, junction boxes, etc., the cost of supporting the vertical sides of such additional excavations will be deemed to be included in the rates tendered for excavation."

Add the following to paragraph (B)(2) :

"The slope of the sides of an excavation of trench may never be steeper than 60° to the horizontal and all costs incurred to slope the sides of an excavation or trench and the reinstatement thereof will, irrespective of the angle of the slope, be deemed to be included in the rates quoted for excavation."

PSD 5.1.1.3 Explosives

Replace the contents of this subclause with the following :

"The contractor will generally be permitted to use explosives for breaking up hard material during excavations, for demolishing existing structures and for such other purposes where they may normally be required, subject to the following conditions :

- (a) The Employer's Agent shall be authorised to prohibit the use of explosives in cases where, in his opinion the risk of injury to person to persons or damage to property or adjoining structures is too high. Such action by the Employer's Agent shall not entitle the contractor to any additional payment for having to resort to other less economical methods of construction.
- (b) The Employer's Agent's prior approval shall be obtained in writing in respect of each and every blasting operation carried out. Such approval may be withheld in the event of the contractor not acting responsibly and carefully in his use of explosives.
- (c) The requirements of the Explosives Act, Act 6 of 1956, and the requirements of the Inspector of Explosives shall be complied with.
- (d) Before any blasting is undertaken the contractor shall satisfy the Employer's Agent that he has established whether or not the insurers concerned require pre- and post-blasting inspections of buildings and structures within a certain radius of the proposed blasting to be carried out.

Should such inspections be required, the contractor shall, together with the Employer's Agent and the insurer, examine and measure any buildings, houses or structures in the vicinity of the proposed blasting and establish and record, together with the owner, lessee or occupier thereof, the extent of any cracking or damage that may exist before the commencement of blasting operations. It shall be the responsibility of the contractor to make good at his own expense any further damage to such houses, buildings or structures that is a result of the blasting.

- (e) Where there is a reasonable possibility of damage to power and telephone lines or any other property, the contractor shall suitably adapt his method of blasting and the size of charges and shall use adequate protective measures, such as cover-blasting, to limit the risk of damage as far as possible.
- (f) All accidents, injury to persons and damage to property shall be reported in detail and in writing to the Employer's Agent as soon as is practicable.
- (g) The Employer's Agent shall be given 24 hours notice by the contractor before each blasting operation is carried out."

PSD 5 CONSTRUCTION

PSD 5.1 Precautions

PSD 5.1.2 Existing services

PSD 5.1.2.2 Detection, location and exposure

Replace the contents of subsubclause 5.1.2.2 with the following:

"Where no services are shown on the drawings, but the presence of such a service could be assumed within reason, the Contractor must in co-operation with the relevant authorities locate such a service before commencing construction. After locating such a service, it would be regarded as a noted service, and the Contractor will be responsible for any costs arising from damages to the service due to the construction activities of the contractor."

"The exposure by the Contractor of underground services, as required in terms of Subclause 5.4 of SABS 1200 A (as amended) shall be carried out by careful hand excavation at such positions and to such dimensions as are agreed to by the Employer's Agent.

Unless otherwise instructed or agreed by the Employer's Agent, no service shall be left exposed after its exact position has been determined and all excavations carried out for the purposes of exposing underground services shall be promptly backfilled and compacted to the following densities :

- (a) In roadways : 98% Mod AASHTO density ; and
- (b) In all other areas : 93% Mod AASHTO density.

Where hand excavations to expose underground services have to be carried out in roadways, the Contractor shall reinstate the road layerworks in accordance with the provisions of Subclause 5.9 of SABS 1200DB.

Payment in respect of the exposing of the services by means of hand excavation as described above, will be made in accordance with Subclause PSD 8.3.8.1.

Payment in respect of the reinstatement of layerworks in roadways will be made in accordance with Subclause 8.3.6.1 of SABS 1200DB (as amended).

PSD 5.1.2.3 Protection of cables

REPLACE SUBSUBCLAUSE 5.1.2.3 WITH THE FOLLOWING:

"5.1.2.3 Protection during Construction

Further to the requirements of Subclause 5.4.2 of SABS 1200A (as amended), major excavating equipment and other Equipment shall not be operated dangerously close to Known Services. Where necessary, excavation in close proximity to Known Services shall be carefully carried out with suitable hand tools, excluding picks wherever their use could damage the services. No additional payment will apply to such more difficult work.

Should any service not being a Known Service be discovered or encountered during the course of the Contract, the Contractor shall, in addition to complying with the requirements of Subclause 5.4.2 of SABS 1200A (as amended), immediately notify the Employer's Agent thereof and implement such measures as will prevent damage of such service or, if it was damaged in the course of discovery, will prevent and minimise the occurrence of any further damage occurring."

PSD 5.1.3 Stormwater and groundwater

Add the following:

"The contractor shall at the earliest practicable opportunity install the permanent drainage specified or shown on the drawings and shall at his own cost provide such further temporary drainage as may be necessary for the protection of the works, except where other specific items regarding drainage are provided."

PSD 5.2 METHODS AND PROCEDURES

PSD 5.2.2 Excavation

PSD 5.2.2.1 Excavation for general earthworks and for structures

Add the following to paragraph (b):

"Where the nature of the material precludes the above procedure, additional excavations shall be made to provide working space for the erection of form work. In general payment will be made for a working width of 600mm, but the contractor may excavate a greater working width at no additional cost to the employer. Excavation for structures shall be measured to vertical planes 0,6m outside the concrete perimeter.

Immediately before any permanent construction is commenced, all loose material shall be removed or thoroughly compacted."

Replace paragraph (e) with the following :

"Where excavations have been carried out below the authorized levels, the contractor shall backfill such excavations to the correct level with approved gravel compacted to 95% of modified AASHTO density or to the density of the surrounding material.

Where excavations for structures in hard material have been carried out, the Employer's Agent may however require the over-excavation to be backfilled with a weak concrete if there is a danger of settlement or differential settlement of the foundations.

Where the sides of excavations against which concrete is to be cast have been over-excavated or have collapsed partially, the contractor shall retrim in the excavations if necessary and, unless other remedial measures are agreed to by the Employer's Agent, shall cast the concrete for the structure, including any additional concrete which may be required as a result of the over-excavation or partial collapse. The cost of the additional concrete or remedial measures shall be for the contractor's account."

PSD 5.2.2.2 Borrow pits

Add the following:

"A commercial source shall, for the purposes of this specification, mean a source of material provided by the contractor, not the employer.

Where it is specified that material shall be obtained from commercial sources, the contractor shall be responsible and include in his prices for borrow to fill from commercial sources, for finding a source of suitable material, for making all arrangements for procuring the material with the owner of the source, for the payment of any royalties, charges or damages and, for transporting the material to the site regardless of the distance involved. No payment will be made for the removal of overburden or stockpiling at the commercial source and no extra over payment for excavating in intermediate, hard or boulder material shall apply."

"PSD 5.2.2.3 Disposal

Add the following:

"The contractor shall provide the necessary spoil sites and shall make the necessary arrangements with the owner of the site where the material is disposed of and shall include in his rates for all charges in this regard and for transporting the material regardless of the distance involved."

Add the following subclause:

"PSD 5.2.2.4 Selection and stockpiling

The approval or designation of a particular borrow area for a particular purpose will not imply that all the material is suitable for the purpose or should be used for that purpose. The contractor shall select suitable material from that source, discard unsuitable material and reserve material for other purposes as necessary. When required and as ordered by the Employer's Agent, material shall be stockpiled for later use when the excavation thereof is unavoidable in order to excavate the material required at the time.

PSD 5.2.3 Placing and CompactionPSD 5.2.3.1 Embankments

Omit "98% in the case of non-cohesive soil" and substitute "100% in the case of non-cohesive soil".

PSD 5.2.4.3 Grass or other vegetation

Add the following subclause:

"Hydroseeding

The following materials shall be used in hydroseeding :

(a) Fertiliser

The type of fertiliser to be used shall be 2:3:2 (22 + 2N) and superphosphate.

(b) Grass seed

The following seed mixture at an application rate of not less than 45 kg of seed mixture per hectare, shall be used :

10 kg	Cynodon dactylon
10 kg	Festuca rubra
6 kg	Lolium multiflorum
6 kg	Agrostis tenuis
3 kg	Trifolium subterranean
4 kg	Dactylis glomerata
6 kg	Serredella
45 kg	per hectare

Cellulose pulp shall be added to the hydroseeding mix at a rate of 25 kg of pulp per kilolitre of water used, except where otherwise instructed in respect of flat slopes.

Hydroseeding shall be carried out with an approved hydroseeding machine at a rate of application of not less than 45 kg of seed mixture per hectare, unless otherwise specified in the project specifications.

The work shall be executed in May, which falls in the 12-month maintenance period.

Straw stabilisation

One bale of hay per 20 m² shall be rotivated or harrowed into the sand. Harrowing or rotivation shall be done in an east-west direction, i.e. across the direction of the prevailing winds."

PSD 5.2.5 Transport for Earthworks

PSD 5.2.5.2 Overhaul

Replace the contents of this subclause with the following:

"No overhaul will be paid under sections 1200 D, 1200 DM, 1200 DK or 1200 DB or any other sections. All transport costs irrespective of distance, source and material must be included in the relevant payment clauses."

PSD 7 **TESTING**

PSD 7.2 TAKING AND TESTING OF SAMPLES

Replace the contents of this subclause with the following:

"The contractor shall carry out sufficient tests on a regular basis as agreed between him and the Employer's Agent to determine whether the degree of compaction, and, where applicable, the quality of materials used, comply with the specification and shall submit the results of these tests to the Employer's Agent in a form approved by him. The Employer's Agent may likewise carry out such tests.

Testing by the Employer's Agent will not relieve the contractor of his obligations to provide materials and workmanship in accordance with the specifications.

The requirements of the density for a particular lot shall be deemed to be satisfied if at least 75% of the dry-density tests show values equal to or above the specified density and no single value is more than five percentage points below the specified value."

PSD 8 **MEASUREMENT AND PAYMENT**

PSD 8.1 BASIC PRINCIPLES

Add the following paragraph :

"PSD 8.1.4 Where backfilling is part of the activities described under a payment clause, the word backfilling includes the supply of the approved backfilling (regardless of the source and distance), as well as the placing of the material as described under subclause PSD 2.3."

PSD 8.1.5 Watering or harrowing of material and allowing it to dry out to obtain optimum moisture content before backfilling and compaction of fill material (whether obtained from site or commercial sources) will not be paid for separately and shall be deemed to be included in the tendered rates for Bulk Excavation or Restricted Excavation.

PSD 8.2 COMPUTATION OF QUANTITIES

PSD 8.2.1(a)(2) Add "or residential houses", after ".... rail embankment".

PSD 8.3 SCHEDULED ITEMS

PSD 8.3.2 Bulk Excavation :

Add the words "temporary stockpiling, harrowing or drying the material" after the words "..... basic selection, loading" in the second sentence of paragraph (a).

Add the following :

"PSD 8.3.2(c) Excavate in all materials, temporary stockpile and maintain **Unit : m³**

The rate shall cover the cost of complying with all precautions required in terms of SABS 1200 subclause 5.1 in addition to the cost of excavation, basic selection, loading, transportation within freehaul distance, off-loading, temporary stockpiling, spreading or backfilling, watering, harrowing and drying the material, compacting, final grading complying with the requirements for tolerances, and maintaining of the stockpile, all in accordance with the requirements of the specifications."

PSD 8.3.2.2 Cut to spoil Unit : m³

The unit measurement shall be the cubic metre of material measured in-situ before excavation or measured in accordance with the provisions of 8.2.2 by taking a percentage of the loose volume in trucks. Where material from an excavation is used in fill, as well as taken to spoil the provisions of 8.2.1 shall be strictly adhered to for purposes of measurement.

The tendered rates shall include full compensation for excavating as if in soft excavation, loading, transporting for the free-haul distance and for off-loading, spreading and trimming the spoil material at sites provided by the employer.

PSD 8.3.2.3 Extra over sub-items 8.3.2.1 and 8.3.2.2 for excavating in :

- (a) Intermediate excavation Unit : m³
- (b) Hard rock excavation Unit : m³
- (c) Boulder excavation class A Unit : m³
- (d) Boulder excavation class B Unit : m³

The tendered rates shall include full compensation for the additional cost of excavating and processing material in the classes specified (see drawing D-1)."

PSD 8.3.3 Restricted excavation

Add the words "harrowing or drying the material" after the words "..... material separate (where relevant)" in the fourth sentence of paragraph (a).

Add the following sub-sub-item :

- " (c) Extra over item 8.3.3 (a) for hand excavation Unit : m³

This item shall apply to hand excavation ordered by the Employer's Agent or where the Employer's Agent considers that, owing to circumstances, excavation by mechanical excavators is not practicable. It shall not apply to hand excavation for the purpose of trimming or finishing excavation made by mechanical means.

The tendered rate shall include full compensation for the additional cost of excavating by means of hand tools."

PSD 8.3.4 Importing of Materials

Amend subclause '(a)' as follows:

Delete the words "Extra over for" from the heading. Delete the words "additional to 8.3.2 and 8.3.3" and replace with "of the work and items described in payment items 8.3.2 or 8.3.3 and including the cost of".

The rate shall also include the waterings, shaping and compaction of important material.

ADD THE FOLLOWING ITEMS IN SUBCLAUSE 8.3:

PSD 8.3.10 Topsoiling Unit : m³

Change the unit to "m³" and replace the contents of this item with the following :

"The unit of measurement shall be the cubic metre and the quantity shall be calculated from the authorized dimensions.

The tendered rate shall include for loading the topsoil from stockpiles, transporting it for the free-haul distance, off-loading, spreading, shaping and lightly compacting."

PSD 8.3.11 Grassing or other vegetation cover

Replace the contents with the following :

"PSD 8.3.11.1 Planting of grass cuttings Unit : m²

Only special type of grass with a short root system is to be used.

- PSD 8.3.11.2 *Planting of grass sods* **Unit : m²**
Only special type of grass with a short root system is to be used.
- PSD 8.3.11.3 *Hydroseeding* **Unit : m²**
The tendered rate shall include full compensation of the seed mixture, for furnishing cellulose pulp and mixing it with seed and water and applying the mixture, watering, weeding, rehydroseeding bare patches, and for any other work except mowing, which may be necessary for establishing an acceptable cover and maintaining the grass for a period of three months after an acceptable cover has been established.
- PSD 8.3.19 Compaction of In-situ Material to a depth of 300mm
a) 93% modified AASHTO density **Unit : m²**
The unit of measurement shall be the square metre.
The tendered rate shall include full compensation for scarifying, watering, shaping and compacting the in-situ material to 93% modified AASHTO density to a depth of 300mm."



PSDB EARTHWORKS (PIPE TRENCHES) (1989(b))**PSDB 3 MATERIALS****PSDB 3.5 BACKFILL MATERIALS**

Add the following paragraphs:

"(c) Cement stabilised backfilling

Backfilling shall be stabilised with 5% cement where directed by the Employer's Agent. Aggregate shall consist of approved soil or gravel containing stones not bigger than 38 mm and with a plasticity index not exceeding 10.

The soil or gravel shall be mixed with 5% cement and shall be compacted in layers of 100 mm thick to 90% of modified AASHTO density.

(d) Soilcrete backfilling

Aggregate for soilcrete shall be mixed with 5% cement and shall consist of approved soil or gravel containing stones not bigger than 38 mm and with a plasticity index not exceeding 10.

The soil or gravel shall be mixed in a concrete mixer with the cement and enough water to such a consistency that the mixture can be placed with vibrators to fill all voids between the pipe and the sides of the trench. Shuttering shall be used where necessary."

PSDB 3.7 SELECTION

Replace the words "if he so wishes" in the first line of the second paragraph with the words "at his own cost".

PSDB 4 PLANT**PSDB 4.1 EXCAVATION EQUIPMENT**

Add the following paragraph :

"All excavations in excess of the specified depth and width, must be backfilled with approved backfilling material. No additional payment regarding this will be made, it will be assumed that payment is included in the tendered rates for the applicable items.

Compaction of sand must be to 100% of modified AASHTO maximum density."

PSDB 5 CONSTRUCTION**PSDB 5.1 PRECAUTIONS****PSDB 5.1.3 Accommodation of traffic and access to properties**

Replace the semicolon and the word "and" at the end of subclause 5.1.3(a) with a full stop and replace item (b) with the following :

"(b) Where necessary to achieve compliance by the Contractor with his obligations in terms of subclause PS 8.1 of Portion 1 Specifications to provide and maintain pedestrian and vehicular access to properties affected by the works, the Contractor shall construct and maintain to the satisfaction of the Employer's Agent, such temporary access roads around, and/or steel or timber bridges over excavations in roads, pavements, entrances or accesses to properties.

Temporary pedestrian access bridges shall be at least 1,2 m wide and temporary access bridges for vehicles shall be at least 3,6 m wide. All temporary access bridges shall be fitted with handrails as well as protective mesh fencing on both sides.

On completion of the work, the Contractor shall dismantle and remove all such temporary constructions and reinstate these areas to their former condition.

Except only where the Employer's Agent has included in the Schedule of Quantities, particular payment items specifically therefore, the Contractor will not be paid directly for the construction and maintenance of temporary access roads and/or the provision and maintenance of bridges as aforementioned, and the costs thereof shall be deemed included in the Contractor's tendered rates for excavation."

Add the following :

"PSDB 5.1.5 REMOVAL OF EXISTING PIPELINES

Where existing pipes have to be removed, they shall be carefully opened up by machine excavation to 300 mm above the pipes after which the whole pipe shall be fully exposed by means of hand excavation. The excavation width shall comply with Subclause 8.2.3.

The pipes shall be removed from the trench in a manner approved by the Employer's Agent, and brought to the surface for inspection by the Employer's Agent.

Pipes that are declared suitable for re-use and pipes declared unfit for re-use shall be dealt with in accordance with the respective manner described in the specifications, or on the drawings or the Employer's Agent's instructions, as relevant."

PSDB 5.2 MINIMUM BASE WIDTHS

Add the following above the table.

"No allowance shall be made for the extra thickness of the collars or couplings."

Add the following after paragraph (b) :

"The above is not applicable to trenches for subsurface drains.

Trenches for subsurface drains shall be excavated to the dimensions and gradients shown on the drawings or directed by the Employer's Agent."

PSDB 5.4 EXCAVATION

Add the following :

"All excavation for pipes must be done according to the trench excavation method, and not to the fill method. No additional payment extra over to that listed under item 8.3.3 will be made for pipes, culverts or any other structure that falls within the road or fill layers. Except where otherwise specified, trenches shall be of such a depth that the minimum cover over the pipes shall be 700 mm except at road-crossings where the minimum cover shall be 1 000 mm."

PSDB 5.6 BACKFILLING**PSDB 5.6.3 Disposal of soft Excavation Material**

Replace the contents of the subclause with the following:

"Excavated material from the trench that has become surplus because of bulking, displacement by the pipe, and importation, shall be disposed of outside the site boundaries at a spoil site provided by the contractor. No additional payment will be made and all costs related to the disposal of this surplus or unsuitable material will be deemed to be included in the tendered rates for the applicable items."

PSDB 5.7 COMPACTION**PSDB 5.7.1 Areas not Subject to Traffic Loads**

Replace "90%" with "95%".

Add the following sentence:-

"All non-cohesive material shall be compacted to 100% MOD AASHTO density."

PSDB 5.7.2 Areas Subject to Traffic Loads:

Replace "93%" with "95%".

Delete "98%" and substitute "100%".

Add the following :

"All pipe trenches that fall within the road reserves shall be regarded as areas subject to traffic loads."

"PSDB 5.11 REMOVAL OF EXISTING PIPES

- PSDB 5.11.1 Where shown on the drawings or where so instructed by the Employer's Agent, the Contractor shall excavate, expose and remove from the ground, existing water pipelines.
- PSDB 5.11.2 If so instructed by the Employer's Agent, the Contractor shall, before commencing with the excavation of the pipeline, expose the pipeline to be removed by means of careful hand excavation at positions agreed with the Employer's Agent, in accordance with the requirements of Subclause PSA 5.4.1 of Portion 1 of the Project Specifications. Measurement and payment for locating the exact positions of the pipelines where required by the Employer's Agent, shall be made in accordance with and under Item PSD 8.3.8.1.
- PSDB 5.11.3 Thereafter, the existing pipelines to be removed shall be carefully opened up by machine excavation to a depth of not more than 300 mm above the pipes after which the whole pipeline shall be fully exposed by means of careful hand excavation. The excavation width shall comply with Subclause 5.2.
- PSDB 5.11.4 The pipes and all specials encountered (e.g. bends, valves, valve box covers and the like) shall be removed from the trench in a manner as to avoid causing damage and as approved by the Employer's Agent, cleaned sufficiently as to allow inspection of the pipes and specials by the Employer's Agent and stacked in such a manner as will facilitate the inspection of each pipe and special by the Employer's Agent.
- PSDB 5.11.5 Pipes and specials that are declared by the Employer's Agent as suitable for re-use shall be transported to the Employer's storeyard; where it shall be off-loaded and neatly stacked to the satisfaction of the Employer's Agent and in accordance to the manufacturer's instructions. The Contractor shall be responsible for obtaining a written receipt of all pipes so delivered to the Employer's storeyard.
- PSDB 5.11.6 Pipes and specials which are declared by the Employer's Agent as unsuitable for re-use shall be transported to a spoil site and covered with spoil material to a depth of not less than 300 mm.
- PSDB 5.11.7 After removal of the pipelines, the trenches shall be backfilled using the excavated material and compacted to 90% Mod AASHTO density. The provisions of Subclauses 5.6. and 5.7 shall apply."

PSDB 8 MEASUREMENT AND PAYMENT**PSDB 8.1 BASIC PRINCIPLES**

- PSDB 8.1.1 Replace the last section of subclause 8.1.1 "... surplus material along the route of the pipeline within 0,5 km of the source", with "... surplus material within the freehaul distance of the site boundaries."
- PSDB 8.1.2 Add the following:
 "In the road prism the ground surface from which depth will be measured will always (irrespective of operation sequenced) be the road bed level at centre-line."

PSDB 8.2 COMPUTATION OF QUANTITIES**PSDB 8.2.3 Add the following to subclause 8.2.3.**

"Where two or more pipes/ducts are to be placed in one trench, the specified base width shall be calculated as follows:

The trench width for the deeper service shall be calculated according to above specifications. The effective trench width for the shallower service shall then be the difference between its specified base width and the overlap with the trench width of the deeper service.

The trench width for subsurface drains shall be as shown on the drawings."

PSDB 8.3 SCHEDULED ITEMS**PSDB 8.3.2 Excavation**

- (a) Excavate in all materials for trenches, backfill, compact and dispose of surplus material.

Replace "of 1, 0 m" in the first sentence of 8.3.2 (a) with "as scheduled in the schedule of quantities."

Replace the words "measured to the bottom of the bedding layer" with "measured from the final road layer or surface to the pipe invert level".

Replace the phrase "within freehaul distances" with:

“at a spoil site provided by the contractor or municipal dumpsite unless scheduled otherwise”

Add the following after the last sentence and before paragraph (b).

“The tendered rate for excavation of trenches for electrical cables to be supplied and installed by the Electrical Contractor shall include full compensation for liaising with the Electrical Contractor, maintaining the trenches to allow the installation of the cables, supply and installation of warning tape and backfilling once the Electrical Contractor completed the installation of cables.”

Add the following after the third paragraph :

“The rate shall also cover the cost of the additional compactive effort required as specified in 5.7.2 (as amended) and the additional selection of materials as specified in 5.6.2 to comply with the requirements for areas subject to road traffic loads. No additional payment will therefor be made under item 8.3.3.3.”

(b) Extra-over item (a) above for; and (c) excavate and dispose of unsuitable material from trench bottom

Replace the phrase “within freehaul distances”
with:

“at a spoil site provided by the contractor or municipal dumpsite unless scheduled otherwise”

PSDB 8.3.2

(b) Extra over item (a) for :

Add the following at the end of the existing sub-item 2 :

“No payments will be made under sub-items (1) and (2) in respect of any materials measured and paid for under sub-item 3 below.”

And add the following new sub-items in 8.3.2(b) :

“(3) Hand excavation and backfill where ordered by the Employer’s Agent :

- | | | |
|-----|----------------------------|-----------------------|
| (a) | Soft material | Unit : m ³ |
| (b) | Intermediate material..... | Unit : m ³ |

The unit of measurement shall be the cubic metre of material, measured in place according to the authorised dimensions, or the lesser dimension excavated, which was excavated by hand on the specific prior written instructions of the Employer’s Agents; provided always that the Employer’s Agent’s said instruction shall have stated that measurement and payment for such hand excavation will be in accordance with this item.

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 Employer’s Agent shall not be obliged to authorise payment under this item in respect of any hand excavation carried out (whether ordered in writing or otherwise), which hand excavation was in any case necessary to achieve compliance by the Contractor of his obligations under the Contract to :

- (i) utilise construction appropriate to the nature of the specific parts of the Work and /or
- (ii) protect existing structures and/or services; and/or
- (iii) comply with all prevailing legislation and regulations.

(4) Backfill stabilised with 5% cement where directed by the Employer’s Agent..... Unit : m³

The unit of measurement shall be the cubic metre of backfill material, measured in place after compaction according to the authorised dimensions, which was stabilised on the Employer’s Agent’s instructions in accordance with Sub-clause PSDB 3.5(c).

The tendered rate shall include full compensation for supplying the cement and for selecting, mixing, backfilling and compacting the stabilised material to 90% of modified AASHTO density.

(5) Soilcrete backfill where directed by the Employer’s Agent..... Unit : m³

The unit of measurement shall be the cubic metre of soilcrete placed on the Employer’s Agent’s instruction in accordance with Sub-clause PSDB 3.5(b), measured in place according to the authorised dimensions.

The tendered rate shall include full compensation for supplying the cement and for selecting, mixing and placing the soilcrete as well as for the cost of shuttering if required.

- (6) Mass concrete Class 15 MPa/19mm in encasing around pipes under structures where directed by the Employer's Agent..... **Unit : m³**

The unit will be the cubic metre as measured in Item 8.3.2 for the applicable material.

The rate will make full provision for the excavation, backfilling, vibrating and compacting as applicable.

The tendered rates for subitem (6) shall include full compensation for supplying the cement and for selecting, mixing and placing the soilcrete or mass concrete, as well as for the cost of shuttering if required.

- (7) Excavation in marshy areas irrespective of depth..... **Unit : m³**

The unit will be the cubic metre as measured in Item 8.3.2 for the applicable material.

The rate will make full provision for the excavation, backfilling, vibrating and compacting as applicable.

The tendered rate for subitem (7) shall include full compensation for all additional costs as a result of excavating in marshy areas, for pumping and draining if required and for vibrating and compacting to the specified density.

- (8) Backfill with clean sand compacted to 100% modified AASHTO density..... **Unit : m³**

The unit will be the cubic metre as measured in Item 8.3.2 for the applicable material.

The rate will make full provision for the excavation, backfilling, vibrating and compacting as applicable.

The tendered rate for subitem (8) shall include full compensation for all additional cost to dispose of excess excavated material at a spoil site provided by the Contractor and to import clean sand from commercial sources to backfill and to compact the clean sand backfill to 100% Mod AASHTO.

- (9) Boulder Excavation

The unit of measurement shall be the cubic metre of boulder material excavated.
(Refer to SANS 1200D, 3.1.2d)

Add the following sub-items in 8.3.2 after sub-item 8.3.2) (c) :

- “(10) Excavate in all materials for stormwater inlet and outlet structures and for manholes, catchpits, valve chambers and the like, irrespective of depth and backfill around structures..... **Unit : m³**

The unit of measurement shall be the cubic metre of material excavated, measured in place according to the authorised dimensions, and excluding the volume of material excavated and paid for under sub-item (a).

The tendered rate shall include for the costs of excavating in all materials, backfilling, compacting, trimming and tidying of the final surface around the structure, disposing of surplus and unsuitable materials within the freehaul distance and where applicable, selecting and keeping separate, excavated material suitable for use as backfill.

- (11) Excavate open drains in all materials..... **Unit : m³**

The tendered rates shall include full compensation for excavating in all materials within the dimensions specified or authorised by the Employer's Agent and to the specified lines and profiles, for the disposal of surplus and unsuitable excavated material where applicable, and in the case of item (d), for backfilling with suitable approved material compacted to 93% of modified AASHTO density around the structures.

- (12) Extra-over sub-items (d) and (e) for excavating in :

(1) Intermediate material..... **Unit : m³**

(2) Hard rock material..... **Unit : m³**

Measurement and payment shall be in accordance with the provisions of 8.3.2(b) of SABS 1200D (as amended)."

PSDB 8.3.3 Excavation ancillaries

PSDB 8.3.3.1 Add the following to the last paragraph :

"The freehaul distance is unlimited and no additional payment will be made for the transport of the material.

PSDB 8.3.16 Compaction of trench invert in situ material to a depth of 300mm..... Unit : m³

(a) 93% modified AASHTO density

The unit of measurement shall be the cubic metre compacted, 300mm deep across the authorized trench width.

The tendered rate shall include full compensation for scarifying (if necessary), watering, shaping and comparing the in situ material to 93% Mod AASHTO density to a depth of 300mm below the trench invert.

PSDB 8.3.17 Testing of trench related works..... Unit No

Various test methods and materials to be tested shall be scheduled and only additional tests ordered by the Employer's Agent and which indicate compliant materials and workmanship will be paid for. Apart from DCP tests witnessed by the Employer's Agent all other tests must be undertaken by a registered independent laboratory. DCP tests shall be undertaken to a depth of 0,3m below the invert of the trench or the depth of the layer thickness being tested unless scheduled otherwise.

Tests results shall be tabulated in electronic format with a unique reference number, the position shall be indicated and the test results clearly referenced to the requirements.



PSG CONCRETE (STRUCTURAL)**PSG 2 INTERPRETATIONS****PSG 2.4 Explanation of Terms**

Add the following:

"PSG 2.4.4 Precast concrete

Concrete components of the general quality described in this specification, which have been cast and cured either elsewhere or on the site and placed in position to form an integral part of the structure."

PSG 3 MATERIALS**PSG 3.2 Cement****PSG 3.2.2 Alternative types of cement**

Replace the contents of this subclause with the following:

"Only ordinary Portland cement, CEM 1 42,5 according to SABS ENV 197-1, may be used.

Should the contractor wish to use any other type of cement he shall obtain the Employer's Agent's prior written approval (see 8.1.3.2 and 8.1.3.3). "

PSG 3.2.3 Storage of cement

Add the following:

"Cement shall not be stored for longer than 12 weeks without the permission of the Employer's Agent."

PSG 3.4 Aggregates**PSG 3.4.3 Storage of aggregates**

Add the following:

"Where aggregates of differing chloride content are stored on the site, the use thereof in the various classes of concrete, shall be strictly controlled."

Add the following subclauses:

"PSG 3.9 Waterstops

PVC waterstops shall comply with the requirements of CKS 389."

PSG 3.10 Roofing Felt

Three-ply roofing felt shall comply with the requirements of SABS 92 for type 40 felt.

PSG 3.11 Butyl Rubber Sealing Strips

The dimensions of the sealing strip for use in the reservoir are shown on the drawings. The strips shall have a factory-applied bonding layer on one side.

The strip shall have an elongation at break of not less than 300% and a tensile strength of 8,0 MPa. The sealing strip shall be permanently bonded to the prepared concrete surface, in accordance with the manufacturer's instructions.

The completed joint shall be guaranteed to be 100% watertight and to be resistant to the long term effects of chemically treated water.

PSG 3.12 Alkali-Aggregate Reaction

Malmesbury hornfels (shale) or other potentially reactive aggregate shall not be used in conjunction with a high alkali cement in concrete in any part of the Works. For the purposes of this clause, a high alkali cement is one in which the equivalent alkali content (Na_2O equivalent) exceeds 0,60% by mass of cement.

In order to ensure that the above requirement is met, the Contractor may elect to use a non-reactive aggregate, that complies with the requirements of SABS 1083. Alternatively, if the Contractor chooses to use Malmesbury hornfels or other potentially reactive aggregate, he shall comply with the following requirements regarding the cement:

- a) Before commencing any particular section of the structure, the Contractor shall ensure that he has enough cement that is not a high alkali cement to complete the section.
- b) Certificates stating the alkali content of each delivery of cement to the Site shall be supplied by the Contractor. These certificates shall be based on tests carried out at a laboratory approved by the Employer's Agent. The cost of testing, including sampling, transporting of samples, and issuing of certificates, shall be borne by the Contractor.
- c) The Contractor shall be entitled to use an approved brand of cement as a means for ensuring that the permissible alkali content is not exceeded. The Contractor shall make allowance for the higher price of such brand, if he chooses to use this method.
- d) High alkali cement delivered to the Site shall be rejected, and the cost of its removal and replacement with cement with an acceptable alkali content shall be borne by the Contractor.

PSG 4 PLANT**PSG 4.1 General**

Add the following subclause:

"PSG 4.1.1 Minimum plant

The contractor shall have available and in sound working order the following minimum plant for the construction of the concrete reservoir:

- (a) Two concrete mixers each of sufficient capacity to complete a circular section of the wall between horizontal construction joints within 4 hours and without interruption.
- (b) Two weigh batchers to supply the mixers.
- (c) Four concrete vibrators of which at least one shall be powered by an internal combustion engine.
- (d) One air compressor.
- (e) Suitable and adequate plant to transport and raise concrete and other material and equipment from the ground level to the top of the structure at all stages of construction.
- (f) Elevated storage tanks of adequate capacity to ensure that sufficient water will be available before the commencement of every major concrete-placing operation.

Should the plant used for placing concrete for the reservoirs be electrically or mechanically powered, then he shall also provide some other approved, non-electrically powered standby means for the placing of concrete at an adequate rate in the event of a power or mechanical failure of the main plant.

Where the contractor elects to place a crane inside the circumference of the reservoir wall for the duration of the period of construction, he shall communicate with the Employer's Agent in good time to ensure that the design and layout of the panels which form the roof slab and floor allow for such positioning of the crane. Where sections of the roof and floor have to be redesigned to accommodate the crane, the costs of such redesign shall be borne by the contractor."

PSG 4.5 Formwork**PSG 4.5.1 Design**

Add the following:

"Any or all formwork or scaffolding required for any part of the works shall be designed by the contractor, and before commencing with the erection of any formwork or scaffolding, the contractor shall submit to the Employer's Agent, for approval, the methods which he proposes to use. The Employer's Agent shall have the authority to order any alterations to the design or in the sizes of any part of the formwork or scaffolding which he may consider necessary. The fact that the Employer's Agent approved or has altered any part shall not be construed as to relieve the contractor of his responsibility with regard to the strength and stability of the formwork or scaffolding."

PSG 4.5.3

Ties

Add the following:

"No plugs, bolts, ties or clamps of any description used for the purpose of holding the formwork will be allowed to project into or through the concrete unless with the express permission of the Employer's Agent.

Only approved tie-rods which consist of solid rods (which remain embedded in the concrete) and have removable ends shall be used to hold the formwork of the reservoir walls. The removable tie-rod ends shall be such that they can be removed without damaging the concrete, and no permanently embedded parts of such tie-rods shall have less than 50 mm cover to the finished concrete surface.

The cavities left in the concrete after the tie-rod end cones have been removed shall be soundly caulked with cement mortar to which an approved shrinkage-reducing agent has been added, and shall be neatly finished to a smooth surface uniform with that of the surrounding concrete.

The cost of supplying the special tie-rods as well as filling the cavities left by the tie-rod cones shall be included in the rates tendered for formwork under the appropriate pay items.

On no account shall formwork be secured to reinforcing bars."

PSG 5

CONSTRUCTION

PSG 5.1

Reinforcement

PSG 5.1.2

Fixing

Add the following:

"The Employer's Agent will inspect the reinforcing after it has been fixed in place, the formwork has been cleaned, cover blocks have been positioned, and before concreting commences. Welding of reinforcing steel will not be permitted."

PSG 5.1.3

Cover

Add the following:

"The distance between pipes cast into the concrete and the reinforcing shall nowhere be less than:

(a) 40 mm or

(a) 5 mm plus the maximum size of the coarse aggregate, whichever is the largest."

Add the following:

"PSG 5.2.5.6

The Contractor shall make provision for the continued support of beams and slabs while the formwork is being removed and/or for back-propping of beams, slabs, etc. The propping may be required simultaneously on more than one level directly underneath one another. The requirements for continuous propping and/or backpropping shall be calculated to a theoretical model that is acceptable to the Employer's Agent, and details shall be submitted for the Employer's Agent's approval. Data required for such calculations, eg design loads and structural dimensions, will be supplied by the Employer's Agent on request."

PSG 5.3

Holes, Chases and Fixing Blocks

Add the following:

"Cover blocks for reinforcing and fixtures may be cast into the concrete provided the strength or any other desirable characteristic (such as the appearance) of the concrete section is, in the opinion of the Employer's Agent, not affected or impaired."

PSG 5.5 Concrete**PSG 5.5.1.5 Durability**

The exposure conditions for concrete are classified as "very severe".

Add the following values to table 5 :

"The maximum water/cement ratio for moderate sections, general reinforced concrete, exterior portions of mass concrete, as well as for internal concrete in buildings under conditions of very severe exposure, is 0,45".

Notwithstanding the aforementioned, the cement content may under no circumstances be less than :

Structural concrete of ≥ 25 MPa	- 265 kg/m ³
Exposed concrete and trafficable surfaces	- 280 kg/m ³

PSG 5.5.1.7 Strength Concrete

Add the following:

"The concrete mixes shall be designed by the Portland Cement Institute or similar approved laboratory.

The shrinkage of concrete to be cast in floor systems, shall not exceed 0,02 % tested as per SABS 1085. Three tests shall be conducted on the mix design to confirm compliance. Test results shall be made available before the concrete is used on site."

PSG 5.5.3.2 Ready-mixed concrete

Add the following:

"The Contractor shall confirm that sufficient continuous supply of concrete is secured to complete the portion of concrete work in one continuous pour."

PSG 5.5.7 Construction joints

Add the following:

"Horizontal construction joints are permitted in the reservoir walls, but must be clarified with the Employer's Agent in advance."

The wall shall be cast in lifts of such height that each lift can be poured without interruption in one continuous operation during normal working hours.

A payment item is provided to cover the costs (if any) of ensuring the watertightness of construction joints. It is the contractor's responsibility to ensure that such joints are watertight. The contractor's proposed method for ensuring the watertightness of such joints shall be submitted to the Employer's Agent for his approval."

PSG 5.5.8 Curing and protection

Add the following:

"Should a curing compound be allowed by the Employer's Agent then it shall be a resin based curing compound. Curing of columns, shafts and walls shall be done by either retaining the formwork for the required period of time or covering with plastic sheeting. On lesser shafts and walls the Employer's Agent may allow a curing compound for curing."

PSG 5.5.11 Watertight concrete

Add the following:

"The minimum cement content for OPC in water-retaining structures shall be 325 kg/m³, while the maximum shall be 400 kg/m³ in reinforced concrete, or 500 kg/m³ in prestressed concrete. Where OPC blended with PFA is permitted, the maximum cement content shall be 450 kg/m³ for reinforced concrete, and 550 kg/m³ for prestressed concrete.

The maximum water:cement ratio for water-retaining structures shall be 0,53 for OPC."

PSG 6 TOLERANCES**PSG 6.2 Permissible Deviations****PSG 6.2.3 Specified permissible deviations**

Add the following:

"Degree of accuracy II is applicable.

Every permissible deviation is binding on its own. The accumulative effect of permissible deviations will not be considered. The maximum permissible vertical deviation is subject to the other permissible deviations."

Replace subclause 6.2.3(d)(5) with the following:

	<u>Permissible deviation</u>		
	<u>Degree of accuracy</u>		
	III	II	I
	mm	mm	mm
"Vertically, per metre height	5	3	2
subject to a maximum of	50	30	10

None of the prescribed permissible deviations will be taken as permission for violating any legal boundaries of properties by any part of a structure.

The above permissible deviations also apply to slip-form concrete, unless another set of permissible deviations have first been accepted by the Employer's Agent, in writing. Such amended permissible deviations shall clearly make provision for interfaces between structures erected with the aid of slip-form concrete and those erected with the aid of conventional concrete.

The maximum permissible deviation from a 3 m long straight line connecting two points on the surface of a finished floor is 5 mm."

PSG 7 TESTS**PSG 7.1 Facilities and Frequency Of Sampling****PSG 7.1.1 Facilities**

Add the following:

"The contractor shall provide the facilities necessary to test the concrete cubes made at the frequency specified in subclause 7.1.2.

The facilities shall consist of sufficient storage capacity and the testing of cubes:

- (a) by means of an approved, calibrated cube testing press installed on site in a manner approved by the Employer's Agent, or
- (b) by an approved laboratory.

The cost of all testing including the cost of sampling, storage and transport of samples shall be included in the rates tendered for concrete work."

PSG 7.3 Acceptance Criteria for Strength Concrete

Add the following:

"Test results obtained from the supplier of ready-mixed concrete will not be accepted for evaluation in terms of subclause 7.3 but samples for testing shall be taken of such concrete at the point of placing."

Add the following acceptance test for watertightness of the tank:

"TESTING FOR WATERTIGHTNESS"

The structure shall be filled with water being gradually let in until the top water level has been reached. The water level will then be carefully noted and recorded by the Employer's Agent in relation to a fixed benchmark, and the structure shall be allowed to remain filled for a period of two weeks to permit complete absorption of water by the concrete. This period may obviously be shorter should an earlier test prove to be successful.

Any loss of water which may have occurred shall then be made up by again filling the structure to the top water level and by allowing to be watertight if the drop in level in 96 hours (less the drop caused by evaporation) does to represent more than 0,06% of the volume of the reservoir.

The evaporation shall be measured by the mean drop in level caused by the evaporation of the water in three flat containers floating in the water, being recorded.

The contractor may attend the taking of all measurements by the Employer's Agent.

In the event of an appreciable leakage being evident or visible at any stage of the filling or testing, or in the event of the final degree of watertightness being unsatisfactory, the contractor shall, when so ordered by the Employer's Agent, discontinue such filling or testing and shall, at his own expense, take approved steps to rectify the leakage, until a test proves that a sufficient degree of watertightness has been obtained.

The costs of retesting the reservoir for watertightness shall be borne by the contractor."

PSG 8 MEASUREMENT AND PAYMENT**PSG 8.3 Measurement and Rates****PSG 8.3.1 & Reinforcement****PSG 8.3.2**

Replace the contents of this subclause with the following:

"The unit of measurement for steel bars shall be the ton of reinforcement in place in accordance with the drawings or as authorized by the Employer's Agent.

The unit of measurement for welded steel fabric shall be the kilogram of fabric reinforcement in place and the quantity shall be calculated from the netto area covered by the mesh, excluding laps.

Clips, ties, separators, stools and other steel used for positioning reinforcement shall not be measured, unless shown on the bending schedules.

The tendered rate shall include full compensation for the supply, delivery, cutting, bending, welding, placing and fixing of the steel reinforcement, including all tying wire, stools, supports and waste."

PSG 8.9 Testing for water tightness Unit : No

Various structures will be scheduled. The rate will include full compensation for the successful water tightness test in accordance with PSG 7.2.

The water tightness test will be paid by a lump sum separately for each structure.

The tendered sum shall make full compensation for all labour, equipment, water and materials to carry out the tests as specified in PSG 7.2, to rectify faults and to achieve a test result to the satisfaction of the Engineer.

The sum shall include for all water required for the successful watertight testing of the structure.

PSG 8.10 Sterilise Reservoir 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 water tightness.

PSG 8.14 Preparation of existing concrete surface (top of channel) Unit : m²

The tendered rate shall include full compensation for the delivery and supply of all material and labour to scabble the top of the existing channel wall and to apply a wet to dry epoxy to the top of the scabbled surface. The bonding agent shall be SikaTop-Armatec 110 EpoCem (or similar approved).

PSG 8.17 Cast in pipes with or without puddle flanges Unit : No

Various pipe diameters and wall thicknesses will be measured.

The tendered rate shall make full compensation for casting the pipe into the wall including grouting (if necessary), supplying and installing joints as per the detail drawing, adapting of formwork around the pipe and ensuring a watertight seal. Puddle flanges and other couplings are measured elsewhere.



PSL MEDIUM-PRESSURE PIPELINES**PSL 2 INTERPRETATIONS****PSL 2.1 REFERENCES****PSL 3 MATERIAL****PSL 3.1 GENERAL**

Add the following paragraphs:

"For each type of pipe to be delivered to the site the individual pipes shall have a standard length, which shall correspond with standard lengths offered by the pipe manufacturer in his catalogue, with a maximum allowable variation in length of +, - 2%.

A pipe which has a shorter or longer length than the defined standard will be rejected by the Employer's Agent, except where such non-standard lengths are required in terms of the contract and have been specifically manufactured or cut as such by the pipe manufacturer or supplier."

PSL 3.4 STEEL PIPES, FITTINGS AND SPECIALS**PSL 3.4.2 Pipes of nominal bore up to 150 mm**

Add the following:

"The pipes shall be 'normalised' or seamless steel pipes and shall be used with malleable cast iron fittings complying with the requirements of SABS 509."

PSL 3.7 OTHER TYPES OF PIPES**PSL 3.7.1 PVC-U pipes**

Replace "uPVC" with "PVC-U" in the heading and first sentence.

Replace "SABS 966" with "SANS 966 : PART 1:2000 (PVC-U).

Add the following:

"All PVC-U pipes shall be class/PN 16 unless otherwise specified using spigot and socket rubber ring joints. All fittings (bends, tee's reducers, etc.) to PVC-U pipes shall be Ductile Iron to EN12842, fusion bonded thermoplastic coated internally and externally with Plascoat PPA 571 HES, to minimum 0.25m coating thickness with EPDM rubber insert seal or 3CR12 flanged tees as billed."

PSL 3.7.2 Polyethylene pipes

Replace "SABS 533" with "SANS ISO 4427 : 1996 (PE63, 80, 100)".

Add the following:

"All HDPE pipes shall be HDPE PE100 to SANS/ISO 4427 pipes, minimum class/PN16 or as specified and 20 to 40mm dia HDPE pipes shall be PN16. All fittings shall be class 16".

PSL 3.9 CORROSION PROTECTION**PSL 3.9.2 Steel Pipes**

Steel pipes shall be mild steel or stainless steel as shown on the drawings or shown in the schedule of quantities.

All mild steel pipes, specials and fittings with nominal diameter up to and including 150mm shall be hot dipped galvanized to SANS 121 and SANS 32 and Carboguard (Product of Carboline) 891 coated or 3CR12 as billed. All steel pipes, specials and fittings with nominal diameter greater than 150mm shall be lined internally and coated externally with Protective Epoxy Paint Product Carboguard (Product of Carboline) 891, applied in three coats and minimum 125 microns dft (dry film thickness) per coat to manufacturer's specifications.

All bolts, nuts and washers for mild steel pipework shall be hot dip galvanized to SANS 121 and SANS 32. All bolts and nuts shall be grade 8.8 to SANS 1700 and ISO 898. Two washers shall be used with every bolt connection to prevent damage to coatings. Nuts and bolts for 3CR12 and stainless steel pipe fittings shall be stainless steel 316 with anti seize compound

Suitable isolation shall be provided between flanges, washers and bolts to prevent galvanic corrosion between dissimilar metals (e.g. between stainless steel and mild steel or cast iron). Shaft thread shall be covered with heat shrink insulation (or similar approved) and 3mm Caf non-conductive washers shall be used with standard washers where dissimilar fittings are joined.

Plain ended fittings shall be joined with approved couplings coated with 300 microns of a Polymer Resin product to the manufactures specifications.

1) Specification

The cement mortar lining shall be applied in accordance with the American Water Works Association Specification C205-80 or as amended except where the Specification C205-80 is at variance with the requirements of this specification.

2) Thickness

The thickness of the cement mortar lining shall be 12 mm and shall be subject to a tolerance of 2 mm.

3) Roundness of pipe ends

The pipe ends shall be held truly round during the placing and the setting of the cement mortar lining.

4) Materials

Cement shall be freshly manufactured ordinary Portland cement complying with SABS 471-1971.

Sand shall consist of inert granular material and the grains shall be durable and uncoated. The sand shall be well graded and pass a 1,5-mm mesh screen. Sand shall be free from injurious amounts of clay, lumps, shale, soft or flaky particles, mica, loam, oil, alkali, and other deleterious substances. The total mass of such substances shall not exceed 3 per cent. The source of the sand shall be stated by the tenderer and be approved by the Employer's Agent.

Water shall be clean and free from injurious amounts of mud, oil, organic materials or other deleterious substances. Admixtures may be used provided the additive will not injuriously affect the water quality and written approval has been obtained from the Employer's Agent. The contractor shall submit test data to substantiate admixture performance.

The proportions of the ingredients shall be approved by the Employer's Agent. These proportions shall be determined from the characteristics of the aggregate. Measurement of the materials shall be by weight and the water-cement ratio shall be controlled and kept to a minimum, with an allowance being made as necessary for the most effective machine operation and adhesion of mortar to the pipe."

PSL 3.9.3 Protection against Electrolytic corrosion

Add the following:

"All nuts and bolts for pipes, pipe specials etc must be provided with an approved insulating material to prevent Electrolytic corrosion."

PSL 3.9.5 Joints, Bolts, Nuts and Washers

Add the following:

All bolts, nuts and washers for mil steel pipework shall be hot dip galvanized to SANS 121 and SANS 32. All bolts and nuts shall be grade 8.8 to SANS 1700 and ISO 898. Two washers shall be used with every bolt connection to prevent damage to coatings. Nuts, Bolts and Washers for stainless steel pipes shall be stainless steel grade 316 and must be treated with a Nickel based anti-seize compound such as chestertou 725 or equivalent."

Only stainless steel bolts, washers and nuts shall be used on all fittings such as saddles, flanges, short collar couplings, etc.

PSL 3.9.6 Corrosive soil

Where shown on the drawings, steel pipes in contact with corrosive soil shall be wrapped with Densopol 80 HT or an equivalent approved product, strictly in accordance with the manufacturer's instructions.

PSL 3.10 VALVES

Replace the contents of this subclause with the following:

"Valves shall be the standard cast-iron gate valve for waterworks and shall comply with the following requirements:

- (a) Valves shall be left hand closing with a non-rising spindle and spindle cap bolt to spindle with stainless steel 316 bolt.
- (b) Valves shall be class 16.
- (c) Valves shall comply with the requirements of SABS 664/1974. "AVK" or similar approved.
- (d) Valves shall be the resilient seal type.
- (e) Valves shall be coated before delivery with a 225 micron Copon EP 2300 epoxy paint applied to all internal services after it has been thoroughly cleaned by grit blasting to SA2½ finish in compliance with SIS 050900.
- (f) The direction for turning the valve open or closing must be permanently marked on the valve."

"Fire hydrants shall be the standard cast-iron fire hydrant and shall comply with the following requirements :

- (a) Fire hydrants shall be anti clockwise closing with a non-rising cast iron spindle and spindle cap and also fitted with a captop with a stainless bolt to attach the captop to the hydrant spindle. No clips, split pins or screws allowed. Hydrants shall be supplied and installed complete with a flanged extension piece complete with cadmium plated nuts and bolts to ensure depth not greater than 400mm.
- (b) Fire hydrants shall be class 16
- (c) Fire hydrants shall be a type 65 "AVK or Ainsworth" or any approved by the local authority
- (d) Fire hydrants must have London Round thread outlets
- (e) Hydrants shall be coated before delivery with a 225 micron Copon EP 2300 epoxy paint applied to all internal services after it has been thoroughly cleaned by grit blasting to SA2½ finish in compliance with SIS 050900.
- (f) The direction for turning the fire hydrant open or closing shall be permanently marked on the fire hydrant.

PSL 5 CONSTRUCTIONPSL 5.2.2 Welding of HDPE pipes

The HDPE pipes shall be supplied in straight lengths, and not in coils, to avoid the pipe ends from curling and thus hindering the welding process. To reduce the number of welds necessary, pipes should be supplied in the maximum straight lengths available.

The HDPE pipe shall be joined by means of heat fusion using approved butt welding equipment by fully trained operators in accordance with **SANS 0268-1** and the pipe manufacturer's specifications. The Contractor shall confirm with the Employer's Agent of the welding machine and of the welding parameters and tables to be used. Test welds shall be carried out and shall be tested and approved by the Employer's Agent before welding on site can commence. No additional payment will be made for test samples which are required and allowance must be made for one test weld per pipe diameter applicable to the contract.

The Contractor shall provide a digital thermometer or similar for the accurate measurement of the weld temperatures.

No separate payment shall be made for the welding of pipes and the removal of internal and external beading is not required, except where pipe bursting will be undertaken.

PSL 5.6 VALVE AND HYDRANT CHAMBERS**PSL 5.6.1 General**

Replace the words "drawing L-1" in the second line with "the drawings".

PSL 5.6.2 Construction of chambers

Replace the words "drawing L-1, L-2 and L-3" in the fourth line with "the drawings".

PSL 5.10 DISINFECTION OF POTABLE WATER PIPELINE

Add the following :

- "d) the pipeline shall also be flushed repeatedly through each saddle, prior to connecting to the existing house connection to ensure each house connection is clean before connecting to the existing house connection.
- e) the local authority and Employer's Agent will be given at least 48 hours notice prior to disinfection of the pipeline, to arrange suitable attendance of the procedure."

PSL 5.11 STANDPIPES

Standpipes shall be erected in positions and to details shown on the drawings.

PSL 5.12 MARKER BLOCKS

Marker blocks shall be manufactured and positioned as shown on the drawings.

PSL 5.13 PIPELINE ROUTE MARKERS

Route markers for the various water pipelines shall be erected in positions and be manufactured according to details shown on the drawings."

PSL 7 TESTING**PSL 7.3 STANDARD HYDRAULIC PIPE TEST****PSL 7.3.1 Test pressure and time of test****PSL 7.3.1.2 Add the following:**

The test pressure for field testing shall be 1.25 times the working pressure indicated by the class of the pipe.

(e.g. Test at 15 bar for class 12 pipe).

"The Employer's Agent may order re-testing of any section of the entire network at any time after the trench is backfilled. The contractor will do the tests and any remedial work required at his own cost.

Any isolating valves and/or end caps, blank flanges, or other isolating devices required for testing mixed types of classes of pipelines which traverse over a wide range of altitudes, will be installed by the contractor at his own cost."

PSL 8 MEASUREMENT AND PAYMENT**PSL 8.2 SCHEDULED ITEMS****PSL 8.2.1 Supply, lay and bed pipes complete with couplings**

Add the following before the first paragraph of the Clause:

"For the purposes of local content of designated sectors as determined by the Department of Trade and Industry the supply and the installation of the pipes shall be scheduled separately. The rates to supply the pipe shall include all cost to provide the scheduled pipe to site including all transport, handling, storage and other cost as may be necessary.

Add the following:

"The tendered rates shall also include full compensation for the cost of all labour, material, plant, chemicals and overheads for the complete sterilisation of the entire potable water reticulation system and the disposal of the sterilising solution as approved by the Employer's Agent."

PSL 8.2.11 Anchor/Thrust blocks and pedestals

Add the following:

"The tendered rates shall also include the wrapping of uPVC pipes and fittings with Densopol 80 or similar approved material where the pipes and fittings are in contact with concrete."

Add the following items:

PSL 8.2.15 Special wrapping in corrosive soil..... Unit : m

Add the following:

"The tendered rate shall include full compensation for the construction of the wrapping as specified. The total cost for additional wrapping required for flanges and specials shall be deemed to be included in the rate.

The surface shall be clean, to minimum preparation ST2 according to Sib 055900-1967. The surface shall furthermore be brushed or sprayed with Denso priming solution or Denso SI05 Paste Denso Mastic to create a profile for Denso tape, so as to ensure that there are no air voids taming beneath the Denso tape. Denso tape shall then be wrapped spirally around the prepared area and then double wrapped with polyethelene tape (minimum 300 micron thick)".

PSL 8.2.17 Marker blocks / pipeline route markers

Measurement and payment shall be as per Scheduled item 8.2.9 (SABS 1200 LD).

PSL 8.2.18 Connection to existing watermain..... Unit : No

The tendered rate shall include full compensation for the location of the main pipe, excavation, removal of surplus material, cutting into the main pipe supply and installation of all fittings and constructing the connection as shown on the drawings, backfilling with clean sand and compacting to 100% Mod Aashto.

The tendered rate will also include all liaison with the local authority and closing of the water supply and notifying affected residents.

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PSLB BEDDING (PIPES) (1983)**PSLB 3.2 SELECTED FILL MATERIAL**

Add the following:

"Where required, selected fill material used for bedding, is to be stabilised with 5% cement as specified under subclause PSDB 3.5(c)."

PSLB 3.3 BEDDING

Add the following:

"PVC-U and HDPE pipes are considered to be flexible pipes for the purpose of this subclause."

PSLB 3.4.1 Suitable material available from trench excavation

Replace the words "(but is not required)" in the fifth line with the words "(at his own cost)".

PSLB 5 CONSTRUCTION**PSLB 5.1 GENERAL****PSLB 5.1.2 Details of bedding**

Add the following paragraph.

"The dimension "X" for flexible and rigid pipes as indicated on drawing LB-1 will be 150 mm unless otherwise indicated on the drawing. The dimension "X" will be measured from the invert of the pipe."

PSLB 5.1.4 Replace "90%"

with:

"90% (100% for sand)".

PSLB 7 TESTING

Add the following :

PSLB 7.3 ROUTINE TESTING

The Contractor must test the bedding density and grading every 50m. A laboratory grading analysis must be undertaken every 50m. All test positions must be recorded by the Contractor and submitted with test results to the Employer's Agent within 7 Days of placing the bedding.

PSLB 8 MEASUREMENT AND PAYMENT**PSLB 8.1 PRINCIPLES****PSLB 8.1.1 Supply of Bedding Materials measured separately**

Insert the following words after the word "placing" in the last sentence : "density testing and grading analysis every 50m,".

PSLB 8.1.3 Volume of Bedding Materials

Add the following to paragraph (b):

"The depth of bedding as specified in PSLB 5.1.2 is applicable. The volume of bedding material displaced by the pipeline shall not be included in the calculation of the volume of bedding material."

PSLB 8.1.5 Disposal of Displaced Material

Replace the contents of this subclause with the following:-

"Material displaced by the pipeline and by importation of material from sources other than trench excavation, shall be disposed of outside the boundaries of the site."

PSLB 8.1.6 Freehaul

Notwithstanding what is specified in subclauses 8.2.1, 8.2.2.2, 8.2.2.3, 8.2.4 and 8.2.5, the freehaul distance for disposal of all displaced (surplus) material, shall be unlimited."

PSLB 8.2 SCHEDULED ITEMS

PSLB 8.2.2 Supply only of bedding by Importation

"PSLB 8.2.6 Extra over items 8.2.1 and 8.2.2 for bedding stabilised with 5% cement Unit : m³

The tendered rate shall include full compensation for selecting, mixing, backfilling and compacting the stabilised material to 90% of modified AASHTO density."

"PSLB 8.2.7 Provision of stone/geofabric to deal with water Unit : m³/m²

If in the opinion of the Employer's Agent, the Contractor complied with the requirements for dealing with water as specified in PSA 8.8.7, the Employer's Agent may instruct the installation of crushed stone and filter fabric. Payment for these items will only be made where instruction was given in writing by the Employer's Agent.

The provision of crushed stone bedding material will be measured by volume based on the specified trench width and a maximum layer thickness of 300 mm unless a greater depth has been specified by the Employer's Agent.

The unit rate shall cover the cost of supplying and laying the crushed stone.

The filter fabric will be measured separately by area based on the specified trench width, a stone bedding thickness of 300 mm and an overlap of 300 mm.

The rate shall cover the cost of the supply, delivery and laying of the filter fabric."



CONSTRUCTION OF DIVERSION WEIR UPGRADE AND ASSOCIATED WORKS IN NKQUBELA, ROBERTSON

PSLD SEWERS (1982)

PSLD 3 MATERIALS

PSLD 3.1 Pipes, Fittings and Pipe Joints

PSLD 3.1.2 Reinforced Concrete Pipes

Replace the contents of this subclause with the following:

Reinforced concrete pipes must be manufactured in accordance with SANS 677 and in accordance with a certified ISO 9001: 2000 quality management system.

Reinforced Concrete pipes shall be of the spigot and socket type, bitumen coated outside with 3 mm thick HDPE lining and shall have water tight socket seals. The minimum class pipe to be used shall be 100 D unless otherwise shown on the drawings or scheduled. The HDPE lining shall comply with SANS 10409:2005 : Design, selection and installation of geomembranes. The HDPE lining shall be a cast in liner, Anchor Knob Sheet (AKS), and 1230knob/m² must be cast into the concrete pipe. The knobs must be homogeneously formed with the HDPE liner during the extrusion manufacturing process. The concrete cover of reinforcement on the inside shall be at least 20mm. Water tight rubber rings or other approved flexible joints must be provided.

The concrete for the reinforced concrete pipes shall be manufactured from dolomitic aggregate. For pipe jacking the pipe shall be purpose made and shall be Class 200 D, and have steel guidance rings, steel collars, pressure distribution rings of medium density fibre and all other required accessories. The Contractor shall supply the detailed design of the pipes for pipe jacking to the Employer's Agent including load strength of the pipe and joint detail prior to construction.

Pipes and manholes shall be handled and stored strictly in accordance with the manufacturer's instructions.

PSLD 3.1.3 AC Pipes

Add the following :

"All AC pipes (FC pipes) shall be double bitumen dipped."

PSLD 3.1.8 Weholite Pipes

Weholite pipes must be manufactured in accordance with EN 13476-1 and SANS 21138 and must form part of an ISO 9001: 2008 quality management system.

Weholite pipes shall be of the structured wall type, 6 m or 12 m long as scheduled and shall have a "water tight" socket seal for diameters up to 500 mm. For diameters 600 mm and greater all pipes shall be extrusion welded in situ by qualified personnel who are PFSA certified with valid PFSA certificates and IFPA welder cards in accordance with the manufacturer's specifications. Acceptance testing of test weld sections will be undertaken in accordance with SANS 10270.

Furthermore, rubber sleeve couplings (Weholite LP couplings) shall also be installed after in situ welding extrusion.

The minimum ring stiffness shall be 4kN/m² unless otherwise scheduled.

Pipes and manholes shall be handled and stored strictly in accordance with the manufacturer's instructions.

PSLD 3.5 Manholes, Chambers, Etc.

PSLD 3.5.2 Pre-cast concrete sections

Replace "Drawing LD-5" in the last sentence with "drawings".

Add the following:

"Sectional spun concrete cylinders shall be manufactured from dolomitic aggregate.

Precast concrete sections with an inside diameter of at least 1 000 mm shall be used for manholes.

The soffits of all inlet pipes in a manhole shall be on the same level unless different levels are shown on the drawings. If the outlet pipe is bigger than all the inlet pipes, it shall have the same soffit level as the inlet pipes. To counteract the effects of buoyancy, all manholes deeper than 2,0 m shall be bedded in Grade 20 MPa/19mm concrete to dimensions as specified on the drawings. The concrete bases may be partly precast, subject to approval by the Employer's Agent."

CONSTRUCTION OF DIVERSION WEIR UPGRADE AND ASSOCIATED WORKS IN NKQUBELA, ROBERTSON

PSLD 3.5.4 Concrete

Add the following:

"Only dolomitic aggregate shall be used for all concrete items".

PSLD 3.5.5 Sand

Add the following:

"Only dolomitic sand shall be used for all concrete items".

PSLD 3.5.7 Step Irons

Delete the contents of this subclause and substitute the following:

"Step irons in AC, concrete ring and brick manholes shall be of the copolymer polypropylene type, such as Calcamite or similar, with a 12 mm dia. high tensile steel reinforced core and shall be of length suitable for fixing in brick, pre-cast concrete or reinforced fibre cement as applicable.

A purpose made HDPE step ladder must be manufactured for Weholite/HDPE manholes in lieu of the normal step irons used in other types of manholes."

PSLD 3.5.8 Manhole covers and frames

Notwithstanding the requirements of Subclause 3.5.8 all heavy duty manhole covers shall be cast iron (or Securex) as shown on the drawings in accordance with SABS 558.

Add the following :

PSLD 3.5.9 Channels and benching in manholes

"Round and half round AC or vitrified clay pipe fittings must be placed in the manholes as channels when the benching is constructed".

PSLD 3.6 **Marker Posts**

Replace the words "project specification" with "drawings."

PSLD 5 **CONSTRUCTION**

PSLD 5.2 **Laying and Bedding**

PSLD 5.9.2 Marker Posts

Delete the contents of this subclause and substitute the following:

"Sewer connection ends shall be marked as shown on the drawings."

Add the following clause:

"PSLD 5.11 **Backfilling Around Manholes**

"Material used to backfill around manholes that fall within the road reserve must comply with SABS 1200 LB subclause 3.1. Material used to backfill around other manholes must comply with SABS 1200 DB subclause 3.5.

Material adjacent to the walls of the manholes must be watered and mixed to its optimum moisture content, and compacted in layers not exceeding 150 mm in the compacted state. Compaction must be minimum 100% MOD AASHTO for non-cohesive material, and minimum 93% of MOD AASHTO density for cohesive materials. Backfilling around the structure must be carried out in even layers to avoid uneven side forces."

PSLD 5.12 **Special water hazards**

The Contractor shall, by means of pumping or any other approved method, deal with the flow effluent in the sewer mains. Any water extracted from domestic sewer shall be piped and discharged back into the sewer system - either into the industrial sewer or the domestic sewer.

CONSTRUCTION OF DIVERSION WEIR UPGRADE AND ASSOCIATED WORKS IN NKQUBELA, ROBERTSON

PSLD 6 **TOLERANCES**

PSLD 6.1 **General**

Add the following :

"Due to the flat gradients of the sewer all levels shall be set out at least by means of a laser level. For sewer pipes of diameter 600mm and larger, the Contractor must provide the level and position (xyz coordinate) of each pipe laid to the Employer's Agent within 24 hours of the specific pipe being laid. The deviation must also be recorded and submitted. Under no circumstances may any deviation exceed the maximum allowable angular deflection at a joint specified by the manufacturer."

PSLD 7 **TESTING**

PSLD 7.2 **Tests And Acceptance/Rejection Criteria**

PSLD 7.2.6 Water-tightness of Manholes

Add the following:

Manholes must be tested for watertightness. No ingress of groundwater into the manhole will be allowed.

Should any manhole fail to pass the inspection to the satisfaction of the Employer's Agent, the fault or faults shall be made good by the Contractor at his own expense according to methods approved by the Employer's Agent and the work shall be inspected again. The cost of all extra work and inspection shall be borne by the Contractor."

PSLD 7.2.7 Capping strip welding (HDPE lined pipes)

Each capping strip weld must be tested and certified by a certified welder who shall only use appropriate calibrated tools and machinery. A copy of the spark and any other test must be submitted to the Employer's Agent. All welding and testing to be done in accordance with SANS 10409:2005 and in accordance with the manufacturers instructions.

PSLD 8 **MEASUREMENT AND PAYMENT**

PSLD 8.2 **Scheduled Items**

PSLD 8.2.11 Connection to existing sewer at:

Replace with the following:

"PSLD 8.2.11 Connection to existing sewer by:

a) Breaking into existing manhole **Unit : No**

Various depth categories shall be scheduled.

The tendered rate shall include full compensation for excavation, breaking into existing manhole, modifying of the benching inside the manhole, dealing with sewage in the live sewer, ensuring the water tightness of the new connection, ensuring that no rubble or soil enter the system and backfilling in accordance with PS�D 5.11.

The contractor shall at no additional cost to the employer execute the work in such a manner that no rubble, soil or water shall enter the existing sewer system, failing by which he shall be held responsible for the resulting remedial work.

Excavation shall be carried out in a manner to avoid uneven side forces.

PSLD 8.2.13 Dealing with sewage **Unit : Sum**

The tendered rate shall include full compensation for dealing with sewage in the existing 400 mm sewer during all connections, crossings and breaking into the pipeline. The tendered rate shall include full compensation for all temporary pipe work, deviations or over pumping as may be required during the construction of the new sewer.

Payment will be made in equal monthly (calculated by dealing the sum tendered by the contract period) intervals for the duration of the contract period.

PSLE STORMWATER DRAINAGE**PSLE 3 MATERIALS****PSLE 3.1 Culvert Units and Pipes**

- (d)
- Skewed ends

ADD THE FOLLOWING:

"Skewed ends for pipe culverts may be cut on Site."

PSLE 3.4 Manholes, Catchpits, and Accessories**PSLE 3.4.1 Bricks**

ADD THE FOLLOWING:

"Bricks shall be engineering bricks complying with the requirements of SABS 227."

ADD THE FOLLOWING SUBCLAUSE:

PSLE 3.5 Geotextiles

The filter fabric to be used below the gabions and mattresses, as well as for subdrainage, shall comply with the following requirements:

- (a) Composition and manufacturing

The synthetic-fibre filter fabric, or geotextile, shall be manufactured from a synthetic polymer processed into a permeable, homogeneous sheet. On account of the temperature and moisture susceptibility of polyamide, this synthetic product is not considered acceptable

- (b) Classification:

The geotextile is classified according to the mechanical properties thereof, viz its penetration load, puncture resistance and the minimum water-percolation rate as measured in the permeability test. The table below gives the values for the properties:

PROPERTY	GRADE	GRADE	GRADE	TEST METHOD
Penetration Load (minimum), N	3800	2400	1500	3.5 of SABS 0221-1988
Puncture Resistance (maximum), mm	14	26	32	Clause 8114 of COLTO Standard Specifications
Water Percolation (minimum), l/m ² /s	20	20	20	3.7 of SABS 0221-1988
Mass per unit area (minimum), g/m ²	320			3.4 of SABS 0221-1988

Notes: - The standard atmosphere for testing and the preconditioning atmosphere for all geotextile tests (SABS tests and others) shall have a relative humidity falling within the range of 0 to 80 per cent and a temperature within the range of 15 °C to 35 °C.

The resistance of a geotextile to puncture is the average diameter of the hole formed when a 45° cone with a mass of 1 kg is dropped through 500 mm onto the geotextile fixed in the holding device.

- (c) Durability

A geotextile is required to comply with the following specifications:

- Resistance to chemical attack

The geotextile shall withstand the level of aggressiveness of the soil and ground water given below, without significant loss of its strength and hydraulic properties during its design life of 25 years:

Soil and ground water with a pH in the range of 4 to 12 (pH to be determined by Method A20, TMH1,1986)

- Resistance to ultra-violet light

The geotextile shall maintain at least 80% of its original strength after direct exposure to sunlight of 1 500 hours.

- Resistance to rot. The geotextile shall be entirely rot proof and shall not support the growth of algae.

(d) Geotextile evaluation and selection

The contractor shall, at least 45 days before the installation of the geotextile, submit to the Employer's Agent samples of the geotextile(s) he proposes to use, together with the relevant test results produced by an approved laboratory.

The Employer's Agent may require additional samples and have these tested by another laboratory at his discretion. Such tests will be paid for under the provisional item allowed for, but only if compliance with the requirements of this specification is confirmed.

No extra payment shall be made for providing the samples

(i) **For river/ erosion protection works underlying gabions and gabion mattresses**

The requirements for Grade 1 geotextile shall apply.

Geotextile of non-woven construction is preferred, and woven geotextiles will be considered only if published data can be provided which show the satisfactory long-term performance of these geotextiles in an environment similar to that in which they are to be used.

Geotextiles, other than non-woven needle-punched material, will be considered only if actual field performance data for geotextiles which have been in use in river protection works for 15 years or longer, can be supplied.

(A typical product with the required track record is Kaytech's Bidim Grade A6)

(ii) **For subdrainage**

The requirements for Grade 2 and Grade 3 geotextiles shall apply.

A functional evaluation shall be done of the permeability reduction (flow test) after 400 hours by an approved laboratory as per test method described in COLTO Standard Specifications for Road and Bridge Works: 1998 Clause 8114 (b).

The test is conducted on the geotextile in combination with the characteristic 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 criteria:

SOI L	P (%)	$P \leq 1,0$	$1,0 < P \leq 7,0$	$7,0 < P \leq 50$	$P > 50$
	D_{10} (mm)	$D_{10} > 0,150$	$0,095 \leq D_{10} < 0,150$	$0,007 \leq D_{10} < 0,095$	$D_{10} < 0,007$
K_{400}	HIGH	$K_{400} \geq 46,0$	$K_{400} \geq 19,0$	$K_{400} \geq 9,0$	$K_{400} \geq 6,0$
	MEDIUM AND LOW	$K_{400} < 46,0$ AND $K_{400} \geq 15,0$	$K_{400} < 19,0$ AND $K_{400} \geq 6,0$	$K_{400} < 9,0$ AND $K_{400} \geq 3,0$	$K_{400} < 6,0$ AND $K_{400} \geq 2,0$

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 0,075mm sieve

D_{10} = the diameter of the grain size, such that 10 per cent by mass is smaller

The geotextile-soil system shall either 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. In addition actual experience of field performance will also be considered during the selection process.

Installation conditions with regard to depth, nature of sides of excavation, degree of sharpness of drainage stone, and compactive effort used, shall also be taken into account when the final selection is made. (Typically Kaytech's Bidim Grade A4 should satisfy the Grade 2 requirements of this specification, and is suitable for trench depth less than 2m, with rough sides or sharp drainage stone, placed with moderate compaction.)

"PSLE 3.6

Materials for Subsurface Drains

(a) Pipes and fittings

CONSTRUCTION OF DIVERSION WEIR UPGRADE AND ASSOCIATED WORKS IN NKQUBELA, ROBERTSON

Pipes for subsurface drains shall be normal duty, perforated or slotted uPVC pipes complying with SABS 791. Fittings shall be class 34 heavy duty and shall also comply with SABS 791.

The size of the perforations in perforated pipes shall in all cases be 8 mm in diameter $\pm$ 1,5 mm, and the number of perforations per metre shall not be less than 26 for 100 mm pipes and 52 for 150 mm pipes. Perforations shall be spaced in two rows for 100 mm pipes and in four rows for 150 mm pipes, as shown on the Drawings.

Slotted pipes shall have a slot width of 8 mm with a tolerance of 1,5 mm in width. The arrangement of the slots is subject to the Employer's Agent's approval, but the total slot area shall not be smaller than that specified for perforations.

(b) Crushed stone

Crushed stone shall be 19 mm single-sized and shall comply with the requirements of SABS 1083.

(c) Geotextiles

Geotextiles shall be a non-woven, spun or thermic-bonded continuous filament fabric consisting of at least 85% by mass of polypropylene, polyester or other approved material and manufactured for civil-engineering applications by a recognised manufacturer."

PSLE 5 **CONSTRUCTION**

PSLE 5.2 **Bedding and Laying**

PSLE 5.2.2 Pipe culverts

ADD THE FOLLOWING:

"The class of bedding required for the various pipe culverts is shown on the Drawings."

ADD THE FOLLOWING SUBCLAUSES:

"PSLE 5.8 **Construction of Subsurface Drains**

After the completion of the excavations, the bottom portion of the trench shall be lined with geotextile sheeting as shown on the Drawings. The top edges of the vertical portions of the geotextile sheeting shall be tacked to the sides of the excavations with nails or by another suitable approved means. An overlap of at least 200 mm shall be provided at each joint. Geotextile sheeting damaged during the installation or construction shall be replaced at the Contractor's cost.

A layer of crushed stone of the thickness shown on the Drawings shall be placed on the geotextile and be lightly tamped and finished to the required gradient.

Pipes of the required size shall be firmly bedded on the permeable material, true to level and grade, and coupled where required. The trench shall then be backfilled with crushed stone to the height above the pipes shown on the Drawings or as directed by the Employer's Agent.

Crushed stone shall be placed in layers of not more than 300 mm at a time and shall be lightly compacted. Care shall be taken to prevent the contamination of crushed stone during construction of the subsurface drains and all material contaminated by soil or silt shall be removed and replaced by the Contractor at his own expense.

Perforated and slotted pipes shall be joined by couplers. Perforated pipes shall be laid with the perforations at the top or at the bottom, as directed. The higher end of subsurface drain pipes shall be sealed off with a loose concrete cap of class 20/19 concrete, as shown on the Drawings and at the lower end of the pipe shall be built into a concrete head wall providing a positive outlet, or it shall be connected to the stormwater pipes or culverts.

After all the crushed stone filter material has been placed, the protruding vertical sections of the geotextile sheeting shall be folded back across the filter material so that the filter material will be completely enwrapped in the geotextile. An overlap of at least 200 mm shall be provided between the portions folded back.

The remainder of the trench shall be immediately backfilled with approved material preferably obtained from the excavations, in layers not exceeding 150 mm and compacted to 90% of modified AASHTO density, unless otherwise ordered by the Employer's Agent. The trench shall be specially protected against the ingress of water, soil and silt until the backfilling has been completed.

Permeable material in subsoil drains shall not be taken to the surface but shall be discontinued at such heights as will be determined by the Employer's Agent.

Any section of a subsurface drain constructed with pipes without perforations or slots shall be backfilled with impermeable backfill material as described above. Suitable excavated material may be used for backfilling.

PSLE 5.9 Backfilling Around Structures

Material used to backfill around manholes that fall within the road reserve must comply with SABS 1200 LB subclause 3.1. Material used to backfill around other manholes must comply with SABS 1200 DB subclause 3.5.

Material adjacent to the walls of the manholes must be watered and mixed to its optimum moisture content, and compacted in layers not exceeding 150 mm in the compacted state. Compaction must be minimum 100% MOD AASHTO for non-cohesive material, and minimum 93% of MOD AASHTO density for cohesive materials.

Backfilling around the structure must be carried out in even layers to avoid uneven side forces."

PSLE 8 MEASUREMENT AND PAYMENT

PSLE 8.2 Scheduled Items

REPLACE THE HEADING OF THE SUBCLAUSE WITH THE FOLLOWING:

PSLE 8.2.2 Supply and lay Portal and Rectangular Culverts

(a) Complete with precast invert slabs

Add the following after the second sentence.

"The tendered rate shall include full compensation for the supply, shaping and compaction of G5 subbase to 97% Mod AASHTO, 200mm thick below the invert slab."



PSMF BASE**PSMF 3 MATERIALS****PSMF 3.3 Physical and Chemical Properties****PSMF 3.3.1 Natural Gravel (Unstabilised or Stabilised)**

Substitute the requirements of MF 3.3.1 for unstabilised natural gravel with the following:

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.

PSMF 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.

PSMF 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.

PSMF 5.4 Placing and Compaction of a Base other than a Water Bound Macadam Base**PSMF 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.

PSMF 5.9 Transport**PSMF 5.9.1 Free-haul**

Substitute MF 5.9.1 with the following:

An unlimited free-haul distance shall apply to basecourse material.

PSMF 6 TOLERANCES**PSMF 6.1 Dimensions, Levels, Etc****PSMF 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.

PSMF 7 TESTING**PSMF 7.2 Process Control**

Substitute "1 500 m²" with "1 200 m²", "1 500 m³" with "1 200 m³" and "5 000 m²" with "3 000 m²" in Table 3 of MF 7.2.

PSMF 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.

PSMF 8 **MEASUREMENT AND PAYMENT**

PSMF 8.2 **Computation of Quantities**

Substitute MF 8.2 with the following:

PSME 8.2 shall apply mutatis mutandis.



PA FENCING**PA 01 SCOPE AND ORDER OF PRECEDENCE**

This is a particular specification and covers the erection of new fences and partial replacement of existing fences. The specification shown on the drawings and schedule will have precedence over these particular specifications.

PA 02 TYPE OF FENCE

The fence shall be a security fence which is locally manufactured in totality in the Western Cape and shall be erected in accordance with the dimensions shown on the drawings.

PA 03 MATERIALS**PA 03.1 POSTS, STAYS AND STANDARDS**

Posts, stays and standards shall be of the type and size indicated on the drawings. Posts shall include gateposts, straining posts and corner posts.

Metal posts, stays and standards shall comply with the requirements of CKS 82 and SABS 280. "Acceptable" in CKS 82 means "acceptable to the engineer".

All posts shall be galvanized in accordance with SABS 1461 Table 1 for type B-articles.

Corner, gate and straining posts shall be suitably drilled for stay bolts or gate fittings as indicated on the drawings.

PA 03.2 BOLTS FOR STAYS, POSTS, GATE POSTS AND CORNER POSTS

All nuts, bolts and washers shall be stainless steel. The length and diameter of the bolts shall be as shown on the drawings. All the necessary bolts, together with nuts and washers, shall be supplied with each post.

PA 03.3 WIRE

All wire shall conform to the requirements of SANS 10244-2 and SANS 675 and shall be class A fully galvanized.

(a) Barbed wire

Barbed wire shall be one or both of the following types :

- (i) High-tensile grade, oval shaped, single-strand wire, 2,60 mm x 2,00 mm.
 - (i) Mild-steel grade, double strand, uni-directional twist wire, each strand 2,50 mm in diameter.
- Barbs shall be spaced at not more than 150 mm intervals.

(b) Smooth wire

Smooth wire shall be of the types specified below :

- (i) Straining wire shall be mild-steel wire, minimum 4,00 mm in diameter.
- (ii) Fencing wire shall be high tensile grade, 4,00 mm diameter wire.
- (iii) Tying wire or binding wire shall be 2,50 mm diameter, mild-steel, class C galvanized wire for tying fencing wire to standards and 1,60 mm diameter, mild-steel, class C galvanized wire for tying wire mesh to fencing wire.

(c) Barbed-tape concertinas

Barbed- tape concertinas shall comply with the requirements for type A in CKS Specification 592 and shall consist of close-coiled high-tensile wire with a continuous strip of flat steel barbs (barbed tape) crimped to the wire along the entire length of the wire. The coils shall further be attached together by clips to give a concertina configuration when pulled apart. The coils shall be of the diameter as shown on the drawings. Each concertina shall have a minimum of 55 coils, and the maximum effective length of open concertina, when pulled apart, shall depend on the diameter of the roll, but shall be at least 12 m. The high-tensile wire shall be Grade 304L stainless steel.

The barbed tape shall be made of Grade 304L Stainless steel.

The concertina clips shall be manufactured from Grade 304L stainless steel strip.

PA 03.04 GATES

Gates shall comply with the requirements of CKS 146 and shall be manufactured to the dimensions shown on the drawings.

Gates shall be complete in every respect, and shall include hinges, washers, bolts and the locking mechanism shown on the drawings.

PA 03.05 CONCRETE

Concrete used for fencing shall comply with the requirements of SABS 1200 G.

PA 04 CLEARING OF FENCE LINE

Strip clearing for the fence shall be carried out and paid for in accordance with SABS 1200 C.

PA 06 INSTALLING BARBED-TAPE CONCERTINAS

Barbed-tape concertinas shall be positioned on the fence as shown on the drawings. The concertinas shall be fastened to the appropriate fencing wires at each standard as well as at 0,5 m maximum intervals between standards.

Rolls of barbed-tape concertinas shall be joined with binding wire at four points, spaced at equidistant intervals around the circumference of the loop. Joints shall be made to coincide with the positions of standards.

PA 07 INSTALLING GATES

Gates shall be installed at the positions indicated on the drawings or pointed out on site. The gates shall be hung on gate fittings in accordance with the details shown on the drawings. Gates shall be so erected that they swing in a horizontal plane at right angles to the gateposts and clear of the ground in all positions. Double swing gates shall close to have a gap of not more than 25 mm between them, and other gates shall close to be no further than 25 mm from the gatepost.

PA 08 FENCING

The fencing must be erected strictly in accordance to the local manufacturer's instructions.

PA 09 MEASUREMENT AND PAYMENT

PA 09.01 FENCING

Items shall be measured separately as scheduled. The unit of measurement shall be the number, linear metre or sum as scheduled for the applicable item.

The tendered rate (or sum) shall include full compensation for manufacturing, supply and installation each item complete as shown on the drawings including all excavation, backfilling and disposal of surplus material as specified.

PA 09.03 Apply Weed Killer along fence line up to 1m both sides of fence after construction.....Unit : m

The rate tendered shall make full compensation to apply roundup or similar approved weed killer according to manufacturer specifications along the fence line up to 1m from the fence both sides once fence has been constructed.

The rate shall also include all health and safety equipment necessary

C3.5 Management

CONTENTS

3.5.1	CONTRACT ADMINISTRATION
3.5.2	LABOUR INTENSIVE CONSTRUCTION / PARTICIPATION OF TARGETED LABOUR
3.5.3	PARTICIPATION OF TARGETED ENTERPRISES
3.5.4	Construction Programme and Planning
3.5.5	Contractor's Responsibility in terms Of the OHS Act
3.5.6	Unauthorized Persons
3.5.7	Management Meetings
3.5.8	Monthly Statements, Payment Certificates and Electronic Payments
3.5.9	Key Personnel
3.5.10	Health and Safety
3.5.11	Environmental Management

3.5.1. CONTRACT ADMINISTRATION

The Contractor shall submit with each monthly statement for payment, the following returns – the format of which are: are included in C3.6 : Annexes.

Annex 1: B-BBEE Sub-contract Expenditure Report

Annex 2: Project Labour Report

Annex 3: Targeted Labour Contract Participation Expenditure Report

Annex 4: Targeted Enterprise Contract Participation Expenditure Report

The Project Labour Report must include details of all labour (including that of sub-contractors) that earns less than R200 per day (excluding any benefits) employed from within the Target Area 1 – Local Area on this contract in the month in question.

3.5.2. LABOUR INTENSIVE CONSTRUCTION / PARTICIPATION OF TARGETED LABOUR

In support of the National Department of Public Works' Expanded Public Works Programme which is aimed at the alleviation of poverty through the creation of employment opportunities, the Employer is seeking to increase the intensity of labour, as appropriate, in all of its infrastructure sector projects.

It is a requirement of this Contract, therefore, that the work be executed in such a manner so as to maximise the use of labour intensive construction methods in order to provide low and semi-skilled employment opportunities and employ workers from the local community.

3.5.2.1 Minimum Targeted Labour contract participation

To this end, a minimum targeted labour contract participation goal (CPG_{2L}) set by the Employer for this Contract is specified in Section 3.3.3 of Part C3.3: Procurement in the Scope of Work, which shall be achieved by the Contractor in the performance of the contract, failing which, penalties as described will be applied.

The minimum Targeted Enterprises and Targeted Labour (Local Resources) contract participation goal set by the Employer may be such that the Contractor will have to carry out some of the work that would normally have been undertaken using mechanised construction methods, by using labour intensive construction methods instead. It is left to the discretion of the Contractor to identify suitable work activities for the intensification of labour. The Contractor shall, within 5 working days of being requested in writing by the Engineer to do so, submit details of his/her plan to achieve the minimum targeted labour contract participation goal (CPG_{2L}).

3.5.2.2 Recruitment of targeted labour

Where targeted labour is to be drawn from specific local communities (defined in terms of the target area), such labour shall be identified using the relevant Regional / District / Sub-Council Job-Seekers Database. The Contractor shall request, via a Community Liaison Officer (if required in terms of the contract), a list of suitable candidates from the database, from which the Contractor shall make his/her final selection. The contractor shall enter into written contracts of temporary employment with all targeted labour.

Any difficulty experienced by the Contractor in identifying candidates through the Job-Seekers Database, or as regards any matter relating to the employment of targeted labour, shall be immediately referred to the Engineer.

3.5.2.3 Records

Credits towards the achieving the minimum targeted labour contract participation (CPG_{2L}) shall be granted by converting the total monetary value of wages paid to targeted labour to a percentage of the net value of the contract. No credits shall be accorded should the contractor fail to enter into written contracts with the targeted labour. Furthermore, no credits shall be accorded in respect of targeted labour employed on work in respect of provisional sums or prime cost items. Such labour shall nevertheless be recorded on the Project Labour Report which is required to be furnished by the Contractor.

In addition to the forms required for contract administration (the Project Labour Report and Targeted Labour Contract Participation Expenditure Report, in particular), the Contractor shall furnish the Engineer with copies of the employment contracts entered into with targeted labour, as well as evidence of payments to the such labour in the form of copies of payslips or payroll runs.

3.5.2.4 Training of targeted labour

The Contractor is required to provide all informal (on-the-job) skills training so as to ensure that a minimum level of competence is achieved and maintained, such that the various activities are carried out safely and to the required standard. The cost of informal training shall be included in the rates for the various work activities.

3.5.3. PARTICIPATION OF TARGETED ENTERPRISES

It is a requirement of this contract that enterprises located within the target area, as defined, be engaged by the Contractor for the provision of supplies, services or works necessary for the performance of this contract.

3.5.3.1 Minimum Targeted Enterprises contract participation

To this end, a minimum targeted enterprises contract participation goal (CPG_{2E}) set by the Employer for this Contract is specified in Section 3.3.3 of Part C3.3 : Procurement in the Scope of Work, which shall be achieved by the Contractor in the performance of the contract, failing which, penalties as described will be applied.

The Contractor shall engage targeted enterprises directly or indirectly in the performance of the contract to the extent that the total monetary value of such engagements (exclusive of VAT), expressed as a percentage of the value of the contract, is sufficient to achieve the specified minimum targeted enterprises contract participation (CPG_{2E}). The Contractor shall, within 5 working days of being requested by the Engineer to do so, submit details of his/her plan to achieve the minimum targeted enterprises contract participation (CPG_{2E}).

3.5.3.2 Records

Credits towards achieving the minimum targeted enterprises contract participation goal (CPG_{2E}) shall be granted by converting the total monetary value (exclusive of VAT) of the agreements between the Contractor, or Contractor's sub-contractors, and targeted enterprises, to a percentage of the value of the contract.

No credits shall be accorded should the Contractor (or sub-contractors):

- a) make direct payment to third parties in connection with the contract on behalf of targeted enterprises, when such payment is recovered by making deductions from payments due to the targeted enterprise;
- b) fail to enter into written contractual agreements with the relevant targeted enterprises.

Credits claimed towards the contract participation goal shall be denied where such written contractual agreements contain any of the following:

- i) conditions which are more onerous than those that exist in the prime contract (this contract);
- ii) payment procedures based on a pay when paid system;
- iii) authoritarian rights given to the employing contractor, with no recourse to independent adjudication in the event of a dispute arising.

No credits may be claimed in respect of targeted enterprises that do not adhere to statutory labour practices. No credits shall be accorded in respect of targeted enterprises engaged on work in respect of provisional sums or prime cost items.

In the event that a targeted enterprise sub-contracts to another targeted enterprise, only the value of the higher level sub-contract shall be granted as credit towards achieving the specified minimum CPG_{2E}.

In addition to the form required for contract administration (the Targeted Enterprises Contract Participation Expenditure Report), the Contractor shall furnish the Engineer, upon written request, with documentary evidence that the targeted enterprises have their base of operations in the target area, copies of the contractual agreements with the various targeted enterprises, as well as documentary proof of payments made to the various targeted enterprises.

3.5.4 Construction Programme and Planning

3.5.4.1 Programme

The Contractor shall submit his programme of work to the Employer's Agent not later than 14 days after the Contractor has been notified of the acceptance of his tender and only after discussions with the Employer's Agent. The Contractor shall furthermore carefully consider the expected wet weather conditions during winter and plan the work and working methods to limit any possible standing time or delay. The Due Completion date and any "float" must be indicated by the Contractor on the programme. Should the Due Completion date not be indicated, the Due Completion date, in the opinion of the Employer's Agent, shall be accepted as correct and binding. If necessary, the Employer's Agent may instruct the Contractor to adjust his programme to suit other activities.

The Contractor shall deliver the programme to the Employer's Agent's offices and shall include :

- 2 colour paper copies
- In electronic MS Project format.

The programme shall not be in the form of a bar chart only, but shall clearly show the anticipated quantities and value of work to be performed each week.

If, during the progress of the work, the quantities of work performed per week fall below those shown on the programme, or if the sequence of operations is altered, or if the programme is deviated from in any other way, the Contractor shall, within one week of being notified by the Employer's Agent, submit a revised programme.

If the programme has to be revised by reason of the Contractor falling behind his programme, he shall produce a revised programme showing how he intends to regain lost time in order to ensure completion of the works within the time for completion as defined in clause 1.1.1.14 of the General Conditions of Contract or any granted extension of time. Any proposal to increase the tempo of work must be accompanied by positive steps to increase production by either providing more labour and equipment on site, or using the available labour and equipment in a more efficient manner.

Failure on the part of the contractor to submit or to work according to the programme or revised programmes shall be sufficient reason for the Employer's Agent to take steps as provided in clause 9.2 of the General Conditions of Contract.

The approval by the Employer's Agent of any programme shall have no contractual significance other than that the Employer's Agent will be satisfied if the work is carried out according to such programme and that the Contractor undertakes to carry out the work in accordance with the programme. It shall not limit the right of the Employer's Agent to instruct the contractor to vary the programme should circumstances make this necessary. The Contractor is also referred to clause PS 8 when drawing up his programme.

The tenderer must make provision in his programme and tendered rates for the following constraints in working hours and working methods : (This list is not exhaustive and it is accepted that all other constraints were identified by the Contractor during the site inspection)

- All wayleaves must be obtained prior to construction.

The Contractor must submit on a monthly basis a progress report consisting of a short report on the progress, project constraint implications (Time, cost, quality, risks, resources) and progress shall be indicated on the approved programme for each activity.

The progress report must be submitted 2 Days before site meetings and must accompany payment certificates to ensure the processing of payment.

3.5.4.2 General Allowances

When drawing up his programme, the Contractor shall, take into consideration and make allowance for, inter alia:

- (a) expected weather conditions and their effects,
- (b) known physical conditions or artificial obstructions,
- (c) searching for, dealing with and carrying out alterations to the existing services,
- (d) the accommodation of public access and traffic,
- (e) the provision and implementation of the health and safety plan in terms of the Construction Regulations, 2003 of the Occupational Health and Safety Act, and
- (f) the design, testing and approval of the concrete mixes.

3.5.4.3 Reporting Requirements

The Contractor shall promptly submit the schedules and reports at Contract stage as requested by Employer's Agent. Updated reports must be submitted to the Employer's Agent two days before site meetings. Should the Contractor fail to provide the necessary documentation, the Employer's Agent may proceed to compile such documentation which costs will

be deducted from payments due to the contractor. The report shall include the following:

- ◆ Bar chart or sloping bar chart schedule showing staff requirements by time interval and reflecting work planned by time interval.
- ◆ A monthly report showing planned progress versus actual progress giving details of how the Work will be completed in relation to the schedule.
- ◆ Daily major construction equipment report
- ◆ Daily staff report by crafts
- ◆ Procurement schedule for the procurement and receipt of materials, equipment and subcontract services by Contract and a monthly status report of all such materials and equipment
- ◆ MIG forms (approximately 5 pages) including employment details, expenditure and programme.

3.5.5 Contractor's Responsibility in terms Of the OHS Act

The Contractor shall be responsible for complying with the Occupational Health and Safety Act, Act 85 of 1993, and specifically the Construction Regulations 2003 issued in terms of Section 43 of the Act (GNR 1010 of 18 July 2003) as amended.

The Contractor is referred to Part T1.2 Tender Data and the Health and Safety Specification (see Part C3.5.8 and PHS Particular Specification : Occupational Health and Safety) in this regard.

3.5.6 Unauthorized Persons

The Contractor shall keep unauthorized persons from the Works at all times.

3.5.7 Management Meetings

3.5.7.1 *Technical Meetings*

Technical meetings shall be held on an ad-hoc basis as required either by the Employer's Agent or the Contractor.

The Contractor shall arrange for the Contract Manager and the Construction Manager to attend these meetings and all Site meetings.

3.5.7.2 *Site Meetings*

Site meetings shall be held monthly.

3.5.7.3 *Health and Safety Meetings*

Health and Safety Meetings shall be held monthly.

3.5.8 Monthly Statements, Payment Certificates and Electronic Payments

The Contractor shall provide his banking details to enable electronic payments to be made for all 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 its own cost, strictly in accordance with the standard payment certificate format prescribed by the Employer's Agent in digital electronic computer format. The Contractor shall, together with a copy of the digital electronic computer file of the statement, submit TWO (2) A4 sized paper copies of the statement. The Contractor must submit the payment certificate in Excel or Bill format as instructed by the Employer's Agent. All supporting calculations of each quantity must be submitted with each payment certificate, sufficiently broken down into various portions of the work to enable the Employer's Agent to verify the quantities.

For the purposes of the Employer's Agent's payment certificate, the Contractor shall subsequently be responsible, at its own cost, for making such adjustments to its statement as may be required by the Employer's Agent for the purposes of accurately reflecting the actual quantities and amounts which the Employer's Agent deems to be due and payable to the Contractor in the payment certificate.

The Contractor shall, at its own cost, make the said adjustments to the statement and return to the Employer's Agent within THREE (3) normal working days from the date on which the Employer's Agent communicated to the Contractor the adjustments which requires, FIVE (5) sets of A4-sized paper copies of such adjusted statement, together with a copy of the electronic digital computer file thereof.

Any delay by the Contractor in making the said adjustments and submitting to the Employer's Agent the requisite copies of the adjusted statement for the purposes of the Employer's Agent's payment certificate will be added to the times allowed in terms of Sub-clause 6.10.4 of the Conditions of Contract to the Employer's Agent for submission to the Employer and the

Contractor of the signed payment certificate and to the period in which the Employer is required to make payment to the Contractor.

3.5.9 Key Personnel

The Contractor shall provide a schedule of key personnel, with contact particulars and experience.

3.5.10 Health and Safety

3.5.10.1 *Health and safety requirements and procedures*

- a) In terms of the provisions of Section 37(2) of the Occupational Health and Safety Amendment Act, 1993 (Act 85 of 1993), hereinafter referred to as the Act, the following arrangements and procedures shall apply between the Contractor and the Employer to ensure compliance by the Contractor with the provisions of the Act:
- (i) The Contractor undertakes to acquaint the appropriate officials and employees of the Contractor with all relevant provisions of the Act and the Regulations promulgated in terms of the Act.
 - (ii) The Contractor undertakes that all relevant duties, obligations and prohibitions imposed in terms of the Act and Regulations on the Contractor will be fully complied with.
 - (iii) The Contractor accepts sole liability for such due compliance with the relevant duties, obligations and prohibitions imposed by the Act and Regulations and expressly absolves the Employer from himself being obliged to comply with any of the aforesaid duties, obligations and prohibitions, with the exception of such duties, obligations and prohibitions expressly assigned to the Employer in terms of the Act and its associated Regulations.
 - (iv) The Contractor agrees that any duly authorised officials of the Employer shall be entitled, although not obliged, to take such steps as may be necessary to monitor that the Contractor has conformed to his undertakings as described in paragraphs (i) and (ii) above, which steps may include, but will not be limited to, the right to inspect any appropriate site or premises occupied by the Contractor, or any appropriate records or safety plans held by the Contractor.
 - (v) The Contractor shall be obliged to report forthwith to the Employer and Employer's Agent any investigation, complaint or criminal charge which may arise as a consequence of the provisions of the Act and Regulations, pursuant to work performed in terms of this Contract, and shall, on written demand, provide full details in writing, to the Employer and Employer's Agent, of such investigation, complaint or criminal charge.
 - (vi) The Contractor shall furthermore, in compliance with Construction Regulations 2003 (Government Gazette 37305 and Regulation Gazette 10113 of 7 February 2014) to the Act acquaint himself with the requirements of the Employer's health and safety specification as laid down in regulation 4(1)(a) of the Construction Regulation 2014, and prepare a suitably and sufficiently documented health and safety plan as contemplated in regulation 7(1)(a) of the Construction Regulation 2014 for approval by the Employer or his assigned agent. The Contractor's health and safety plan and risk assessment shall be submitted for approval, to the Employer or his agent, within 14 days of the Commencement Date and shall be implemented and maintained from the commencement of the Works.
- The Contractor shall at all times be responsible for full compliance with the approved plan as well as with the Construction Regulations and no extension of time will be considered for delays due to non-compliance with the abovementioned plan or regulations.
- (vii) The Employer, or his assigned agent, reserves the right to conduct periodic audits, as contemplated in the Construction Regulations 2014, to monitor that the Contractor is compliant in respect of his obligations. Failure by the Contractor to comply with the requirements of these Regulations shall entitle the Engineer, at the request of the Employer or his agent, to suspend all or any part of the Works, with no recourse whatsoever by the Contractor for any damages incurred as a result of such suspension, until such time that the Employer or his agents are satisfied that the issues in which the Contractor has been in default have been rectified.
 - (viii) The proposed type of work, materials to be used and potential hazards likely to be encountered on this Contract are detailed in the Parts C3.4 and C3.5, the Bill of Quantities, the Drawings, and in the Employers' health and safety specification (regulation 5(1)(b) of the Construction Regulations 2014), which is contained in the Particular Specifications.

Payment items are included in the Bill of Quantities to cover the Contractor's cost for compliance with the OHS Act and the abovementioned regulations.

3.5.10.2 *Health and Safety Plan*

Without limiting his obligations and liabilities in terms of the Construction Regulations, 2003 of the OHS Act, the Contractor, in his Health and Safety Plan to be submitted in terms of the Contract Data, shall inter alia deal with the safety provisions he will set up in respect of the aspects specified in the Specifications.

The Health and Safety Plan shall be neatly set out in a lever-arch type file, with labelled dividers for each section.

A copy of the approved Health and Safety Plan shall be kept on Site and made available upon request.

3.5.10.3 Protection of the public and Employer's staff

The Contractor shall at all times ensure that his operations do not endanger any member of the public, or the Employer's staff.

Open excavations and other hazardous conditions on site shall be barricaded and precautions shall be taken to protect the public from the same in terms of the OHS Act.

The Contractor shall direct, control, facilitate and safeguard all pedestrian traffic during construction of the Works, provide all notices, and arrange for watching and lighting in accordance with the requirements of the relevant authorities.

3.5.10.4 Excavations

Without limiting his responsibility for the safety of his workers in any excavation, the Contractor shall ensure the safety of his workers in trenches and excavations deeper than 1,0 m. in terms of the provisions of the OHS Act. The Contractor may choose to batter excavations to a safe slope if sufficient space is available, or adequately shore the excavations.

3.5.10.4 Working and entering confined spaces

Confined space is defined in the Occupational Health and Safety Act, Act 85, 1993, as an enclosed, restricted, or limited space in which, because of its construction, location or contents, or any work activity carried on therein, a hazardous substance may accumulate or an oxygen-deficient atmosphere may occur, and includes any chamber, tunnel, pipe, pit, sewer, container, valve, pump, sump, or similar construction, equipment, machinery or object in which a dangerous liquid or dangerous concentration of gas, vapour, dust or fumes may be present.

(a) Hazardous conditions in confined spaces could be identified as:

Hazardous atmosphere:

- Too little or too much Oxygen (too little can cause brain damage and cause the heart to stop and too much increases the risk of fire or explosion)
- Presence of Toxic gasses
- Liquids or solids inside the confined space. Liquids may produce hazardous atmosphere when it evaporates e.g. fuel
- Type of work done inside the confined space. Activities can lead to the release of harmful substances e.g. grinding, descaling etc.
- Contamination from outside/adjacent sources. A contaminant could enter the confined space through porous walls, communicating openings e.g. sewers

Explosive atmospheres:

- High concentration of Oxygen (>23%),
- Fuel e.g. Acetylene gas from leaking welding equipment;
- Methane gas and hydrogen sulphide produced by rotting organic waste in sewers;
- Hydrogen gas produced by contact between aluminium or galvanized metals and corrosive liquids;
- grain or coal dust;
- solvents such as acetone, ethanol, toluene, turpentine, and xylene which may be introduced into the space through spills) and
- Ignition sources e.g. open flames, welding arcs, chemical reaction, arcing of electrical motors etc.)

Physical hazards

- Loose and unstable material may lead to trapping or burying workers
- Slip, trip and fall hazards
- Falling objects from above

- Moving parts of equipment and machinery
- Electrical shock from defective extension cords, welding cables etc.
- Poor visibility
- Temperature extremes
- Noise
- Risk of drowning
- Rusted railings

(b) Safe work procedures for Confined Spaces shall include:

Only enter confined space after the air has been tested and evaluated by a competent person who has certified in writing that the space is safe and will remain safe for the duration of the work. Where the confined space cannot be certified as safe steps must be taken to ensure that any confined space in which there exists or is likely to exist a hazardous gas, vapour, dust or fumes, or which has or is likely to have, an oxygen content of less than 20 per cent by volume, is entered by an employee or other person only when;

- the confined space is purged and ventilated to provide a safe atmosphere therein and measures necessary to maintain a safe atmosphere therein have been taken; and
- the confined space has been isolated from all pipes, ducts and other communicating openings by means of effective blanking other than the shutting or locking of a valve or a cock, or, if this is not practicable, only when all valves and cocks which are a potential source of danger have been locked and securely fastened by means of chains and padlocks.

In an instance where it's not possible to purge and ventilate the confined space, the following precautions must be taken:

- the confined space is entered only when the employee or person entering is using breathing apparatus of a type approved by the chief inspector and, further, that ;
- the confined space has been isolated from all pipes, ducts and other communicating openings by means of effective blanking other than the shutting or locking of a valve or a cock, or, if this is not practicable, only when all valves and cocks which are a potential source of danger have been locked and securely fastened by means of chains and padlocks any employee or person entering the confined space is using a safety harness or other similar equipment, to which a rope is securely attached which reaches beyond the access to the confined space, and the free end of which is attended to by a person referred to in paragraph (c);
- at least one other person trained in resuscitation is and remains in attendance immediately outside the entrance of the confined space in order to assist or remove any or persons from the confined space, if necessary; and
- effective, approved apparatus for breathing and resuscitation is available immediately outside the confined space.

Ensure that everybody vacate the confined space after completion of any work therein. Where the hazardous gas, vapour, dust or fumes are of an explosive or flammable nature, further steps must be taken to ensure that such a confined space is entered only if –

- the concentration of the gas, vapour, dust or fumes does not exceed 25 per
- cent of the lower explosive limit of the gas, vapour, dust or fumes concerned
- where the work to be performed is of such a nature that it does not create a
- source of ignition; or
- such concentration does not exceed 10 per cent of the lower explosive limit of
- the gas, vapour, dust or fumes where other work is performed

Employees required to work in confined spaces must be trained and competent in confined space procedures. Working alone in a confined space is not permitted. A Confined Space Entry Permit is required for entry prior to any work performed in a confined space. A suitably trained person must undertake a written risk assessment before carrying out work involving entry into a confined space. The assessment shall take into account the following:

- the nature of the confined space;

- the work required and the methods by which the work can be done;
- the hazards involved and associated risks;
- implementation of control measures;
- the emergency and rescue procedures.

The risk assessment must be signed by all the people involved in the work to be done in the confined space. Communication between people in a confined space must be established as well as communication with any stand-by staff located outside. Rescue procedures must be established before entry into any confined space which, include a stand-by person. If working under a contractor or client's entry permit, this must be reviewed by a suitably qualified Health and Safety Specialist person to ensure adequacy of risk assessment, control measures and safe working procedures before entry.

3.5.10.5 Health and safety specialist

The contractor shall employ a health and safety specialist, with suitable and proven qualifications, either on full-time or part-time basis, for the duration of the Contract. This specialist shall assist with the preparation of the health and safety plan, shall provide on-going training for all construction staff (at least 1 hour per week whilst work on site is in progress, in the form of weekly tool-box talks), and shall assist with the upkeep of the health and safety plan and associated regular inspections etc.

The requirement for a weekly presence on Site necessitates that the Health and Safety Specialist be based locally, at least for the period while the Contractor is working on Site (i.e. during delivery, installation, testing and commissioning).

3.5.10.6 Monthly health and safety reports

The health and safety specialist required in terms of C3.5.8.4 shall submit a report to the Engineer at the monthly site meetings, detailing the state of health and safety on the site over the last month, new risk assessments added, potential new risks, new precautions taken, and summarising the results of various inspections required in terms of the health and safety plan, etc. If this report is not submitted at each monthly site meeting, the Engineer shall impose a fine of R5000.00 on the Contractor, in each instance.

3.5.11 Environmental Management

The Contractor will be responsible for managing his activities so that damage to the environment is minimised, as per the specifications contained within the Particular Specification attached in Part C3.6.3.

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C3.6 Annexes

CONTENTS

Annex 1: B-BBEE Sub-contractor Expenditure Report

Annex 2: Project Labour Report

Annex 3: Targeted Labour Contract Participation Expenditure Report

Annex 4: Targeted Enterprise Contract Participation Expenditure Report



ANNEX 1**CONTRACT NO. AND NAME:** 28/2023: CONSTRUCTION OF DIVERSION WEIR UPGRADE AND ASSOCIATED WORKS IN NKQUBELA, ROBERTSON**CONTRACTOR:****B-BBEE SUB-CONTRACT EXPENDITURE REPORT BASED ON PAYMENT CERTIFICATE NO.**

Value of the contract (as defined in Schedule 21: Preferencing Schedule) (P*)	R	B-BBEE Status Level of Prime Contractor		
Name of Sub-contractor (list all Sub-contractors)	B-BBEE Status Level of Sub-contractor ¹	Total Value of Sub-contract (Excl VAT) ¹	Value of Sub-contract work to date (Excl VAT)	Value of Sub-contract work to Sub-contractors with a lower B-BBEE Status Level than Prime Contractor
Sub-contractor A				
Sub-contractor B				
Sub-contractor C				
¹ Documentary evidence to be provided			Total: Expressed as a percentage of P*	%

Signatures**Contractor:****Date:****Engineer/
Engineer's
Representative:****Date:**

ANNEX 2

Project Labour Report

Project/Contract Name: 28/2023: Construction of Diversion Weir Upgrade and Associated Works in Nkqubela, Robertson						Budget: (tick one)		Capital	☒	Operating	
Project/Contract Number:						WBS No./Cost Centre No.:					
Contractor:						Project/Contract Start Date:					
Consultant:						Project/Contract End Date:					
CLO Name:			CLO ID Number:			Project/Contract Value (incl. allowance for escalation/excl. VAT):					
Month:						Project Labour Intensity Target/ Specified Minimum Targeted Labour Contract Participation Goal:					
Total value of work done to date (incl. escalation/excl. VAT):											
Number of workers	Name	Surname	ID Number/DOB	Targeted Labour (Y/N)	Daily Rate	Number of days worked this month (incl. training)	Disabled (Y/N)	Number of training days this month	Course Name	Training Service Provider	
1											
2											
3											
4											
5											
6											
7											
8											
9											
10											
11											
12											
13											
Totals for sheet											
Sheet of											

Signatures

Contractor: _____

Date: _____

Consultant/Project Manager: _____

Date: _____

ANNEX 3**CONTRACT NO. AND NAME:** 28/2023: CONSTRUCTION OF DIVERSION WEIR UPGRADE AND ASSOCIATED WORKS IN NKQUBELA, ROBERTSON**CONTRACTOR:****TARGETED LABOUR CONTRACT PARTICIPATION EXPENDITURE REPORT BASED ON CERTIFICATE NO.**

...

Value of the contract (as defined in Schedule 21: Preferencing Schedule) (P*)	R	Specified Targeted Labour Contract Participation Goal	%
---	---	---	---

Name of Contractor/Sub-contractor (list all)	Total previous expenditure on wages in respect of targeted labour	Net Amount for this month ¹	Total expenditure on wages in respect of targeted labour
Contractor			
Sub-contractor A			
Sub-contractor B			
¹ Documentary evidence to be provided			
Total: Expressed as a Percentage of P*			%

Signatures**Contractor:****Date****Engineer/
Engineer's
Representative:****Date**

ANNEX 4**CONTRACT NO. AND NAME:** 28/2023: CONSTRUCTION OF DIVERSION WEIR UPGRADE AND ASSOCIATED WORKS IN NKQUBELA, ROBERTSON**CONTRACTOR:****TARGETED ENTERPRISES CONTRACT PARTICIPATION EXPENDITURE REPORT BASED ON CERTIFICATE NO.**

.....

Value of the contract (as defined in Schedule 21: Preferencing Schedule) (P*)	R	Specified Targeted Enterprises Contract Participation Goal	%
---	---	--	---

Name of Targeted Enterprise (list all)	Total previous expenditure (excl VAT) in respect of targeted enterprises	Net Amount for this month ¹	Total expenditure (excl VAT) in respect of targeted enterprises
Enterprise A			
Enterprise B			
Enterprise C			
¹ Documentary evidence to be provided			
Total: Expressed as a Percentage of P*			%

Signatures**Contractor:****Date****Engineer/
Engineer's
Representative:****Date**

C4 Site Information

The rates tendered are deemed to be based on the Contractors own inspection, investigations and site visits and Clause 2.1 of the GCC 2015 (3rd Edition) is applicable in this regard.



C5 Health and Safety Specification

The attached Health and Safety Specification is applicable to this project



C6 Drawings

The Works shall be carried out in accordance with the following drawings which are included in Part C6 : Drawings and form part of the contract documents:

Table 3.2.4.1: List of Drawings		
CONSULTANT'S DRAWING NUMBER	DESCRIPTION	REVISION
LAYOUTS		
22098-C-000	Locality Plan	A
22098-C-001-01	Existing Services Layout for Existing Stormwater Detention Pond	A
22098-C-001-02	Existing Services Layout for Reroute of Existing Sewer Rising Main	A
22098-C-003-01	Proposed Reroute of Existing Sewer Rising Main	A
22098-C-005-01	Proposed Layout of Stormwater Pond & Sewer Channel	A
DETAILS		
22098-C-100	Typical Details of Stormwater Detention Pond	A
22098-C-101	Outlet Structure Amendment Details	A
22098-C-102	Typical Details – Security Fence	A
22098-C-103	Typical Details – Security Fence Details	A
22098-C-104	General Structure Details	A



safe working practice
OCCUPATIONAL HEALTH AND SAFETY GROUP

Project Health and Safety Specification

In terms of Construction Regulations 2014

Project Client

LANGEBERG MUNICIPALITY

Description of Project Works

**DIVERSION WEIR PUMP STATION AND
DETENTION POND, NKQUBELA**

Project Location

**SOUTHERN END OF MAMOMBO STREET,
NKQUBELA, ROBERTSON**

Preparation Date

JULY 2023

Project Health and Safety Specification developed by:

Mark Winter PrCHSA, (SACPCMP)
Safe Working Practice (Cape Town) Pty Ltd
Cell: 071 603 2213
Tel: 021 701 0470
Email: markw@safeppractice.co.za



PROJECT HEALTH AND SAFETY SPECIFICATION

TABLE OF CONTENTS

1. Specific Project Information

- 1.1 Introduction and Definitions
- 1.2 Background to the Health and Safety Specification
- 1.3 Purpose of the Health and Safety Specification
- 1.4 Implementation of the Health and Safety Specification
- 1.5 Project Directory
- 1.6 Project Details
- 1.7 Existing Environment
- 1.8 Available Drawings
- 1.9 Project Health and Safety Requirements
- 1.10 Interface and Restrictions by Client
- 1.11 Project Close Out
- 1.12 Safety File Return to Client

2. Further Requirements

- 2.1 Duties of Principal Contractor / Contractor in terms of Construction Regulations 2014
- 2.2 Management and Supervision of Construction Work
- 2.3 Notification of Intention to Commence Construction Work
- 2.4 Construction Work Permit
- 2.5 Assignment of Contractor's Responsible Persons to Manage Health and Safety on Site
- 2.6 Competency for Contractor's Responsible Persons
- 2.7 Compensation of Occupational Injuries Act 130 of 1993 (COIDA)
- 2.8 Occupational Health and Safety Policy
- 2.9 Health and Safety Organogram
- 2.10 Risk Assessments
- 2.11 Health and Safety Representative(s)
- 2.12 Health and Safety Committee
- 2.13 Medical Certificate of Fitness
- 2.14 Health and Safety Training
 - 2.14.1 Induction
 - 2.14.2 Awareness
- 2.15 Competency
- 2.16 General Record Keeping
- 2.17 General Inspection, Monitoring and Reporting
- 2.18 Emergency Procedures
- 2.19 First Aid Box and First Aid Equipment
- 2.20 Accident / Incident Reporting and Investigation
- 2.21 Hazards and Potential Situations
- 2.22 Occupational Health and Safety Signage
- 2.23 Management of Contractors by Principal Contractor
- 2.24 Stacking of Materials
- 2.25 Housekeeping and General Safeguarding on Construction Sites
- 2.26 Construction Vehicles and Mobile Plant
- 2.27 Electrical Installations and Machinery on Construction Sites
- 2.28 Use and Temporary Storage of Flammable Liquids on Construction Sites
- 2.29 Water Environments



- 2.30 Fire Precautions on Construction Sites
- 2.31 Construction Employees' Facilities
- 2.32 Fall Protection
- 2.33 Temporary Works
- 2.34 Excavation
- 2.35 Demolition Work
- 2.36 Tunnelling
- 2.37 Scaffolding
- 2.38 Bulk Mixing Plant
- 2.39 Rope Access Work
- 2.40 Hazardous Chemical Substances (HCS)
- 2.41 Noise Induced Hearing Loss
- 2.42 Explosives and Blasting
- 2.43 Personal Protective Equipment (PPE)
- 2.44 Asbestos
- 2.45 Pressure Vessels (Including Gas Bottles)
- 2.46 Fire Extinguishers and Fire Fighting Equipment
- 2.47 Lifting Machinery and Tackle
- 2.48 Ladders and Ladder Work
- 2.49 General Machinery
- 2.50 Portable Electrical Tools
- 2.51 High Voltage Electrical Equipment
- 2.52 Public Health and Safety
- 2.53 Night Work
- 2.54 Environmental Conditions and Flora and Fauna
- 2.55 Occupational Health
- 2.56 Suspended Platforms
- 2.57 Material Hoists
- 2.58 Explosive Actuating Fastening Devices
- 2.59 Confined Spaces
- 2.60 Alcohol and Drugs
- 2.61 General Practices when Working at Heights
- 2.62 Traffic Management
- 2.63 Ventilation and Lighting in the Work Place
- 2.64 Nuclear Density Gauge (Troxler)
- 2.65 Ergonomics Regulation of 2019

Annexure A Requirements for the Safety Plan Assessment

Annexure B Legal Appointments

Annexure C Baseline Risk Assessment

Annexure D Safety Specification and Baseline Risk Assessment Issue Register



1.0 SPECIFIC PROJECT INFORMATION

1. 1 INTRODUCTION AND DEFINITIONS

THE REQUIREMENTS OF THE CONSTRUCTION REGULATIONS 2014 (AND GUIDANCE NOTES OF 2017) HAVE BEEN IN EFFECT SINCE 7TH AUGUST 2014. THE REGULATIONS PLACE LEGAL DUTIES UPON PRINCIPAL CONTRACTORS AND CONTRACTORS. ALTHOUGH THIS HEALTH AND SAFETY SPECIFICATION INCLUDES MUCH OF THE CONTENT OF THE REGULATIONS, THE CONTRACTOR WILL BE DEEMED TO BE FAMILIAR WITH THE REQUIREMENTS OF THESE REGULATIONS, AND OTHER ASSOCIATED HEALTH AND SAFETY REGULATIONS, AND TO HAVE FACTORED IN ALL THE DUTIES PLACED UPON CONTRACTORS AND PRINCIPAL CONTRACTORS IN THE TENDER. A COPY OF THE REGULATIONS CAN BE VIEWED ON THE DEPARTMENT OF LABOUR'S WEBSITE.

PLEASE NOTE THAT THE TERMS "CONTRACTOR" AND "PRINCIPAL CONTRACTOR" HAVE THE SAME MEANING AS THAT IN THE CONSTRUCTION REGULATIONS AND ARE USED INTERCHANGEABLY IN THIS DOCUMENT, I.E., REFERENCES TO "CONTRACTOR" REFER TO PRINCIPAL CONTRACTOR AND/OR CONTRACTOR AS THE REGULATIONS PERTAIN TO THEIR FUNCTIONS.

This Health and Safety Specification contains clauses that are generally applicable to construction activities, as well as imposing pro-active controls associated with activities that impact on Health and Safety as it relates to work on site. Compliance to the requirements of the Occupational Health and Safety Act 1993 is an additional requirement of this Health and Safety Specification and is part of the Contractor's responsibility. The Client, and/or their agents, will monitor that all Contractors comply with the requirements of such legislation.

ALL REFERENCES TO CLIENT IN THIS HEALTH AND SAFETY SPECIFICATION ALSO REFER TO SAFETY AGENT, WHERE SO APPOINTED.

Definitions (as per the Construction Regulations 2014) applicable to this Health and Safety Specification:

"agent" means a competent person who acts as a representative for a Client;

"angle of repose" means the steepest angle of a surface at which a mass of loose or fragmented material will remain stationary in a pile on the surface, rather than sliding or crumbling away;

"bulk mixing plant" means machinery, appliances or other similar devices that are assembled in such a manner so as to be able to mix materials in bulk for the purposes of using the mixed product for construction work;

"client" means any person for whom construction work is being performed;

"competent person" means a person who has, in respect of the work or task to be performed, the required knowledge, training and experience and, where applicable, qualifications, specific to that work or task: Provided that where appropriate qualifications and training are registered in terms of the provisions of the National Qualification Framework Act, 2000 (Act No.67 of 2000), those qualifications and that training must be regarded as the required qualifications and training; and is familiar with the Act and with the applicable regulations made under the Act;

"construction manager" means a competent person responsible for the management of the physical construction processes and the coordination, administration, and management of resources on a construction site;

"construction site" means a workplace where construction work is being performed;



"construction supervisor" means a competent person responsible for supervising construction activities on a construction site;

"construction vehicle" means a vehicle used as a means of conveyance for transporting persons or material, or persons and material, on and off the construction site for the purposes of performing construction work;

"construction work" means any work in connection with -

- the construction, erection, alteration, renovation, repair, demolition or dismantling of or addition to a building or any similar structure; or
- the construction, erection, maintenance, demolition or dismantling of any bridge, dam, canal, road, railway, runway, sewer or water reticulation system; or the moving of earth, clearing of land, the making of excavation, piling, or any similar civil engineering structure or type of work;

"construction work permit" means a document issued in terms of regulation 3;

"contractor" means an employer who performs construction work;

Note:

a) Includes organisations and or self-employed person that contracts with a client, principal contractor, or a contractor to carry out construction work.

"demolition work" means a method to dismantle, wreck, break, pull down or knock down of a structure or part thereof by way of manual labour, machinery, or the use of explosives;

"design" in relation to any structure, includes drawings, calculations, design details and specifications;

"designer" means a competent person who-

- prepares a design;
- checks and approves a design;
- arranges for a person at work under his or her control to prepare a design, including an employee of that person where he or she is the employer; or
- designs temporary work, including its components;
- an architect or engineer contributing to, or having overall responsibility for a design;
- a building services engineer designing details for fixed plant;
- a surveyor specifying articles or drawing up specifications;
- a contractor carrying out design work as part of a design and building project; or
- an interior designer, shop-fitter, or landscape architect;

"ergonomics" means the scientific discipline concerned with the fundamental understanding of interactions among humans and other elements of a system, and the profession that applies theory, principles, data, and methods to design in order to optimise human well-being and overall system performance;

"excavation work" means the making of any man-made cavity, trench, pit or depression formed by cutting, digging or scooping;

"explosive actuated fastening device" means a tool that is activated by an explosive charge and that is used for driving bolts, nails, and similar objects for the purpose of providing fixing;

"fall arrest equipment" means equipment used to arrest a person in a fall, including personal equipment, a body harness, lanyards, deceleration devices, lifelines, or similar equipment;

"falsework" means a combined system of formwork and support work;

"formwork" means temporary or permanent shutters used to form wet concrete into elements of a structure, and includes both horizontally and vertically placed shutters;

"fall prevention equipment" means equipment used to prevent persons from falling from a fall risk position, including personal equipment, a body harness, lanyards, lifelines or physical equipment such as guard-rails, screens, barricades, anchorages or similar equipment;



"fall protection plan" means a documented plan, which includes and provides for -

- all risks relating to working from a fall risk position, considering the nature of work undertaken;
- the procedures and methods to be applied in order to eliminate the risk of falling; and
- a rescue plan and procedures;

"fall risk" means any potential exposure to falling either from, off or into;

"health and safety file" means a file, or other record containing the information in writing required by these Regulations;

"health and safety plan" means a site, activity or project specific documented plan in accordance with the Client's health and safety specification;

"health and safety specification" means a site, activity or project specific document prepared by the Client pertaining to all health and safety requirements related to construction work;

"material hoist" means a hoist used to lower or raise material and equipment, excluding passengers;

"medical certificate of fitness" means a certificate contemplated in regulation 7(8);

"mobile plant" means any machinery, appliance or other similar device that is able to move independently, and is used for the purpose of performing construction work on a construction site;

"National Building Regulations" means the National Building Regulations made under the National Building Regulations and Building Standards Act, 1977 (Act No. 103 of 1977), and promulgated by Government Notice No. R. 2378 of 30 July 1990, as amended by Government Notices No's R. 432 of 8 March 1991, R. 919 of 30 July 1999 and R. 547 of 30 May 2008;

"person day" means one normal working shift of carrying out construction work by a person on a construction site;

"principal contractor" means an employer appointed by the Client to perform construction work;

"Professional Engineer or Professional Certificated Engineer" means a person holding registration as either a Professional Engineer or Professional Certificated Engineer in terms of the Engineering Profession Act, 2000 (Act No. 46 of 2000);

"Professional Technologist" means a person holding registration as a Professional Engineering Technologist in terms of the Engineering Profession Act, 2000;

"provincial director" means the provincial director as defined in regulation 1 of the General Administrative Regulations, 2003;

"scaffold" means a temporary elevated platform and supporting structure used for providing access to and supporting workmen or materials or both;

"shoring" means a system used to support the sides of an excavation and which is intended to prevent the cave-in or the collapse of the sides of an excavation;

"structure" means-

- any building, steel or reinforced concrete structure (not being a building), railway line or siding, bridge, waterworks, reservoir, pipe or pipeline, cable, sewer, sewage works, fixed vessels, road, drainage works, earthworks, dam, wall, mast, tower, tower crane, bulk mixing plant, pylon, surface and underground tanks, earth retaining structure or any structure designed to preserve or alter any natural feature, and any other similar structure;
- any falsework, scaffold or other structure designed or used to provide support or means of access during construction work; or
- any fixed plant in respect of construction work which includes installation, commissioning, decommissioning, or dismantling and where any construction work involves a risk of a person falling;



"support work" means the temporary structure erected to support the formwork before the casting of a concrete element of a structure.

"suspended platform" means a working platform suspended from supports by means of one or more separate ropes from each support;

"temporary works" means any falsework, formwork, support work, scaffold, shoring or other temporary structure designed to provide support or means of access during construction work;

"the Act" means the Occupational Health and Safety Act, 1993 (Act No. 85 of 1993);

"tunnelling" means the construction of any tunnel beneath the natural surface of the earth for a purpose other than the searching for or winning of a mineral.

Reference should be made to the following documentation in conjunction with this Safety Specification (including existing surveys, drawings, and reports):

- Tender documents
- Drawings

IMPORTANT NOTE:

This Health and Safety Specification has been prepared to comply with the requirements of the Construction Regulations 2014.

1.2 BACKGROUND TO THE HEALTH AND SAFETY SPECIFICATION

Historically, the Construction Industry has had a poor health and safety record. Due to the complex and potentially dangerous operations being undertaken, there is a high risk of incidents, accidents, and injuries. In many instances poor adherence to the Act and Regulations has resulted in severe consequences for Health and Safety performance. The Client is determined that the highest Health and Safety standards will prevail throughout the Contract and that there will be full commitment from all parties involved.

To achieve this goal the Client has arranged for the preparation of this Health and Safety Specification. The Health and Safety Specification sets out guidelines and minimum levels of awareness and guidance for Health and Safety requirements for the project. Contractual responsibility for adhering to these requirements rests with the Contractors. All employees are encouraged to be pro-active in compliance.

The Client is committed to ensuring the highest Health and Safety standards for all work undertaken within the Contract.

Contractors as employers are fully responsible and accountable for compliance with all Health and Safety requirements.

IMPORTANT NOTE:

Compliance with the Occupational Health and Safety Act and Regulations shall not be limited to this Health and Safety Specification and definitions contained in this document.

Contractors shall be conversant with the requirements and effects of Health and Safety legislation upon their activities, in particular the Construction Regulations, 2014, and the Occupational Health and Safety Act, 1993, and to have made adequate resource in their tender submission to comply with all legislative requirements.

Failure to comply with the requirements of this Safety Specification will result in severe sanction and the severity of the sanction will depend on the severity of the noncompliance.



The Contractor's personnel will be responsible for the auditing of the implementation of the Health and Safety Specification and maintaining the document control and record systems associated with the Health and Safety Specification. The Client will arrange for Health and Safety audits to be conducted on site on their behalf to monitor health and safety compliance by contractors.

1.3 PURPOSE OF THE HEALTH AND SAFETY SPECIFICATION

The purpose of this site-specific Health and Safety Specification is to comply with legal requirements and to provide health and safety information about specific project risks known by the Client, Designer and Safety Agent to be applicable to this project. This document also provides minimum health and safety requirements, standards, and expectations that the contractor must adhere to.

The Contractor must take into account all information in this specification and ensure that their tenders include adequate resource and competence to deal with the matters detailed herein so that all relevant contents are dealt with in a way which is in compliance with legislation and the ethical concerns for the safeguarding of employees, contractors and other persons affected by the construction activities. Please note that a detailed OHS bill of quantities must be provided by the contractor on all Construction Work Permit projects. The Bill of Quantities will form part of the Construction Work Permit application presented to Department of Labour for approval.

The Health and Safety Specification will be implemented during construction of the works and any construction activity that the Client has control over.

This will also assist in ensuring that all the costs related to the compliance with Occupational Health Act 85 of 1993 and the Construction Regulations 2014, as well as this Health and Safety Specification, are taken into consideration at Tender stage.

No advice, approval of any document required by the Health and Safety Specification such as hazard identification and risk assessment action plans or any other form shall be construed as an acceptance by the Client of any obligation that absolves the Contractor from achieving the required level of performance and compliance with legal requirements.

Further, there is no acceptance of liability by the Client which may result from the Contractor failing to comply with the Health and Safety Specification unless the Client has issued an instruction to any requirement, i.e. the Contractor remains responsible for achieving the required performance levels.

1.4 IMPLEMENTATION OF THE HEALTH AND SAFETY SPECIFICATION

This Health and Safety Specification forms an integral part of the Contract, and Contractors shall make it an integral part of their Contracts with other Contractors and Suppliers. Contractors employed by the Client are to ensure that the provisions of the Health and Safety Specification are applied both on the site and in respect of all off site activities relating to the project, in particular in transport activities and project dedicated off site fabrication works.

The Contractor shall enforce the provisions of the Health and Safety Specification amongst all Contractors and suppliers for the project.

The Contractor shall sign the acknowledgment on the last page of this safety specification that he/she has familiarized him/herself with the content of the Health and Safety Specification and shall comply with all obligations in respect thereof.

The successful Contractor will be required to compile a Health and Safety Plan based on the requirements of the Occupational Health Act 85 of 1993 and these Specifications, which will need to be approved by Client (or their appointed safety agent) prior to commencement with construction work.



1.4.1 Client Duties

In terms of the Construction Regulations 2014 the Client (or their Agent, where appointed) has legal duties. Where an Agent (refer to “definitions” section of this document) is appointed in terms of this project, these Health and Safety duties assigned will also apply.

All references to “Client” will apply to their appointed “Safety Agent”, where so appointed, in this Health and Safety Specification.

The Client must:

- Prepare a baseline risk assessment for the construction work
- Prepare a suitable, sufficiently documented, and coherent site specific Health and Safety specification for the intended construction work, based on the baseline risk assessment
- Include the health and safety specification in the tender documents
- Ensure that potential principal contractors submitting tenders have made adequate provision for the cost of health and safety measures
- Ensure that the principal contractor to be appointed has the necessary competencies and resources to carry out the construction work safely
- Take reasonable steps to ensure co-operation between all contractors appointed by the Client to enable each of those contractors to comply with the regulations
- Ensure, before work commences, that every principal contractor is registered and in good standing with the compensation fund, or with a licensed compensation insurer as contemplated in the Compensation for Occupational Injuries and Diseases Act, 1993 (Act no 130 of 1993)
- Appoint each principal contractor in writing for the project, or part thereof
- Discuss and negotiate with the principal contractor the contents of the principal contractor’s safety plan and thereafter finally approve that plan for implementation
- Ensure that a copy of the principal contractor’s health and safety plan is implemented and maintained
- Ensure that periodic health and safety audits and document verification are conducted at intervals mutually agreed upon between the principal contractor and any contractor, but at least once every 30 days
- Ensure that a copy of the health and safety audit report is provided to the principal contractor within 7 days after the audit
- Stop any contractor from executing a construction activity which poses a threat to the health and safety of persons which is not in accordance with the principal contractor’s health and safety plan for site
- Where changes are brought about to the design or construction work, make sufficient health and safety information and appropriate resources available to the principal contractor to execute the work safely
- Ensure that the health and safety file is kept and maintained by the principal contractor.
- Where the Client requires additional work to be performed as a result of a design change or error in construction due to the actions of the Client, the Client must ensure that sufficient safety information and appropriate additional resources are available to execute the required work safely.
- Where more than one principal contractor is appointed, the Client must take reasonable steps to ensure co-operation between all principal contractors and contractors to ensure compliance with the Regulations
- Where the Client has appointed a Safety Agent for the project, their details for this project are contained in the Project Directory section of this health and safety specification.

1.4.2 Designer Duties

It must be noted that the Designer also has Health and Safety duties assigned in terms of the Construction Regulations. Where the contractor fulfils a design function in terms of this project (refer to “definitions” section of this document), these duties will also apply. Please refer to Regulation 6 of the Construction Regulations 2014.



Please note that the designer of temporary works must ensure that:

- all temporary works are adequately designed so that it will be capable of supporting all anticipated vertical and lateral loads that may be applied;
- the designs of temporary works are done with close reference to the structural design drawings issued by the contractor, and in the event of any uncertainty consult the contractor;
- all drawings and calculations pertaining to the design of temporary works are kept at the office of the temporary works designer and are made available on request by an inspector; and
- the loads caused by the temporary works and any imposed loads are clearly indicated in the design.

1.5 PROJECT DIRECTORY		
Project Client	Langeberg Municipality	Tel: 023 615 8000 Cell: TBA
Contact Person	Carel Posthumus	Email: cposthumus@langeberg.gov.za
Project Manager	Lyners	Tel: 021 914 0300 Cell: 072 433 7262
Contact Person	Carel Davids	Email: carel@lyners.co.za
Civil Engineer	Lyners	Tel: 021 914 0300 Cell: 076 152 0353
Contact Person	Monique Lyners	Email: monique@lyners.co.za
Other Professionals in the Professional Team with a design input	Lyners	Tel: 021 914 0300 Cell: 069 456 0833
Contact Person	Henri Blignaut	Email: henri@lyners.co.za
Construction Safety Agent	Safe Working Practice	Tel: 021 701 0470 Cell: 071 603 2213
Contact Person	Mark Winter	e-mail: markw@safeppractice.co.za

OTHER PARTIES DIRECTORY	
Department of Labour for submission of Annexure 2: Notification of Construction Work WESTERN CAPE – Fezeka Ngalo	Tel: 021 441 8158 e-mail: fezeka.ngalo@labour.gov.za Cell: 083 365 0681



Department of Labour http://www.labour.gov.za/Contacts/Labour-centres/Pages/defaults.aspx BELLVILLE P. O. Box 1789 Bellville 7535	Tel: 021 441 8158 e-mail: fezeka.ngalo@labour.gov.za Cell: 083 365 0681
Telecommunications, Water, Gas and Electricity Contractor to apply for and refer to wayleave information from service providers for the nature and location of services. Refer all queries Project Manager.	

1.6 PROJECT DETAILS

Description of Works

Diversion Weir Pump Station and Detention Pond, Nkqubela to mitigate the contamination of the stormwater inflow into the existing stormwater detention pond to the south of the informal settlement of Nkqubela by upgrading the existing stormwater detention pond and re-routing the existing sewer rising main to the outside of the residential properties.

The works include the following:

Upgrading of existing stormwater detention pond including bulk earthworks, concrete works, associated pipe works and installation of new fencing around the existing stormwater detention pond.
Installation of 520m of 160mm diameter sewer rising main.

Work items under this tender shall include any one or more of the following:

- Establishment on site
- Clearing and grubbing
- Bulk Earthworks
- Accommodation of traffic during construction
- Installation of Sewer Rising Mains
- Stormwater drainage and associated structures

This description of the works is not necessarily complete and shall not limit the work to be carried out by the Contractor under this Contract.

Anticipated Construction Duration

3 months.

Provisional Start Date

January 2024

Provisional Completion Date

April 2024

Construction Work Permit Required for the Project?

No



1.7 EXISTING ENVIRONMENT

Hazards particular to this project by virtue of location:

- The works are located next to existing low cost housing area – members of public and vehicular traffic present. Note presence of children close to works area in particular.
- Live services will be present in the area of the works.
- Possible underground asbestos pipes present.
- Heat stress and other environmental conditions may be present.
- Crime and security may be an issue.

Overhead, Above Ground and Underground Services crossing the site:

Overhead: Principal Contractor to protect against damage and risks to safety of workforce and public.

Underground: sewer pipes, water pipes, stormwater pipes and electrical cables. Principal Contractor to protect against damage and risks to safety of workforce and public.

Ground level: Principal Contractor to protect against damage and risks to safety of workforce and public.

Service Drawings available: Yes.

Wayleaves required: Yes

Permits required: TBA

Isolations required: TBA

Existing structures on site and surrounding land use (with a significant impact on Health & Safety):

The works are located next to existing low cost housing area – members of public and vehicular traffic present

Existing ground conditions and ground survey report:

- No Geotechnical report available.
- Geotechnical queries to be referred to project manager.
- Excavation depth 1.5m – 2m for the rising main, 3.5m at the stormwater pond for construction of chamber.
- Shoring required at stormwater pond.
- Dewatering will be required.

Existing Traffic Systems

Condition: Existing two way surfaced roads.

Restrictions to access: None known.

Speed restrictions: Usual urban speed limits apply, to be reduced in construction areas and as per traffic management plan.



1.8 AVAILABLE DRAWINGS

Refer to tender documentation.

1.9 PROJECT HEALTH AND SAFETY REQUIREMENTS

Significant health and safety hazards identified by Client, Designer and Safety Agent:

Use of delivery or support trucks used for the delivery and removal of material and equipment on open roadways – plant must be effectively separated from members of public and unauthorised personnel. Flag persons wearing high visibility clothing to be in place as required. Exclusion zone to be in operation when the support vehicles are in use next to the roadways.

Any **plant** that will be moving in or around the road must be made visible at all times. Parking of this plant must be strictly monitored by the contractor at all times. Use flag persons as applicable. Plant must be effectively separated from members of public and unauthorised personnel.

Members of the public and road traffic – the site is located in an existing low cost housing area. The site works will present safety issues regarding risks to members of public and road traffic. The health and safety of members of public and road users must be a priority at all times and all necessary steps must be taken to prevent unauthorised entry to site and to protect members of the public from any dangers associated with the construction works being undertaken. Existing roads will remain open during works. This is a critical hazard to traffic/members of public and to workers in the road who must have high visibility clothing on at all times. Safety of road users and workers is crucial and must be managed by Principal Contractor. The Principal Contractor is responsible for the directional signage to divert pedestrian members of the public and road users. Where applicable - flag persons to control traffic with red flags and to have high visibility clothing on at all times. A traffic accommodation plan will be required. Contractor will be required to erect temporary fencing during construction around the stormwater pond to prevent public access. Barricades will be used along the rising main route to prevent public access to the work area.

Working at height, Temporary works, including scaffolding, formwork, support work – All access structures and temporary work must be designed by competent temporary works designers and constructed and inspected by competent personnel at the appropriate intervals as required by legislation and good practice and site circumstances. Results to be entered into register on site. All temporary works structures must be adequately erected, supported, braced and maintained by a competent person so that they are capable of supporting all anticipated vertical and lateral loads that may be applied to them. No loads to be imposed onto the structure that the structure is not designed to withstand. All required leading edge protection must be in place and storage of temporary works materials must be in a safe manner. Exclusion zones and/or other measures to keep unauthorised personnel from accessing work areas underneath must be enforced.

Crime and security - site is in an area with potential risk to contractors. The safety of the workers must be taken into consideration. Emergency procedures must form part of induction training. Contractor must ensure safe entry into the area and vacate the area immediately in event of incidents and notify professional team.

Noise and Dust control: Measures to be put in place by the appointed contractor to minimize the dust and noise on site. Contractor must take sufficient steps to reduce the production of noise and dust.

Warning Notices: Construction warning signage must be prominently displayed to avoid access to site areas by unauthorised persons.

Risk of fires caused by construction works and / or Smoking – ensure correct measures are in place for fire control to ensure no fires will break out. Fire extinguishing equipment to be readily



available at all times especially during high risk activities. The smoking of cigarettes is also to be monitored and adequate smoking areas and smoking control measures to be put in place

Live services – services present in the works areas. All necessary precautions must be taken to prevent accidental contact with these services. All services to be treated as live.

Presence of Asbestos – Possibility of underground asbestos pipes in the works area. Works with asbestos must be done in strict accordance with the Asbestos Abatement Regulations of 2020.

Lifting Operations – all operators must provide copies of their up to date competency and medical certificates and driver's license. Loads must be slung by person with appropriate training and competence. Daily plant inspection registers to be completed and records kept in the safety file. Valid load test certificates and record of inspections by competent personnel must be available and maintained throughout the project. Rotating amber lights and reverse alarms to be active when operating all plant on site. Plant must be effectively separated from members of public and unauthorised personnel. Use trained flag persons as applicable. Exclusion zone under lifting operations to be enforced as applicable. Particular attention must be paid to lifting operations in windy conditions.

Excavations – method statement to be in place. All workers must receive induction prior to commencement of works. Excavations must sloped to a safe repose. If sloping is not possible, it must be adequately supported, braced and maintained by a competent person (shored) so that they are capable of supporting all anticipated vertical and lateral loads that may be applied to them. Support mechanisms to be of sufficient design, durability and strength to prevent any excavation edges from collapsing. **Excavations must be backfilled by end of each shift as far as is reasonably practicable.** If this cannot be done then appropriate safety measures must be put in place by the contractor to prevent unauthorised entry to excavations, including barriers and warning signage. Ensure there is a safe distance between employees and plant when digging excavations.

- ALL EXCAVATIONS MUST HAVE A MINIMUM OF ORANGE PLASTIC BARRIER MESH IN PLACE.
- Red & white danger tape is not permitted for securing excavated areas.
- Excavated soil is to be placed at a sufficiently safe distance from the excavation itself.
- Water seepage / water table management into excavated areas due to high subsurface water table is to be management by the Principal Contractor.
- No Geotechnical report available.
- Geotechnical queries to be referred to project manager.
- Excavation depth 1.5m – 2m for the rising main, 3.5m at the stormwater pond for construction of chamber.
- Shoring required at stormwater pond.
- Dewatering will be required.

Confined spaces (chambers) – confined space work must be monitored by a competent appointed person. Prior to entry, ensure that confined space is sufficiently ventilated. Oxygen levels to be tested in confined space to ensure that it is safe for entry. Personal protective equipment to be worn (such as proper masks) if air supply insufficient or not of sufficient quality. Emergency procedures to be in place. Sufficient training must take place in use of equipment prior to any works commencing in such confined space. Permit system to be in place to declare confined space safe for entry.

Working next to Water – During a storm event the stormwater pond will fill with water and pose as a potential drowning risk. It is essential that safe systems of work are in place based on a thorough risk assessment and that staff are properly trained and instructed. To be addressed at induction where workers ability to swim to be recorded. Barriers to be placed on edge as required. Personal protective equipment (PPE) such as life vests and safety equipment such as life belts, ropes etc must be provided and readily available. Workers must not work alone near water and must know how to use the rescue equipment. An emergency rescue plan to be in place and must be communicated to all personnel. Consideration must also be given to the health implications of falls into the water.



Other construction hazards that the contractor can reasonably expect are as follows:

Compacting and Filling
Compactor Operations
Cutting Off Disc
Electric Tools and Electrical Installations
Flammable Liquids / Gas
Hot Works
Hand tools
Manhole Rings and Pipes Storage
Manual Handling of General Items
Plant/Vehicle and Equipment Operation
Troxler Use

NOTE: Please refer to end of this Health and Safety Specification for the baseline risk assessment for these hazards and risks.

ACTIVITIES REQUIRING PERMITS (FOR HEALTH AND SAFETY PURPOSES)

Permit to Dig: Where applicable, Principal Contractor to approach service providers.

Permit to Enter Excavations: The Principal Contractor is to formally manage all excavation work.

Road Works Permit: The Principal Contractor to liaise with the professional team.

Permit to Work with Electricity: Where applicable, Principal Contractor to approach service providers.

Confined Space Permit: The Principal Contractor is to formally manage all confined space work.

Hot Works Permit: The Principal Contractor is to formally manage all hot work.

Permit to Work under Power Lines: The Principal Contractor is to formally manage all works under power lines, as applicable.

Blasting: n/a

Temporary Works: The Principal Contractor is to formally manage all temporary work.

CONTRACTOR SAFETY OFFICER PROVISION

Records of safety audits undertaken by the Contractor's Safety Officer must be kept on site in the safety file and nonconformances reported by the Safety Officer to the Contractor's management team. All nonconformances identified by the Safety Officer and client's safety agent must be investigated and corrective action taken by the Contractor to prevent re-occurrence.

Please note that as from 7th August 2018 the safety officer must be professionally registered with the SACPCMP. Proof of registration with the SACPCMP must be provided.

If registered as a Candidate proof of mentorship and weekly visits by mentor must be available on site.

The requirement for this site is that a part time Safety Officer be appointed by the Contractor for the duration of the project, conducting at least monthly safety audits.

MEDICAL CERTIFICATE OF FITNESS (ANNEXURE 3)

The contractor must ensure that their employees on site have a valid medical certificate of fitness, specific to the construction work being performed, issued by an occupational health practitioner in the form of an Annexure 3 template.



MANAGEMENT AND SUPERVISION OF CONSTRUCTION WORK

A principal contractor must, in writing, appoint one full-time competent person as the construction manager with the duty of managing all the construction work on a single site, including the duty of ensuring occupational health and safety compliance, and in the absence of the construction manager an alternate competent person must be appointed by the principal contractor. Proof of an all-inclusive assessment by the Principal Contractor of the Construction Manager's Competency in construction management and health and safety competency must be available in the Safety File.

The Construction Manager, Alternate Construction Managers, Assistant Construction Managers, and designated construction supervisor/s must, as a minimum, have training in Legal Liability, Construction Regulation 2014 and the OHS Act and Regulations.

TRAFFIC MANAGEMENT AND TRAFFIC SAFETY OFFICER PROVISION

Traffic management plan will be required while constructing the rising main. The Traffic Management Plan will be prepared by the Contractor and be approved by the Project Manager and, as required, the Traffic Chief as per the National Road Traffic Act, No. 93 of 1996. The Traffic Safety Officer (TSO) must have training as per Unit Standard 14561 or similar.

- The principal contractor is to implement the Plan before the start of works. Presence of TSO to be discussed with professional team.
- Note that barriers may need to be provided for works in the road and usual trench barricading where the works are within the sidewalks or verges.

ENVIRONMENTAL CONDITIONS

Contractor must take into account adverse weather conditions on site activities and implement control measures to mitigate risk. This includes risk of exposure to excessive heat, cold, rain, lightning and wind.

The open nature of the site works will not preclude any of the above.

ARRANGEMENTS FOR ACCESS, PARKING, DELIVERIES, ETC.

Off existing roads. Residents must have access to their properties at all times as well as emergency vehicles.

All service providers must sign a 37.2 Mandatory Agreement and must be inducted before they can be allowed on site.

ARRANGEMENTS FOR SITE CAMP, ABLUTIONS AND YARD

Site camp location and set up

- **Restrictions / requirements:** }
 - **Storage areas:** }
 - **Security:** }
- Contractor to advise in consultation with Engineer / Professional Team

Ablutions and Welfare Arrangements

Contractor to supply ablutions and facilities in line with the Construction Regulations 2014, refer to section 2.31 of this health and safety specification regarding the below. Toilets should be provided with built in facilities for hand washing. Please note further that control measures form an important part of ablutions provision on site ref soap and water/hand sanitiser, signage, etc:

- **Toilets:** }
 - **Washing facilities:** }
- Contractor to provide as per Regulations



- **Drinking Water:**

- **Shelter:**

- **Showers:**

}
}
}
}
}
}

Contractor to provide as per Regulations

Mobile site facilities requirements:

A camping toilet/mobile toilet will be required for sites that cannot facilitate a permanent location for ablution units and must be available for each gender per location.

The use of a camping toilet must be prepared and setup correctly with additional anchors and available toiletries prior to each working day and to be first priority when changing location of works along a set working path.

Teams are to ensure that the toilets are cleaned correctly and suitable for easy and hygienic uses and recorded on a daily register.

PROTECTION OF SITE AGAINST UNAUTHORISED ACCESS BY PUBLIC

Excavation Fencing: Note that excavations accessible to public, or adjacent to public roads / thoroughfares, must have (1) barrier / fence of at least 1m in height, and (2) warning illuminants at night or when visibility is poor, or have other suitable precautionary measures if of both these are not practicable.

- Orange plastic barrier mesh fencing is to be used at the minimum during excavation.
- Excavations are to be sufficiently fenced off if they are to be left open. Wherever possible, all excavations are to be backfilled at the end of each shift.
- Excavations are to be conducted in no more than 100m sections – this is to limit unnecessary risk with unsupervised excavations.
- Note requirements regarding protection of excavations in and alongside public roads.
- At interface with public where there is an increased risk of unauthorised access to site more stringent measures may be required, for example metal panel fencing. Note presence of children in area of the works.

General Fencing of Site: Note that construction sites in built up areas adjacent to public walkway must be fenced off and have controlled access points with the correct signs to indicate the site office for any relevant enquiries.

- Site camp / site yard is to be fenced off with 1.8m fence panels and be access controlled.
- Work areas to be fenced off with orange plastic barrier mesh fencing as minimum to keep unauthorised persons off the site. More robust measures (metal fencing panels) may be required at interface of works with public if there is a high risk to members of public safety.
- Please note requirements of the traffic management plan with respect to barricading of site.

Warning Notices: Construction warning signage must be prominently displayed to avoid unauthorised access to site and to warn of dangers associated with construction works.

Look Outs: TBA



PERSONAL PROTECTIVE EQUIPMENT (PPE)

The Client requires the Contractor to ensure that employees (and others under his/her control) wear the following minimum PPE:

Overalls: Yes.

Safety Harnesses: n/a.

Hard Hats: Yes, as per risk assessment.

Reflective Vests: Yes.

Goggles / gloves / ear defenders / respiratory protection: Yes, as per risk assessment.

Safety Footwear: Yes.

Specialist Equipment (e.g. for confined Spaces): Yes, as per risk assessment

HAZARDOUS SUBSTANCES

The following materials and substances have, or may have, to be used in the works and are identified as potentially posing special health and / or safety hazards during the project. Appropriate measures will need to be specified for their control:

Cement – Fuels (Petrol & Diesel) – Oils

1.10 INTERFACE AND RESTRICTIONS BY CLIENT

Contractor must note that the following Client activities will continue during construction:

- No client activities noted.
- The surrounding area remains accessible to the general public.

The following Client safety rules and/or requirements are to be observed:

All workers are to receive induction prior to commencement of work on site.

Other safety rules and requirements to be advised at induction.

Please also refer to tender document.

Restrictions on times, access or other restrictions by Client

Please refer to tender document.

Other restrictions may be advised at induction.

1.11 Project Close Out

The Health and Safety files for the Principal Contractors and all Contractors require closure and handover to the Client at the completion of the project in the form of a consolidated safety file. The following list is an example of what should be included but is not exhaustive. The Safety Agent or the Client may require further information at the time of completion and the Principal Contractor is to ensure that all instructions are responded to. Documentation would include all health and safety related records from the start of the project. All records to be in hard copy or electronic format and submitted to the Safety Agent for approval in adequately formatted lists and folders. Layout should be logical and in the same order as in the site files.



Consolidated Health and Safety close out file requirements include:

- Health and safety specification (most recent version)
- Principal Contractor's health and safety plan/s
- Site safety organograms
- Legal appointments
- Notification to Department of Labour of commencement of work / Construction Work Permit
- Workman's Compensation Letters of Good Standing for the project
- Full safety files for all contractors as well as their close out reports
- List of all contractors who worked on site
- Letters of safety plan approval of contractors by the Principal Contractor
- Mandatory agreements (section 37.2 agreements)
- Incident and accident records / Occupational Disease records
- Contractor Nonconformance records
- Safety agent's audit reports
- Safety Officer reports
- Method Statements
- Risk assessments
- Safe work procedures
- Medical surveillance certificates of fitness. Medical records are to be kept according to the Occupational Health and Safety Act, as amended.
- All temporary works drawings (suspended beams/scaffolds, etc.)
- Copies of test results, policies, and procedures for environmental monitoring (silica, noise, dusts, etc.)
- Detailed registers of all material used
- Copies of all Checklists completed

1.12 SAFETY FILE RETURN TO CLIENT

The consolidated Health and Safety Files for the Project is to be handed over by the Principal Contractor to the Client upon Project Completion in either hard copy or electronic format.

2.0 FURTHER REQUIREMENTS

2.1 Duties of Principal Contractor / Contractor in terms of Construction Regulations 2014

A Principal Contractor must:

- provide and demonstrate to the Client a suitable, sufficiently documented and coherent site specific health and safety plan, based on the Client's documented health and safety specifications, *which* plan must be applied from the date of commencement of and for the duration of the construction work and which must be reviewed and updated by the principal contractor as work progresses;
- open and keep on site a health and safety file, which must include all documentation required in terms of the Act and these Regulations, which must be made available on request to an inspector, the Client, the Client's Safety Agent, or a Contractor; and
- on appointing any other contractor, in order to ensure compliance with the provisions of the Act –
 - provide contractors who are tendering to perform construction work for the principal contractor, with the relevant sections of the health and safety specifications pertaining to the construction work which has to be performed;



- ensure that potential contractors submitting tenders have made sufficient provision for health and safety measures during the construction process;
- ensure that no contractor is appointed to perform construction work unless the principal contractor is reasonably satisfied that the contractor that he or she intends to appoint, has the necessary competencies and resources to perform the construction work safely;
- ensure prior to work commencing on the site that every contractor is registered and in good standing with the compensation fund or with a licensed compensation insurer as contemplated in the Compensation for Occupational Injuries and Diseases Act, 1993;
- appoint each contractor in writing for the part of the project on the construction site
- take reasonable steps to ensure that each contractor's health and safety plan is implemented and maintained on the construction site;
- ensure that the periodic site audits and document verification are conducted at intervals mutually agreed upon between the principal contractor and any contractor, but at least once every 30 days;
- stop any contractor from executing construction work which is not in accordance with the Client's health and safety specifications and the principal contractor's health and safety plan for the site or which poses a threat to the health and safety of persons;
- where changes are brought about to the design and construction, make available sufficient health and safety information and appropriate resources to the contractor to execute the work safely;
- discuss and negotiate with the contractor the contents of their health and safety plan and finally approve that plan for implementation;
- ensure that a copy of both the principal contractor and contractor's health and safety plan is available on request to an employee, an inspector, a contractor, the Client, or the Client's Safety Agent;
- hand over a consolidated health and safety file to the Client upon completion of the construction work, to include a record of all drawings, designs, materials used and other similar information concerning the completed structure;
- in addition to the documentation required in the health and safety file include and make available a comprehensive and updated list of all the contractors on site accountable to the principal contractor, the agreements between the parties and the type of work being done;
- ensure that all his or her employees have a valid medical certificate of fitness specific to the construction work to be performed and issued by an occupational health practitioner in the form of Annexure 3.

A contractor must prior to performing any construction work-

- provide and demonstrate to the principal contractor a suitable and sufficiently documented health and safety plan, based on the relevant sections of the Client's health and safety specification and provided by the principal contractor, which plan must be applied from the date of commencement of and for the duration of the construction work and which must be reviewed and updated by the contractor as work progresses;
- open and keep on site a health and safety file, which must include all documentation required in terms of the Act and these Regulations, and which must be made available on request to an inspector, the Client, the Client's Safety Agent or the principal contractor;



- before appointing another contractor to perform construction work be reasonably satisfied that the contractor that he or she intends to appoint has the necessary competencies and resources to perform the construction work safely;
- co-operate with the principal contractor as far as is necessary to enable each of them to comply with the provisions of the Act;
- as far as is reasonably practicable, promptly provide the principal contractor with any information which might affect the health and safety of any person at work carrying out construction work on the site, any person who might be affected by the work of such a person at work, or which might justify a review of the health and safety plan.

Where a contractor appoints another contractor to perform construction work, the duties that apply to the principal contractor will apply to the contractor as if he or she were the principal contractor.

A principal contractor must take reasonable steps to ensure co-operation between all contractors appointed by the principal contractor to enable each of those contractors to comply with these Regulations.

No contractor may allow or permit any employee or person to enter any site unless that employee or person has undergone health and safety induction training pertaining to the hazards prevalent on the site at the time of entry.

A contractor must ensure that all visitors to a construction site undergo health and safety induction pertaining to the hazards prevalent on the site and must ensure that such visitors have the necessary personal protective equipment.

A contractor must at all times keep on his or her construction site records of the health and safety induction training and such records must be made available on request to an inspector, the Client, the Client's Safety Agent or the Principal Contractor.

A contractor must ensure that all his or her employees have a valid medical certificate of fitness specific to the construction work to be performed and issued by an occupational health practitioner in the form of Annexure 3 (a template of which can be found in the Construction Regulations, 2014).

2.2 Management and Supervision of Construction Work

A principal contractor must, in writing, appoint one full-time competent person as the construction manager with the duty of managing all the construction work on a single site, including the duty of ensuring occupational health and safety compliance, and in the absence of the construction manager an alternate must be appointed by the principal contractor. Proof of all-inclusive assessment of the Construction Manager's Competency in construction management and H & S competency must be available in the Safety File. The Construction Manager must, as a minimum, have a Construction Regulation course. No contractors may be left unsupervised on site by the principal contractor.

A principal contractor must upon having considered the size of the project, in writing appoint one or more assistant construction managers for different sections thereof: Provided that the designation of any such person does not relieve the construction manager of any personal accountability for failing in his or her management duties in terms of this regulation.

Where the construction manager has not appointed assistant construction managers, or, in the opinion of an inspector, a sufficient number of such assistant construction managers have not been appointed, that inspector must direct the construction manager in writing to appoint the number of assistant construction managers indicated by the inspector, and those assistant construction managers must be regarded as having been appointed.



No construction manager appointed in terms of the Regulations 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.

A contractor must, after consultation with the Client and 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 to assist in the control of all health and safety related aspects on the site: Provided that, where the question arises as to whether a construction health and safety officer is necessary, the decision of an inspector is decisive.

No contractor may appoint a construction health and safety officer to assist in the control of health and safety related aspects on the site unless he or she is reasonably satisfied that the construction health and safety officer that he or she intends to appoint is registered with a statutory body approved by the Chief Inspector and has necessary competencies and resources to assist the contractor

A construction manager must in writing appoint construction supervisors responsible for construction activities and ensuring occupational health and safety compliance on the construction site. Proof of all-inclusive assessment of the Construction Supervisor's competency in construction supervision and H&S competency must be available in the Safety File. The Construction Supervisor must, as a minimum, have a supervision course as per Unit Standard 262845 (Civil Engineering), 119080 (Building Construction) and 262884 (Civil Engineering).

A contractor must, upon having considered the size of the project, in writing appoint one or more competent employees for different sections thereof to assist the construction supervisor, and every such employee has, to the extent clearly defined by the contractor in the letter of appointment, the same duties as the construction supervisor: Provided that the designation of such employee does not relieve the construction supervisor of any personal accountability for failing in his or her supervisory duties.

Where the contractor has not appointed such an employee, or, in the opinion of an inspector, a sufficient number of such employees have not been appointed, that inspector must instruct the employer to appoint the number of employees indicated by the inspector.

No construction supervisor appointed may supervise any construction work on or in any construction site other than the site in respect of which he or she has been appointed: Provided that if a sufficient number of competent employees have been appropriately designated on all the relevant construction sites, the appointed construction supervisor may supervise more than one site.

2.3 Notification of Intention to Commence Construction Work

The Contractor shall notify the Provincial Director of the Department of Labour of the intention to commence construction work at least 7 days prior to the works commencing if the intended construction work will:

- Include excavation work
- Include work at height where there is a risk of falling
- Include the demolition of a structure, or
- Include the use of explosives to perform construction work.

If the construction work involves construction of a single storey dwelling for a Client, and such Client will be residing in such dwelling upon completion, the Contractor must also notify the Provincial Director of the Department of Labour at least 7 days before the works commence.

This must be done on a form similar to an Annexure 2 (template of which can be found in the Construction Regulations, 2014). A copy of the notification letter to the Provincial Director shall be forwarded to the Client for record purposes.



2.4 Construction Work Permit

Not thought to be applicable to this project.

2.5 Assignment of Contractor's Responsible Persons to Manage Health and Safety on Site

The Contractor shall submit management and supervisory appointments as well as any relevant appointments in writing (as stipulated by the Construction Regulations 2014 and the Occupational Safety and Health Act 1993), prior to commencement of work (refer to **Annexure B** at the end of this Health and Safety Specification).

2.6 Competency for Contractor's Responsible Persons

The Contractor's responsible persons shall be competent in health and safety and be familiar with the Occupational Health and Safety Act 1993, and applicable regulations. Valid proof of pertinent health and safety courses attended by such persons will be required to be presented to the Client.

2.7 Compensation of Occupational Injuries and Diseases Act 130 of 1993 (COIDA)

The successful Contractor shall submit to the Client a valid letter of good standing with the Compensation Insurer prior to appointment.

2.8 Occupational Health and Safety Policy

The Contractor shall submit their Health and Safety Policy, prior to construction commencement, signed by the Chief Executive Officer. The Policy must outline objectives and how they will be achieved and implemented within the company operations. The Policy must be communicated to all employees and proof thereof must be available in the Safety File.

2.9 Health and Safety Organogram

The Contractor shall submit an organogram, prior to construction commencement, outlining the Health and Safety Site Team that will be assigned to the project, if successful with the tender. In cases where appointments have not been made, the organogram shall reflect the position. The organogram shall be updated when there is a change in the site team.

2.10 Risk Assessments

Baseline Risk Assessment

The Client shall cause a baseline risk assessment to be conducted by a competent person before the design process and tender process commence, and the assessed risks shall form part of the health and safety specifications.

The Contractor must, before commencement of any construction work, and during construction work, have risk assessments performed by a competent person appointed in writing, which risk assessments form part of the health and safety plan to be applied on the site and must include:

- The identification of the risks and hazards to which persons may be exposed to;
- An analysis and evaluation of the risks and hazards identified; based on a documented method
- A documented plan and applicable safe work procedures to mitigate, reduce or control the risks and hazards that have been identified;
- A monitoring plan; and
- A review plan



The Contractor must ensure that, as far as is reasonably practicable, ergonomic related hazards are analysed, evaluated, and addressed in a risk assessment.

The Contractor must ensure that all employees under his control are informed, instructed and trained by a competent person regarding any hazard and the related work procedures and/or control measures **before any work commences** and thereafter **at the times determined in the risk assessment monitoring and review plan of the relevant site**.

The Principal Contractor must ensure that all contractors are informed regarding any hazard that is stipulated in the risk assessment **before any work commences** and thereafter **at the times determined in the risk assessment monitoring and review plan of the relevant site**.

The Contractor must consult with the health and safety committee or with a representative trade union or representative group of employees if no health and safety committee exists, on the monitoring and review of the risk assessments for the site.

The Contractor must ensure that copies of risk assessment for this site are available on site for inspection purposes by interested parties (inspector, the Client, Client's Safety Agent, any contractor, any employee, a representative trade union, a health and safety representative or safety committee member).

A Contractor must review the relevant risk assessment where changes are effected to the design and/or construction that result in a change to the risk profile, or when an incident has occurred.

Preventative measures must first address the elimination of the hazard or risk. Should PPE be required to reduce risk, the equipment or clothing to be used must be SABS approved.

In general, the Contractor must ensure that the Risk Assessment involves identifying the hazards present in a work activity on site. This is followed by an evaluation of the extent of the risk involved taking into account those precautions already being taken.

The following general principle should be followed when conducting a risk assessment:

- All relevant risks and/or hazards should be systematically addressed;
- The risk assessment should address what actually happens in the workplace during the work activity;
- All employees and those who may be affected must be considered, including maintenance staff, security guards, visitors, and Contractors;
- The risk assessment should highlight those groups and individuals who may be required to work alone or who have disabilities;
- The risk assessment process should take into account the existing safety measures and controls.
- The level of detail on a risk assessment should be appropriate to the level of risk.

2.11 Health and Safety Representative(s)

The Contractor shall ensure that Health and Safety Representative(s) is/are elected and trained to carry out his / her functions. The Safety Representative(s) must be democratically nominated, elected, and appointed in writing. The Health and Safety Representative(s) shall carry out regular inspections, keep records and report to the supervisor to take appropriate action. The Safety Representative(s) shall attend Health and Safety Committee Meetings. The Health and Safety Representative shall be part of the team that will investigate incidents, accidents, and non-conformances. The Safety Representative(s) must be (a) full time employee(s) who is/are acquainted with conditions and activities at that workplace or section thereof. The Safety Representatives must have Safety Representative training and must be capable of performing their duties.



2.12 Health and Safety Committee

Where two or more health and safety representatives have been appointed on site, the Contractor shall ensure that monthly health and safety meetings are held with such representatives and minutes are kept on record. Meetings must be organized and chaired by the Contractor's Health and Safety Committee Chairperson. Minutes of these meetings must be available for the employees of the contractor to refer to.

PLEASE NOTE THAT THE SAFETY AGENT MAY REQUIRE THAT THE PRINCIPAL CONTRACTOR CONVENES A SAFETY COMMITTEE MEETING ON SITE IN THE INTERESTS OF HEALTH AND SAFETY ON SITE. SUCH COMMITTEE MEETING MAY REQUIRE ATTENDANCE OF CONTRACTORS SAFETY OFFICERS/SAFETY REPRESENTATIVES, CONSTRUCTION SUPERVISION AND THE SAFETY AGENT.

2.13 Medical Certificate of Fitness

The contractor must ensure that their employees on site have a valid medical certificate of fitness, specific to the construction work being performed, issued by an occupational health practitioner in the form of an Annexure 3 template (refer to the Construction Regulations 2014 on the Department of Labour website for a sample of this form).

Employees required to perform work at heights or from fall risk position must be medically fit to perform such work, such employee's medicals must specify "Fall Risk" or "Working at heights" in the exposure section of the annexure 3 template.

2.14 Health and Safety Training

The Contractor shall quarterly conduct a training needs analysis to ascertain what health and safety training is required. A plan of action should be devised and forwarded to the Client for records. Once the identified people have attended the training, the Contractor must provide the Client with copies of certificates obtained.

2.14.1 Induction

No Contractor may allow or permit any employee or person to enter site unless they have undergone health and safety induction training pertaining to the hazards prevalent on site at the time of entry. This includes visitors to site. The Contractor must ensure that visitors to site have the necessary protective equipment (PPE). A copy of attendance registers of all employees who attend inductions shall be kept.

2.14.2 Awareness

The Contractor shall conduct periodic toolbox talks on site, weekly or before any hazardous work takes place. The talks shall cover the relevant activity and an attendance register must be signed by all attendees. This record of who attended and the content of the topic will be kept on the site health and safety file as evidence of training.

2.15 Competency

After the Contractor has identified the training to be conducted as part of the competency requirement, and based on Risk Assessment, he shall send the relevant persons on appropriate courses and keep certificates of training for reference. Familiarity with the Health and Safety Act and Regulations is an integral part of the definition of competence. All training must be conducted by an accredited training provider and the certificates must display the applicable unit standards and the expiry dates thereof.



2.16 General Record Keeping

The Contractor shall keep and maintain Health and Safety records to demonstrate compliance with the Health and Safety Specification and the Occupational Health and Safety Act. The contractor shall ensure that all records of incidents, spot fines, training, etc. are kept on site. All documents shall be available for inspection by the Client, or the Department of Labour's Inspectors.

2.17 General Inspection, Monitoring and Reporting

The Contractor shall carry out inspections as required by this Health and Safety Specification, as well as by health and safety legislation.

2.18 Emergency Procedures

The Contractor shall submit a detailed Emergency Procedure for approval by the Client prior to commencement on site. The procedure shall detail the response plan including the following:

- List of key personnel;
- Details of emergency services;
- Actions or steps to be taken in the event of the emergency; and
- Information on hazardous materials / situations, including each material's hazardous potential impact or risk on the environment or human and measures to be taken in the event of an accident.

Emergency procedure(s) shall include, but shall not be limited to, fire, spills, accidents to employees, use of hazardous substances, dangers as a result of riot / service delivery protests / intimidation, etc. The Contractor shall advise the Client in writing of any on-site emergencies, together with a record of action taken, within 24 hours of the emergency occurring. A contact list of all service providers (Fire Department, Ambulance, Police, Medical and Hospital, etc.) must be maintained and available to site personnel.

2.19 First Aid Box and First Aid Equipment

The Contractor shall provide first aid box/es and appoint, in writing, First Aider(s) for this project in line with the results of the Contractor's risk assessment for the project, this health and safety specification as well as the provisions of the General Safety Regulations. The appointed First Aider(s) are to be sent for accredited first aid training before starting on site. Valid certificates are to be kept on site.

- First Aid box/es must be adequately stocked at all times, accessible and be controlled by a qualified First Aider.
- Perishables to be checked and replaced when expired.
- Stock per content list as per the General Safety Regulations Annexure.
- Signage to be in place.
- To be numbered and sealed with name of first aider on or above the First aid box.
- Dressing logbook to be available in the first aid box.
- If more than 5 employees are present, there must be a first aid box available.
- Register to be checked by a Competent person.

If required by the Client, the Contractor shall have a stretcher on site to be used in case of a serious incident.

2.20 Accident / Incident Reporting and Investigation

The Contractor shall, in addition to the prescribed requirements of the Occupational Health and Safety Act and General Safety Regulations, investigate, record, and report all Section 24 reportable incidents to the Client within 24 hours of the incident occurring. Incident investigations shall be conducted by the



Contractor's appointed Accident Investigator – this Investigator must be a competent person or persons who have sufficient knowledge to carry out an investigation.

In the event of a fatality or a permanent disabling injury the Contractor must submit proof of reporting of incident to Department of Labour as well as proof of preventative measures to the Client. The Client reserves the right to conduct investigations into any incidents that they deem fit and the Contractor is required to provide full co-operation in this regard.

2.21 Hazards and Potential Situations

The Contractor shall immediately notify other Contractors of any hazardous or potentially hazardous situations, which may arise during performance of the activities.

2.22 Occupational Health and Safety Signage

The Contractor shall ascertain and provide adequate on site health and safety signage. This signage shall include, but shall not be limited to, Hard Hat / Helmet Area; Safety Shoes to be worn on site; Dust Masks to be worn in areas where there might be exposure to excessive dust; Ear Plugs / Muffs to be worn where there might be noise exposure over 85 dB; Gloves; Safety Goggles; Safety Harness, Workers in Excavation, traffic management, etc. The Contractor shall be responsible to maintain the quality and replacement of signage. Signage must comply with the requirements of SABS.

2.23 Management of Contractors by Principal Contractor

The Principal Contractor shall ensure that all contractors under his control are complying with the respective Health and Safety Plans, as well as Health and Safety Legislation.

2.24 Stacking of Materials

In addition to the provisions for the stacking of articles in the General Safety Regulations, 2003, the contractor must ensure that –

- a competent person is appointed in writing with the duty of supervising all stacking and storage on a construction site;
- adequate storage areas are provided;
- there are demarcated storage areas; and
- storage areas are kept neat and under control.

2.25 Housekeeping and General Safeguarding on Construction Sites

A contractor must, in addition to compliance with the Environmental Regulations for Workplaces, 1987, promulgated by Government Notice No. R. 2281 of 16 October 1987, ensure that suitable housekeeping is continuously implemented on each construction site, including-

- the proper storage of materials and equipment;
- the removal of scrap, waste and debris at appropriate intervals;
- ensuring that materials required for use, are not placed on the site so as to obstruct means of access to and egress from workplaces and passageways;
- ensuring that materials which are no longer required for use, do not accumulate on and are removed from the site at appropriate intervals;
- ensuring that waste and debris are not disposed of from a high place with a chute, unless the chute complies with the requirements set out in the regulations;
- ensuring that construction sites in built-up areas adjacent to a public way are suitably and sufficiently fenced off and provided with controlled access points to prevent the entry of unauthorized persons; and



- ensuring that a catch platform or net is erected above an entrance or passageway or above a place where persons work or pass under or fencing off the danger area if work is being performed above such entrance, passageway, or place so as to ensure that all persons are kept safe in the case of danger or possibility of persons being struck by falling objects.

2.26 Construction Vehicles and Mobile Plant

A contractor must ensure that all construction vehicles and mobile plant-

- are of an acceptable design and construction;
- are maintained in a good working order;
- are used in accordance with their design and the intention for which they were designed, having due regard to safety and health;
- are operated by a person who-
 - has received appropriate training, is certified competent and in possession of proof of competency and is authorised in writing to operate those construction vehicles and mobile plant;
 - has a medical certificate of fitness to operate those construction vehicles and mobile plant, issued by an occupational health practitioner in the form of Annexure 3.
- have safe and suitable means of access and egress;
- are properly organized and controlled in any work situation by providing adequate signalling or other control arrangements to guard against the dangers relating to the movement of vehicles and plant, in order to ensure their continued safe operation;
- are prevented from falling into excavations, water, or any other area lower than the working surface by installing adequate edge protection, which may include guard-rails and crash barriers;
- are fitted with structures designed to protect the operator from falling material or from being crushed should the vehicle or mobile plant overturn;
- are equipped with an acoustic warning device which can be activated by the operator;
- are equipped with an automatic acoustic reversing alarm;
- are equipped with fire extinguishers (2.5 – 4.5 kg); and
- are inspected by the authorised operator or driver on a daily basis using a relevant checklist prior to use and that the findings of such inspection are recorded in a register kept in the construction vehicle or mobile plant.

A contractor must ensure that-

- no person rides or is required or permitted to ride on a construction vehicle or mobile plant otherwise than in a safe place provided thereon for that purpose;
- every construction site is organized in such a way that, as far as is reasonably practicable, pedestrians and vehicles can move safely and without risks to health;
- the traffic routes are suitable for the persons, construction vehicles or mobile plant using them, are sufficient in number, in suitable positions and of sufficient size;
- every traffic route is, where necessary, indicated by suitable signs;
- all construction vehicles and mobile plant left unattended at night, adjacent to a public road in normal use or adjacent to construction areas where work is in progress, have appropriate lights or reflectors, or barricades equipped with appropriate lights or reflectors, in order to identify the location of the vehicles or plant;
- all construction vehicles or mobile plant when not in use, have buckets, booms, or similar appendages, fully lowered, or blocked, controls in a neutral position, motors stopped, wheels chocked, brakes set, and ignition secured;
- whenever visibility conditions warrant additional lighting, all mobile plant are equipped with at least two headlights and two taillights when in operation;
- tools, material, and equipment are secured and separated by means of a physical barrier in order to prevent movement when transported in the same compartment with employees;
- vehicles used to transport employees have seats firmly secured and adequate for the number of employees to be carried; and
- all construction vehicles or mobile plant travelling, working, or operating on public roads comply with the requirements of the National Road Traffic Act, 1996.



- all plant and vehicles are to be fitted with amber rotating beacons and reverse alarms.
- ALL construction site vehicles must be inspected daily especially if it has dangerous "items" (fuel, explosives, etc.) on vehicle, completed inspection registers must also be available for inspection.
- the vehicles must resemble the original manufacturer's product. Levers, alarms, and amber lights to be fitted to construction vehicle for notification of vehicle.
- fire extinguishers, signage, and licence disc to be correctly mounted and displayed.
- when the vehicle is stationary no key to be left in or on vehicle or plant.
- Drip tray must be present when stationary.

2.27 Electrical Installations and Machinery on Construction Sites

A contractor must, in addition to compliance with the Electrical Installation Regulations and the Electrical Machinery Regulations, ensure that –

- before construction commences and during the progress thereof, adequate steps are taken to ascertain the presence of and guard against danger to workers from any electrical cable or apparatus which is under, over or on the site;
- all parts of electrical installations and machinery are of adequate strength to withstand the working conditions on construction sites;
- the control of all temporary electrical installations on the construction site is designated to a competent person who has been appointed in writing for that purpose;
- all temporary electrical installations used by the contractor are inspected at least once a week by a competent person and the inspection findings are recorded in a register kept on the construction site; and
- all electrical machinery is inspected by the authorized operator or user on a daily basis using a relevant checklist prior to use and the inspection findings are recorded in a register kept on the construction site.

2.28 Use and Temporary Storage of Flammable Liquids on Construction Sites

A contractor must, in addition to compliance with the provisions for the use and storage of flammable liquids in the General Safety Regulations, 2003, ensure that –

- where flammable liquids are being used, applied, or stored at the workplace concerned, it is done in a manner that does not cause a fire or explosion hazard, and that the workplace is effectively ventilated;
- no person smokes in any place in which flammable liquid is used or stored, and the contractor must affix a suitable and conspicuous notice at all entrances to any such areas prohibiting such smoking;
- an adequate amount of efficient fire-fighting equipment is installed in suitable locations around the flammable liquids store with the recognized symbolic signs;
- only the quantity of flammable liquid needed for work on one day is taken out of the store for use;
- all containers holding flammable liquids are kept tightly closed when not in actual use and, after their contents have been used up, are removed from the construction site and safely disposed of;
- where flammable liquids are decanted, the metal containers are bonded and earthed; and
- no flammable material, including cotton waste, paper, cleaning rags or similar material is stored together with flammable liquids
- proper containers are to be used for fuel. Marked and labelled as per the content.
- diesel on site; more than 800 litres must have a certificate, fire safe certificate. Locked in a ventilated, secure area with a drip tray and have a designated, responsible person to use it.

2.29 Water environments

A contractor must ensure that where construction work is done over or in close proximity to water, provision is made for –

- preventing persons from falling into water; and



- the rescuing of persons in danger of drowning.

A contractor must ensure that where a person is exposed to the risk of drowning by falling into the water, the person is provided with and wears a lifejacket.

2.30 Fire precautions on Construction Sites

A contractor must, in addition to compliance with the Environmental Regulations for Workplaces, 1987, ensure that –

- all appropriate measures are taken to avoid the risk of fire;
- sufficient and suitable storage is provided for flammable liquids, solids, and gases;
- smoking is prohibited and notices in this regard are prominently displayed in all places containing readily combustible or flammable materials;
- in confined spaces and other places in which flammable gases, vapours or dust can cause danger-
 - only suitably protected electrical installations and equipment, including portable lights, are used;
 - there are no flames or similar means of ignition;
 - there are conspicuous notices prohibiting smoking;
 - oily rags, waste, and other substances liable to ignite are without delay removed to a safe place; and
 - adequate ventilation is provided;
- combustible materials do not accumulate on the construction site;
- welding, flame cutting, and other hot work are done only after appropriate precautions have been taken to reduce the risk of fire;
- suitable and sufficient fire-extinguishing equipment is placed at strategic locations or as may be recommended by the Fire Chief or local authority concerned, and that such equipment is maintained in a good working order;
- the fire equipment contemplated above is inspected by a competent person, who has been appointed in writing for that purpose, in the manner indicated by the manufacturer thereof;
- a sufficient number of workers are trained in the use of fire-extinguishing equipment;
- where appropriate, suitable visual signs are provided to clearly indicate the escape routes in the case of a fire;
- the means of escape is kept clear at all times;
- there is an effective evacuation plan providing for all -
 - persons to be evacuated speedily without panic;
 - persons to be accounted for; and
 - plant and processes to be shut down; and
- a siren is installed and sounded in the event of a fire.

2.31 Construction Employees' Facilities

A contractor must, in terms of the Construction Regulations 2014, provide:

- Shower facilities after consultation with the employees or employees' representatives, or at least one shower facility for every 15 persons;
- at least one sanitary facility for each sex and for every 30 workers;
- Toilets to be within walking distance
- Hygiene registers to be completed
- Proof of safe disposal of effluent waste disposal certificates to be obtained
- changing facilities for each sex;
- and sheltered/shaded eating area.
- Protection from the Elements and raised off the ground.
- Every employer shall provide sanitary facilities at the workplace in accordance with the provisions of Parts F, P and Q of the National Building Regulations.
- Sufficient clean water for all employees. 500ml to each employee every hour.



A contractor must provide reasonable and suitable living accommodation for the workers at construction sites who are far removed from their homes and where adequate transportation between the site and their homes, or other suitable living accommodation, is not available.

2.32 Fall protection

Not thought to be applicable to this project. Note steep slopes though.

2.33 Temporary works

A contractor must appoint a temporary works designer in writing to design, inspect and approve the erected temporary works on site before use.

A contractor must ensure that all temporary works operations are carried out under the supervision of a competent person who has been appointed in writing for that purpose.

A contractor must ensure that-

- all temporary works structures are adequately erected, supported, braced and maintained by a competent person so that they are capable of supporting all anticipated vertical and lateral loads that may be applied to them, and that no loads are imposed onto the structure that the structure is not designed to withstand;
- all temporary works structures are done with close reference to the structural design drawings, and where any uncertainty exists the structural designer should be consulted;
- detailed activity specific drawings pertaining to the design of temporary works structures are kept on the site and are available on request to an inspector, other contractors, the Client, the Client's Safety Agent, or any employee;
- all persons required to erect, move, or dismantle temporary works structures are provided with adequate training and instruction to perform those operations safely;
- all equipment used in temporary works structure are carefully examined and checked for suitability by a competent person, before being used;
- all temporary works structures are inspected by a competent person immediately before, during and after the placement of concrete, after inclement weather or any other imposed load and at least on a daily basis until the temporary works structure has been removed and the results have been recorded in a register and made available on site;
- no person may cast concrete, until authorization in writing has been given by the competent person contemplated above;
- if, after erection, any temporary works structure is found to be damaged or weakened to such a degree that its integrity is affected, it is safely removed or reinforced immediately;
- adequate precautionary measures are taken in order to-
 - secure any deck panels against displacement; and
 - prevent any person from slipping on temporary works due to the application of release agents;
- as far as is reasonably practicable, the health of any person is not affected through the use of solvents or oils or any other similar substances;
- upon casting concrete, the temporary works structure is left in place until the concrete has acquired sufficient strength to safely support its own weight and any imposed load, and is not removed until authorization in writing has been given by the competent person
- the foundation conditions are suitable to withstand the loads caused by the temporary works structure and any imposed load in accordance with the temporary works design.
- provision is made for safe access by means of secured ladders or staircases for all work to be carried out above the foundation bearing level;
- a temporary works drawing, or any other relevant document includes construction sequences and methods statements;
- the temporary works designer has been issued with the latest revision of any relevant structural design drawing;
- a temporary works design and drawing is used only for its intended purpose and for a specific portion of a construction site; and



- the temporary works drawings are approved by the temporary works designer before the erection of any temporary works.

No contractor may use a temporary works design and drawing for any work other than its intended purpose.

2.34 Excavation

A contractor must-

- ensure that all excavation work is carried out under the supervision of a competent person who has been appointed in writing for that purpose; and
- evaluate, as far as is reasonably practicable, the stability of the ground before excavation work begins.

A contractor who performs excavation work-

- must take reasonable and sufficient steps in order to prevent, as far as is reasonably practicable, any person from being buried or trapped by a fall or dislodgement of material in an excavation;
- may not require or permit any person to work in an excavation which has not been adequately shored or braced: Provided that shoring and bracing may not be necessary where-
 - the sides of the excavation are sloped to at least the maximum angle of repose measured relative to the horizontal plane; or
 - such an excavation is in stable material: Provided that-
 - permission has been given in writing by the appointed competent person contemplated above upon evaluation by him or her of the site conditions; and
 - where any uncertainty pertaining to the stability of the soil still exists, the decision from a professional engineer or a professional technologist competent in excavations is decisive and such a decision must be noted in writing and signed by both the competent person and the professional engineer or technologist, as the case may be;
- must take steps to ensure that the shoring or bracing contemplated above is designed and constructed in a manner that renders it strong enough to support the sides of the excavation in question;
- must ensure that no load, material, plant or equipment is placed or moved near the edge of any excavation where it may cause its collapse and consequently endangers the safety of any person, unless precautions such as the provision of sufficient and suitable shoring or bracing are taken to prevent the sides from collapsing;
- must ensure that where the stability of an adjoining building, structure or road is likely to be affected by the making of an excavation, steps are taken to ensure the stability of such building, structure or road and the safety of persons;
- must cause convenient and safe means of access to be provided to every excavation in which persons are required to work, and such access may not be further than six metres from the point where any worker within the excavation is working;
- must ascertain, as far as is reasonably practicable, the location and nature of electricity, water, gas or other similar services which may in any way be affected by the work to be performed, and must before the commencement of excavation work that may affect any such service, take the steps that are necessary to render the circumstances safe for all persons involved;
- must ensure that every excavation, including all bracing and shoring, is inspected-
 - daily, prior to the commencement of each shift;
 - after every blasting operation;
 - after an unexpected fall of ground;
 - after damage to supports; and
 - after rain,

by the competent person, in order to ensure the safety of the excavation and of persons, and those results must be recorded in a register kept on site and made available on request to an inspector, the Client, the Client's Safety Agent, any other contractor or any employee;



- must cause every excavation which is accessible to the public or which is adjacent to public roads or thoroughfares, or whereby the safety of persons may be endangered, to be –
 - adequately protected by a barrier or fence of at least one metre in height and as close to the excavation as is practicable; and
 - provided with warning illuminants or any other clearly visible boundary indicators at night or when visibility is poor, or have resort to any other suitable and sufficient precautionary measure where this is not practicable;
- must ensure that all precautionary measures stipulated for confined spaces as determined in the General Safety Regulations, 2003, are complied with by any person entering any excavation;
- must, where the excavation work involves the use of explosives, appoint a competent person in the use of explosives for excavation, and must ensure that a method statement is developed by that person in accordance with the applicable explosive's legislation; and
- must cause warning signs to be positioned next to an excavation within which or where persons are working or carrying out inspections or tests.

2.35 Demolition Work

Not thought to be applicable to this project.

2.36 Tunnelling

Not thought to be applicable to this project.

2.37 Scaffolding

Not thought to be applicable to this project.

2.38 Bulk mixing plant

Not thought to be applicable to this project, contractor to advise safety agent if this is not correct.

2.39 Rope Access Work

Not thought to be applicable to this project.

2.40 Hazardous Chemical Substances (HCS)

In addition to the requirements in the HCS Regulations, the principal contractor must provide proof in the Health and Safety Plan that:

- Material Safety Data Sheets (MSDS's) of the relevant materials / hazardous chemical substances are available prior to use by the contractor. All MSDS's shall be available for inspection by the agent at all times.
- Risk assessments are done at least once every 6 months.
- Exposure monitoring is done according to OESSM and by an Approved Inspection Authority (AIA) and that the medical surveillance programme is based on the outcomes of the exposure monitoring.
- How the relevant HCS's are being/going to be controlled by referring to:
 - Limiting the amount of HCS
 - Limiting the number of employees
 - Limiting the period of exposure
 - Substituting the HCS
 - Using engineering controls
 - Using appropriate written work procedures
- The correct PPE is being used.
- HCS are stored and transported according to SABS 072 and 0228.
- Training with regards to these regulations was given.



The Health and Safety plan should make reference to the disposal of hazardous waste on classified sites and the location thereof (where applicable).

The First Aider must be made aware of the MSDS and trained in how to treat HCS incidents appropriately.

2.41 Noise Induced Hearing Loss

Where noise is identified as a hazard the requirements of the NIHL regulations must be complied with and the following must be included / referred to in the Health and Safety Plan:

- Proof of training with regards to these regulations.
- Risk assessment done within 1 month of commencement of work.
- That monitoring carried out by an AIA and done according to SABS 083.
- Medical surveillance programme established and maintained for the necessary employees.
- Control of noise by referring to:
 - Engineering methods considered
 - Admin control (number of employees exposed) considered
 - Personal protective equipment considered/decided on
- Describe how records are going to be kept for 40 years.

2.42 Explosives and Blasting

Not thought to be applicable to this project.

2.43 Personal Protective Equipment (PPE)

The Contractor shall carry out PPE or clothing needs analysis in accordance with his risk assessment, to determine the necessary PPE or clothing to be used during construction. The Contractor shall make provision to keep adequate quantities of appropriate, SABS approved PPE or clothing on site at all times.

The Contractor must ensure that personnel are trained in the correct use of PPE to be used.

The Contractor must ensure that lost, stolen, worn out or damaged PPE is replaced as required and receipt signed for by employees on site.

2.44 Asbestos

The Contractor shall ensure that all asbestos work is done only by registered "Asbestos Contractor" as prescribed by the Asbestos Abatement Regulations, 2020. The Contractor shall submit an Asbestos Certificate from Department of Labour which refer to the prescribed requirements. The Contractor shall notify The Client if there are any asbestos materials to be used on site.

"asbestos clearance certificate" means a written document verifying that the regulated asbestos fibre concentration in the air meets the clearance indicator;

"type 1 asbestos work" means:

(a) painting of asbestos cement products in a manner that does not require surface preparation and does not cause the release of asbestos fibres; or

(b) the removal of less than 10 square metres of asbestos cement products or equivalent gutters and piping or asbestos insulating board, where removal work may not be repeated on the same site within a



period of six months; and does not require registration as a registered asbestos contractor with the chief inspector;

"type 2 asbestos work" means:

- (a) the repair or encapsulation of asbestos cement products in a manner that does not require surface preparation; or
- (b) the removal of asbestos cement products or asbestos insulating board; and, requires registration as a type 2 registered asbestos contractor with the chief inspector;

"type 3 asbestos work" means:

- (a) the removal, repair or encapsulation of any asbestos and asbestos-containing material; and, requires registration as a type 3 registered asbestos contractor with the chief inspector;

Besides the requirements listed above, should asbestos be identified as a hazard at the workplace, the contractor must, as per AAR 2020, include the following in the health and safety plan/file and must be implemented on site:

- An asbestos risk assessment must be carried out, as far as is reasonably practicable, immediately by a competent person and thereafter at intervals not exceeding 24 months.
- If asbestos-containing materials are identified a written asbestos management plan for the workplace must be prepared by a competent person.
- Train Employees, visitors and persons who may have incidental asbestos exposure to asbestos.
- The Chief Director: Provincial Operations must be notified as per the Annexure 2 when asbestos work will be done, at least seven days prior to commencement of work.
- The contractor may only undertake the type of asbestos work for which they are registered by the chief inspector.
- Must appoint an occupational health and safety representative as contemplated in section 17 of the Act.
- Submit the approved plan of work to the Chief Director: Provincial Operations at least seven days prior to commencement of asbestos work.
- Appoint an asbestos removal supervisor for each asbestos work site.
- Adhere to the repair or removal methodology and associated control measures provided in the plan of work approved for that specific asbestos work.
- Ensure that the employee medical and training records are available on site for inspection and validation.
- Keep employee information for a minimum period of 50 years.
- For type 2 and type 3 asbestos work, ensure that air monitoring is in place.
- All asbestos contractor employees must be put under medical surveillance.
- Close off all asbestos containing or affected areas.
- The contractor must provide the required PPE, washing facilities and decontamination facilities as per the type of asbestos work.
- A document must be obtained from the asbestos disposal site for all asbestos waste removed from the workplace; all asbestos waste is disposed of only on sites specifically designated for this purpose
- When all asbestos is removed an inspection must be done by and approved inspection authority and an asbestos clearance certificate issued.
- Comply with the Prohibitions in regulation 24.

2.45 Pressure Vessels (Including Gas Bottles)

The Contractor shall comply with Pressure Vessel Regulations, including:

- Providing competency and awareness training to the operators;
- Providing PPE or clothing;
- Providing and maintain appropriate signage in areas where pressure vessels are used, as applicable;
- Inspect equipment regularly and keep records of inspections;
- Providing appropriate firefighting equipment (Fire Extinguishers).
- Under pressure vessels to have the following in place;



- Service date
- Seals on valves with no leaks and not broken
- flash arrestors
- Should be stored and chained together
- Oxygen / Acetylene bottles to have clips
- Signage to be visible
- Gauges in working condition and be visible
- Permits for use
- Pressure equip Regs 6. (1) The user shall ensure that the pressure equipment is operated and maintained within its design and operating parameters.

2.46 Fire Extinguishers and Fire Fighting Equipment

The Contractor shall provide adequate, regularly serviced fire extinguishers located at strategic points on site. The Contractor shall keep spare serviced portable fire extinguishers. The Contractor shall have adequate persons trained or competent to use the Fire Fighting Equipment.

Safety signage shall be posted up in all areas where fire extinguishers are located.

2.47 Lifting Machinery and Tackle

The Contractor shall ensure that lifting machinery and tackle is inspected before use and on a monthly basis. The Contractor shall have lifting machinery and tackle inspector who will inspect the equipment at intervals required by the Driven Machinery Regulations, taking into account that:

- All lifting machinery and tackle have a safe working load clearly indicated
- Regular inspection and servicing is carried out
- Records are kept of inspections and of service certificates
- Thorough examinations are carried out by competent personnel at the frequencies required by legislation
- There is proper supervision in terms of guiding the loads which includes a trained banks man to direct and check lifting tackle if it is safe for use
- Forklift to be inspected every year and lift plan every 2 years
- Load test certificate to be no older than 6 months
- Sufficient props to be used and max weight to be displayed
- Slings to be checked with regard to integrity, chains, serial numbers, checked for tears, cuts links and all other materials
- Hooks to be oiled, not in a fixed position and closed to prevent materials from slipping/falling off
- Lifting equipment must be used for the scope of work carried out

2.48 Ladders and Ladder work

The Contractor shall ensure that all ladders are numbered and inspected regularly keeping record of inspections. It should be noted that Aluminium ladders are preferred to wooden ladders.

2.49 General Machinery

The Contractor shall comply with the Driven Machinery Regulations, which include inspecting machinery regularly, appointing a competent person to inspect and ensure maintenance, issuing PPE or clothing and training those that use machinery and enforce compliance.

2.50 Portable Electrical Tools

The Contractor shall ensure that use and storage of all explosive actuating fastening devices and portable electrical tools are in compliance with relevant legislation.



The Contractor shall consider that:

- A competent person undertakes routine inspections;
- Only authorised persons use the tools;
- There are safe working procedures applied;
- Awareness training is carried out and compliance is enforced at all times; and
- PPE and clothing is provided and maintained.

2.51 High Voltage Electrical Equipment

The Contractor shall ensure that, where the work is under, on or near high-voltage electrical equipment the Electrical Installation Regulations, together with safety instructions (Regulations of the Owner of the Equipment) are complied with. Such equipment includes:

- Eskom and the Local Authority equipment
- The Contractor's own power supply; and
- Electrical equipment being installed but not yet taken over from a Contractor by The Client.

2.52 Public Health and Safety

The Contractor shall ensure that each person working on or visiting a site, and the surrounding community, shall be made aware of the dangers likely to arise from onsite activities and the precautions to be observed to avoid or minimize those dangers. Appropriate health and safety signage shall be posted at all times.

2.53 Night Work

The Contractor shall not undertake any night work without prior arrangement and a written permit from the Client. The Contractor shall ensure that adequate lighting is provided for all night work and failure to do so shall result in work being stopped.

2.54 Environmental Conditions and Flora and Fauna

The Contractor must be mindful of adverse weather conditions upon the health and safety of the workforce. This includes inclement weather, strong wind, heat stress, extreme cold, etc. The Contractor's risk assessment process must take into account the risks associated with such weather conditions. The same is true when working in an environment where there is a risk to employees' health and safety from presence of poisonous flora, or wildlife (including bees, snakes, etc). The Contractor's risk assessment process must take these risks into account.

2.55 Occupational Health

Exposure of workers to occupational health hazards and risks are quite common in any work environment, especially in construction. Occupational health hazards and risks exposure is a major problem and all Contractors are to ensure that proper health and hygiene measures are put in place to prevent exposure to these hazards and risks.

The occupational hazards and risks may enter the body in three ways:

- Inhalation through breathing e.g. cement dust;
- Ingestion through swallowing maybe through food intake;
- Absorption through the skin (pores) e.g. painting or use of thinners.

The contractor is required to ensure that all his personnel are medically fit prior to being allowed onto the work site.



All Contractors should ensure that Occupational Hygiene surveys are conducted as per the Occupational Health and Safety Act to ensure employees are not exposed to hazards. Risk Assessments should identify areas where surveys are to be conducted.

2.56 Suspended Platforms

Not thought to be applicable to this project.

2.57 Material Hoists

Not thought to be applicable to this project.

2.58 Explosive Actuated Fastening Device

Not thought to be applicable to this project.

2.59 Confined Spaces

Confined space work must be closely monitored by a competent person appointed by the contractor, to include, but not restricted to, ensuring that the confined space is sufficiently ventilated prior to entry. Oxygen levels to be tested in confined space to ensure that it is safe for entry. Permit system to be in place to declare confined space safe for entry prior to entry. PPE must be worn (such as proper masks) if air supply is insufficient or not of sufficient quality.

Sufficient training must take place in use of all confined space monitoring and access equipment prior to any works commencing in such confined space. It is strongly recommended that a tripod and winch system be in place to afford easy access and egress and for emergency evacuation from the confined space (manholes and chambers). Please also refer to GSR5 on safety requirements for Work in Confined Spaces.

General safety Regulations 5.

(1) An employer or a user of machinery shall take steps to ensure that a confined space is entered by an employee or other person only after the air therein has been tested and evaluated by a person who is competent to pronounce on the safety thereof, and who has certified in writing that the confined space is safe and will remain safe while any person is in the confined space, taking into account the nature and duration of the work to be performed therein.

(2) Where the provisions of sub regulation (1) cannot be complied with the employer or user of machinery, as the case may be, shall take steps to ensure that any confined space in which there exists or is likely to exist a hazardous gas, vapour, dust or fumes, or which has or is likely to have, an oxygen content of less than 20 per cent by volume, is entered by an employee or other person only when-- (a) subject to the provisions of sub regulation (3), the confined space is purged and ventilated to provide a safe atmosphere therein and measures necessary to maintain a safe atmosphere therein have been taken; and (b) the confined space has been isolated from all pipes, ducts and other communicating openings by means of effective blanking other than the shutting or locking of a valve or a cock, or, if this is not practicable, only when all valves and cocks which are a potential source of danger have been locked and securely fastened by means of chains and padlocks.

(3) Where the provisions of sub regulation (2)(a) cannot be complied with, the employer or user of machinery shall take steps to ensure that the confined space in question is entered only when the employee or person entering is using breathing apparatus of a type approved by the chief inspector and, further, that—

(a) the provisions of sub regulation (2) (b) are complied with;

(b) any employee or person entering the confined space is using a safety harness or other similar equipment, to which a rope is securely attached which reaches beyond the access to the confined space, and the free end of which is attended to by a person referred to in paragraph (c);



(c) at least one other person trained in resuscitation is and remains in attendance immediately outside the entrance of the confined space in order to assist or remove any or persons from the confined space, if necessary; and

(d) effective apparatus for breathing and resuscitation of a type approved by the chief inspector is available immediately outside the confined space.

(4) An employer or user of machinery shall take steps to ensure that all persons vacate a confined space on completion of any work therein.

(5) Where the hazardous gas, vapour, dust or fumes contemplated in sub regulation (2) are of an explosive or flammable nature, an employer or user of machinery shall further take steps to ensure that such a confined space is entered only if –

(a) the concentration of the gas, vapour, dust or fumes does not exceed 25 per cent of the lower explosive limit of the gas, vapour, dust or fumes concerned where the work to be performed is of such a nature that it does not create a source of ignition; or

(b) such concentration does not exceed 10 per cent of the lower explosive limit of the gas, vapour, dust or fumes where other work is performed.

2.60 Alcohol and drugs (GSR 2)

1. A 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 site.

2. No employee shall be under the influence of or have in his or her possession or partake of or offer any other person intoxicating liquor or drugs.

3. An employer or a user, as the case may be, shall, in the case where a person is taking medicines, only allow such person to perform duties at the site if the side effects of such medicine do not constitute a threat to the health or safety of the person concerned or other persons at such site.

2.61 General Practices when Working at Heights

- No Homemade structures or ladders will be permitted on the project.
- Trestle tables are not to be fully extended and must be fully boarded, no drums to be used.
- Surroundings to be clear of rubble.
- Fall protection, fall prevention, and fall rescue plans to be in place and communicated to site employees.
- Ladders to be structurally sound and not broken and in accordance to GSR 13A.
- Only competent persons may be allowed to work at heights
- Correct personal protective equipment to be used (safety harness and lanyard) and edge protection / life lines to be used.
- Anchor points to be in place and determined by an engineer. Anchor points must be pull tested prior to use.
- GSR (6) 6. No employer shall require or permit any person to work in an elevated position and no person shall work in an elevated position, unless such work is performed safely from a ladder or scaffolding, or from a position where such person has been made as safe as if they were working from scaffolding.
- Construction regulation 10 of 2014 to be implemented when working at heights and to prevent any person from falling from heights.
- Employees required to perform work at heights or from fall risk position must be medically fit to perform such work, such employee's medicals must specify "Fall Risk" or "Working at heights" in the exposure section of the annexure 3 template.



2.62 Traffic Management

All traffic signs must be displayed as per the traffic management plan.

Size of signs used must be as per the traffic management drawings and all signs to be visible and in good condition.

- Traffic accommodation Plan issued must be approved by the professional team.
- Plans for signage deployment must be in order and must be placed correctly.
- Traffic accommodation plan must be submitted and must be suitable for the tasks being performed.
- Traffic plan must be implemented and controlled by the sites Responsible Person and flag persons.
- As applicable, road marking buggies/vehicles must be protected by escort vehicles front and rear.

2.63 Ventilation and Lighting in the Work Place

Every employer shall cause every workplace in his undertaking to be lighted in accordance with the illuminance values specified in the Schedule to the General Safety Regulations:

Provided that where specialised lighting is necessary for the performance of any particular type of work, irrespective of whether that type of work is listed in the Schedule or not, the employer of those employees who perform such work shall ensure that such specialised lighting is available to and is used by such employees.

The Contractor must ensure that:

- the average illuminance at any floor level in a workplace within five meters of a task is not less than one fifth of the average illuminance on that task;
- glare in any workplace is reduced to a level that does not impair vision;
- lighting on rotating machinery in such that the hazard of stroboscopic effects is eliminated; and
- luminaires and lamps are kept clean and, when defective, are replaced or repaired forthwith.

With a view to the emergency evacuation of indoor workplaces without natural lighting or in which persons habitually work at night, every employer shall, in such workplaces, provide emergency sources of lighting which are such that, when activated, an illuminance of not less than 0.3 lux is obtained at floor level to enable employees to evacuate such workplaces: Provided that where it is necessary to stop machinery or shut down plant or processes before evacuating the workplace, or where dangerous materials are present or dangerous processes are carried out, the illuminance shall be not less than 20 lux.

The contractor must ensure that the emergency sources of lighting prescribed above:

- are capable of being activated within 15 seconds of the failure of the lighting prescribed by subregulation (1);
- will last long enough to ensure the safe evacuation of all indoor workplaces;
- are kept in good working order and tested for efficient operation at intervals of not more than three months; and
- where directional luminaires are installed, these are mounted at a height of not less than two meters above floor level and are not aimed between 10° above and 45° below the horizontal line on which they are installed.

The contractor must ensure that all rooms, stairways, passageways, gangways, basements, and other places where danger may exist through lack of natural light, to be lighted such that it will be safe.

The contractor must ensure that every workplace in his undertaking is ventilated either by natural or mechanical means in such a way that –



- the air breathed by employees does not endanger their safety;
- the time-weighted average concentration of carbon dioxide therein, taken over an eight-hour period, does not exceed one half per cent by volume of air;
- the carbon dioxide content thereof does not at any time exceed three per cent by volume of air;
- the prescribed exposure limits for airborne substances therein are not exceeded; and
- the concentration therein of any explosive or flammable gas, vapour or dust does not exceed the lower explosive limit of that gas, vapour, or dust.

2.64 Nuclear Density Gauge (Troxler)

The use of a Troxler on site must be in line with the SANS 3001 of March 2014. The SANS consists of 5 sections

The in-situ density of road construction materials is only determined in civil engineering using indirect methods such as the nuclear density gauge and sand replacement methods.

This method forms part of a set of methods used to operate nuclear gauges, and includes the following:

- a) administration, handling, and maintenance (see SANS 3001-NG1);
- b) validation of standard calibration blocks (see SANS 3001-NG2);
- c) calibration of a nuclear gauge (see SANS 3001-NG3);
- d) verification of a nuclear gauge (see SANS 3001-NG4);
- e) in situ density determination using a nuclear gauge (see SANS 3001-NG5)

When used Troxlers must be:

- Stored in a dedicated, lockable area and must have a warning signage displayed.
- Must only be transported in a dedicated vehicle with the required signage displayed and by an authorised employee that has been appointed in writing.
- Must have a Troxler Calibration Certificate in place.
- Must have a Troxler Technician Appointment on file and signed and proof of competency within the safety file.

2.65 Ergonomics Regulation of 2019

"competent person" in relation to ergonomics, means a person who– (a) has in respect of the work or task to be performed the required knowledge, training and experience in ergonomics and, where applicable, qualifications specific to ergonomics: provided that where appropriate qualifications and training are registered in terms of the provisions of the National Qualifications Framework Act, 2008 (Act No. 67 of 2008), those qualifications and that training must be regarded as the required qualifications and training; and (b) is familiar with the Act and the applicable regulations made under the Act;

"ergonomic risk" means a characteristic or action in the workplace, workplace conditions, or a combination thereof that may impair overall system performance and human well-being;

"ergonomic risk assessment" means a programme, process, or investigation to identify, analyse, evaluate and prioritise any risk from exposure to ergonomic risks associated with the workplace;

"ergonomics" means the scientific discipline concerned with the fundamental understanding of interactions among humans and other elements of a system, and the profession that applies theory, principles, data and methods to design in order to optimise human well-being and overall system performance;

The ergonomics regulations will apply to any employer or self-employed person who carries out work at the workplace who may expose any person to an ergonomic risk in the work place and any designer, manufacturer, importer or supplier of machinery, plant, or work systems for the work place.



An employer must, before the commencement of any work that may expose employees to ergonomic risks, have an ergonomic risk assessment performed by a competent person.

The ergonomic risk assessment must be done at intervals not exceeding two years and must include the following;

- a complete hazard identification and all persons who may be affected by the ergonomic risk.
- how employees may be affected by the ergonomic risks;
- the analysis and evaluation of the ergonomic risks;
- the prioritisation of ergonomic risks.

An employer must review the relevant ergonomic risk assessment if:

- such assessment is no longer valid;
- control measures are no longer effective;
- technological or scientific advances allow for more effective control methods;
- there has been a change in –
 - the work methods;
 - the type of work carried out; or
 - the type of equipment used to control the exposure; and
 - an incident occurs or medical surveillance reveals an adverse health effect, where ergonomic risks are identified as a contributing factor.

An employer must ensure that an employee is placed under medical surveillance, which is overseen by an occupational medicine practitioner, if–

- the ergonomic risk assessment referred to in regulation 6 indicates the need for the employee to be placed under medical surveillance; or
- an occupational health practitioner recommends that relevant employees must be under Medical surveillance, in which case the employer may call upon an occupational medicine practitioner to ratify the appropriateness of such recommendation.

An employer must ensure that the medical surveillance consists of–

- in the case of a new employee, an initial health examination before the employee commences employment or within 30 days of commencement of such employment;
- a periodic health examination informed by the ergonomic risk assessment, at intervals specified by an occupational medicine practitioner, but not exceeding two years; and
- an exit health examination informed by the ergonomic risk assessment.

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Both the Client and the Contractor have a duty in terms of health and safety legislation to do all that is reasonably practicable to make members of the public and others being affected by the construction processes aware of possible risks and put preventative measures in place to mitigate the risks. The public and/or visitors shall go through a brief health and safety induction detailing hazards and risks they may be exposed to and what measures are in place to control these hazards and risks.



OTHER HEALTH AND SAFETY SPECIFICATION REQUIREMENTS

The contractor must be aware of the following additional requirements:

What	When	Output
Awareness training (Toolbox Talks)	At least weekly and before hazardous work is carried out	Attendance Register
Health and Safety Committee Meetings	Monthly	Minutes signed by the employer (Contractor) covering: a) Health and Safety Representative Checklist b) Safety report from Safety Officer and Safety Agent
Health and Safety Reports	Monthly	Report covering: a) Incidents/Accidents and Investigations b) Non-conformance c) Health and Safety Training d) HIRA Updates e) Internal and External Audits
General Inspections	As per Health and Safety Specification and OHSA	Report on Health and Safety Specification and OHSA compliance: a) Scaffolding b) Lifting Machinery c) Excavation
General Inspections	Monthly	Covering: a) Firefighting Equipment b) Portable Electrical Equipment c) Ladders
Record keeping	Ongoing	Covering: a) General complaints b) Fines c) General incidents d) MSDS e) Surveillance Medicals f) Inspection Register g) Dept of Labour Notices
Permits	Before commencement with certain activities	As stipulated by the Health and Safety Specification and the OHSA / Construction Regulations

Key:

OHSA – Occupational Health and Safety Act, 1993



ANNEXURE A – REQUIREMENTS FOR THE SAFETY PLAN ASSESSMENT

The Contractor must note that the information below is pertinent to the compilation of their safety plan response to this site-specific safety specification and it would be preferred if the Safety Plan is written in the order of the assessment documented below.

No	Item	Notes
1	Project Directory	Please state details of Project Client, Project Manager/Principal Agent, Safety Agent, Consulting Engineer, etc. (Name, address, contact details).
2	Contractors Directory	Please indicate if you will be using Contractors on this project, if yes, include their details, trade, and FEM details.
3	Other Parties Directory	Please indicate contact details for any services applicable (electricity, water, etc.) as well as Department of Labour and Emergency Services.
4	Project Safety Statement	The Project Safety Statement must be included in the Safety Plan.
5	Health and Safety standards for the project (OHS Act, construction regulations, basic conditions of employment, etc.)	Health and Safety standards must be included in the Safety Plan.
6	Project Particulars	Scope of works must be included in the Safety Plan. This is critical.
7	Existing environment – Structures and Surroundings, Services (Electrical, Water, Sewerage, etc.), Traffic Arrangements, Parking, Access to Site, Storage of Plant and Materials	Please include these items in the plan. The items must be Site Specific, the location of services and services that will be affected must be mentioned.
8	Management Structure for safety on the Project	A structured organogram with names of the responsible people must be included.
9	Appointed Persons, Supervision	The required appointments must be identified. A list of the appointed persons must be included in the Safety Plan.
10	Security Procedures	Please indicate if a security company will be appointed and include the contact information in the Safety Plan.
11	Registers list and inspection frequency	A list of the Inspection Registers that will be on file must be included in the Safety Plan.
12	Design Co-ordination	Please indicate your procedure for implementation of design changes by designer on the project, and the procedures for liaison and implementation of temporary works design on the project.
13	Contractor Co-ordination	Mention must be made of how Contractors will be co-ordinated on site to ensure that they work together and not adversely affected health and safety.



No	Item	Notes
14	Housekeeping, stacking and storage	Housekeeping policies and procedures must be included in the Safety Plan.
15	Waste Disposal Arrangements	Waste disposal arrangements procedures must be included in the Safety Plan.
16	Noise and dust control	Please indicate if any noisy operations (more than 85 decibels) will be carried out and what measures will be used to reduce noise exposure to workforce.
17	Training Requirements	Training requirements must be identified and recorded.
18	Plant and Equipment	A list of plant and equipment to be used on site must be included in the Safety Plan.
19	Safety Monitoring Arrangements	The name, contact details and SACPCMP registration status of the Safety Officer must be included in the Safety Plan. State how often the Safety officer will be on site (note safety specification requirement in section 1.7).
20	Information for Contractors	State how information will be given to Contractors on site.
21	Consultation/communication arrangements with Employees	State how information will be given to employees e.g. notice board.
22	Selection of Contractors Procedures	Principal contractor must state what health and safety procedures they will use to assess the competence and resources of their contractors on site.
23	Activities with risk to Health and Safety (Risk Assessment)	A Baseline Risk Assessment must be included in the Safety Plan, it must address the Risks identified in the Safety Specification as well as the risk of any other hazards that the Principal Contractor is aware of that are relevant to the site.
24	Hazardous Substances	Must be listed in the Safety Plan and addressed in the Risk Assessment.
25	First Aid and Medical Procedures	Please indicate name of first aider, position of first aid box, location of nearest medical facility and emergency numbers.
26	Fire and Emergency Procedures	List of emergency telephone numbers must be drawn up and included in the Safety Plan. The position of Fire Extinguishers, Assembly Point location, fire drill frequencies, numbers of fire marshals, etc.
27	Accident and Incident Reporting and investigation	State the Accident and Incident Reporting and investigation procedures of your company.
28	Welfare and Site Facilities	Elaborate on toilets and eating areas, water provision, ablution provision, how will workers be protected during wet weather conditions etc.
29	Site Rules	The Site Rules must be included in the Safety Plan.
30	Personal Protective Equipment	The necessity must be identified by Risk Assessments, the required PPE for site risks and control measures.
31	Health & Safety File arrangements	Please indicate arrangements for the return of the Health and Safety File to the safety agent at the end of the project.



No	Item	Notes
32	Method Statements/Safe System of Works	A list of Method Statements/Safe System of Works must be included in Safety Plan for all High-risk activities.
33	Permits and wayleaves	List of activities that Principal Contractor anticipates will require permits and wayleaves (including those stated in the safety specification) to be included.
34	Fall Prevention and Protection Plan and Fall Rescue Plan	A copy of the Fall Prevention and Protection Plan, fall rescue plan and fall risk assessment must be included in the Safety Plan.
35	Demolition method statement	A copy of the Demolition Method Statement must be included in the Safety Plan.
36	Confined spaces	The Principal Contractors' procedures for managing access, egress and work in confined spaces must be specified in the Safety Plan. Includes permit procedures, air monitoring, PPE, etc.
37	Safety Representatives and Safety Committees	When a project has more than 20 employees a designated employee must be chosen by the labourers to represent them. A safety committee must be established if 2 or more safety representatives are appointed. Please note Safety Specification requirements regarding this section (section 2.12).
38	Have the significant hazards from the safety specification been addressed?	See section 1.9 of the Specifications and ensure practical measures have been detailed in the safety plan.
39	Safety File - Safety Policies in File and Signed by 16(1) CEO.	Safety Policies must be signed and explained to employees.
40	Safety File - A copy of the valid Letter of Good standing from FEM / Workman's Compensation must be on file.	A copy of the valid Letter of Good standing from FEM / Workman's Compensation must be on file.
41	Safety File - Signed copy of the 37.2 Mandatary Agreement	A 37.2 Mandatary Agreement needs to be signed between the Client and the Principal Contractor.
42	Safety File - Appointment letter from Client (as well as 5.1.K)	The Client must appoint the Principal Contractor in writing.
43	Safety File – Notification / Permit	A copy of the Annexure 2 Notification (and proof of submission) to Department of Labour must be available. This can be in the form of a Department stamp, email, or copy of Construction Work Permit.



ANNEXURE B – LEGAL APPOINTMENTS	
The contractor shall make the following appointments, as required:	
Chief Executive Officer (OSH Act 16(1))	
Contract Director/Manager (OSH Act 16(2))	
Construction Manager (CR 8(1))	
Construction Supervisor (CR 8(7))	
Assistant Construction Supervisor (CR 8(8))	
Construction Safety Officer (CR 8(5))	
Traffic Safety Officer	
Safety Representative (where > 20 employees on site)	
Temporary work Designer (CR 12(1))	
Temporary work Supervisor (CR12(2))	
Construction risk assessor (CR 9(1))	
Excavation Supervisor (CR13(1)(a))	
Demolition Supervisor (CR14(1))	
Scaffold Supervisor (CR16(1))	
Suspended Platform Supervisor (CR17(1))	
Material Hoist Inspector (CR19(8)(a))	
Material Hoist Operator (CR19(6))	
Bulk Mixing Plant Supervisor (CR20(1))	
Bulk Mixing Plant Operator (CR20(2))	
Controller of Explosive Actuated Fastening Devices Nails, Cartridges or Studs Issue and Collection (CR21(2)(g)(1))	
Construction Vehicle and Mobile Plant Operator (CR23(1)(d)(i))	
Controller of Temporary Electrical Installations (CR24(c))	
Stacking Supervisor (CR28(a))	
Fire Extinguishing Equipment Inspector (CR29(h))	
Fall Protection Plan Developer (CR 10(1)(a))	
Incident Investigator (OSH Act 9(2))	
Competent Person – Confined Spaces (GAR 5(1))	



ANNEXURE C - BASELINE RISK ASSESSMENT FOR PROJECT

Irrespective of the risk presented on site, it will be ensured that sufficient supervision is in place on site, that personnel are trained in accordance with legislation, including the requirement for site specific inductions on site to inform personnel on site of the risks and hazards applicable to the site. Site supervision is responsible for ensuring that the control measures required below are implemented on site.

	HAZARD	RISK	MINIMUM CONTROL MEASURES
1.	Asbestos Cement Pipes	Release of asbestos fibres	- Ensure safe access and egress is provided - Erect physical barriers to prevent entry by unauthorised persons, as applicable - damp down exposed area to contain fibre release - Personnel involved to wear asbestos respiratory protection - Exclusion zone may be required - Only Department of Labour registered asbestos contractors may work with asbestos, and strictly in accordance with the requirements of the Asbestos Abatement Regulations.
2.	Compacting and Filling	Contact with tipping materials Contact with moving plant Vehicles/personnel falling into excavations Contact with underground services	- Trained banksman to control vehicles movement - Only trained personnel use plant - Personal Protective Equipment to be worn - Personnel to stand clear as materials are being tipped - Use stop blocks and signs to warn vehicles of excavations, where applicable - Stand clear of plant whilst materials are being compacted - Establish position of underground services and protect services from damage
3.	Compactor Operations	Crushing of feet	- Only trained and competent personnel to use the machine - Ensure operative wears steel toe cap shoes or boots at all times
4.	Confined Spaces	Suffocation Fumes	- Ensure that confined space is sufficiently ventilated - Wear personal protective equipment such as proper masks if air supply insufficient or not of sufficient quality - Test oxygen levels in confined space to ensure that is safe for entry - Ensure that emergency procedures in place
5.	Crime and security	Injury to employees during protest action, criminality, intimidation	- Workers to be vigilant for signs of security threats - Contractor must have contingency plan in place for emergency evacuation of site - Emergency numbers for police and security to be on hand - Report incidents of vandalism, damage and intimidation on site to site management immediately
6.	Cutting Off Disc	Noise Cuts from machine Fire (particularly at refuelling) Flying debris Blade shattering Contamination by fume created or exhaust fume	- Use competent personnel. - Hot works control- fire extinguisher, fire watchman. (Permit may be required) - PPE to include gloves, eye protection, hearing protection - Solid working position. - Clear working area - Correct grade of blade must be used. - Good ventilation to be provided (forced if necessary). - Changing of wheels to be by competent persons only - Cut off discs must not be used for grinding (grinding disc thicker) - Bystanders to wear hearing protection, as applicable



	HAZARD	RISK	MINIMUM CONTROL MEASURES
7.	Electric Tools and Electrical Installations	Electric shock Fire	- Electric tools and installations to be in good condition - Inspect electric tools before use - Do not use electric tools in wet/damp conditions - Use personal protective equipment such as insulated gloves - Electrical installations register to be maintained, inspected by competent person
8.	Excavations (Working in and around)	Toxic fumes Collapse of trench walls/trapping Falling into excavation Collapse of adjacent structures	- Deep excavations / monitor air for toxic fumes - Prevent collapse by battering back sides to a safe angle or install temporary support - Protect vehicles from falling into excavations – provide barriers, signage, etc. as necessary - Beware of undermining of other structures (e.g. buildings, scaffolds) - Record excavation inspections by competent person on daily basis - Provide suitable means of access/egress in case of emergency. - Excavations formed by explosives must be accompanied by method statement approved by Client
9.	Fire	Injuries to workers, pedestrians, residents, road users, damage to property through fire	- No littering on site which could become fire hazard, maintain site in clean condition. - No fires to be lit on site. Have a working fire extinguisher at hand at all times. - No smoking or naked flame near flammable substances or in unauthorised areas - Ensure proper storage/use of Petrol/diesel/flammable substances – post warning notices
10.	Flammable Liquids and Gases (Use of)	Fire Explosion	- No littering on site which could become fire hazard, maintain site in clean condition. - Have a working fire extinguisher at hand at all times. - No smoking or naked flame near flammable substances or in unauthorised areas - Ensure proper storage/use of Petrol/diesel/flammable substances – post warning notices - Equipment must be in good condition, maintained - Personnel using substances must be trained in safe use and risks
11.	Hand tools	Injuries caused by use of hand tool Impact with the tool Falls due to access problems Contamination with substance being worked	- Ensure: - Tool is correct for job - Tool is in good order and suitably sharp - Personnel must be competent/instructed in tool usage and tool safely - Lighting is sufficient - Access is safe, working platform is secure, leading edge is guarded - Operative is wearing all necessary PPE
12.	Hazardous Substances	Injuries to workers through use of hazardous substances, e.g. injuries to eyes, skin, etc.	- Use substances in accordance with data sheet, particularly reference protective clothing required (example: gloves, goggles, etc.) - Know what First Aid measures are - Have welfare facilities available for washing of hands, etc.
13.	Hot Works	Burns to eyes or other parts of the body	- Personal Protective Equipment to include eye, skin, and hearing protection - Respirator maybe be required where cutting galvanized steel or anywhere else toxic fumes and gases arise. Dust can also be a problem and forced ventilation may be required.



	HAZARD	RISK	MINIMUM CONTROL MEASURES
14.	Manual Handling of General Items	Muscular skeletal injuries if the load is too heavy or awkward Operative falling/ tripping Contamination from the substance being carried Fall of material being carried	- Personnel should be aware of safe manual handling techniques - Personnel to wear Personal Protective Equipment when carrying items, e.g. safety footwear and gloves. - Ensure good housekeeping against tripping/fall hazards. - Operative to get assistance if load too heavy- team lift if necessary. - Utilise mechanical lifting and carrying aids where possible. - Personnel to ensure access equipment, ladders will take weight of operative and load being carried. - Personnel to ensure item being carried is properly bonded or is not be liable to break apart whilst being manually handled.
15.	Members of Public – Protection of	Injury to member of public and road users from site works – NOTE PRESENCE OF CHILDREN	- Barriers and signage to be in place - Workers must warn away any members of public from the works - Footpaths and bridges which are open to public must be closed off if in area of works or otherwise made safe so that no injury occurs to members of public - Traffic turning into site – traffic management and signage as required. - Signage to be on road at site entrance warning motorists that construction traffic turning into/out of site access. Keep roads free of mud where possible - Refer to plant risk assessment for details on plant safety precautions - NOTE: SIGNAGE TO BE POSTED ON SITE TO WARN OF CONSTRUCTION TRAFFIC MOVEMENTS. SAFE MEANS OF ACCESS FOR BOTH CONSTRUCTION TRAFFIC TO SITE AND PRIVATE HOMEOWNERS MUST BE AGREED.
16.	Noise and Dust	Breathing in dust can cause long term health problems, noise can damage hearing	- Wear respiratory and hearing protection - Dampen down and minimise dust where possible.
17.	Plant or Vehicles and Equipment Operation	Workers injured by passing traffic Road users and pedestrians at risk from plant operation Noise	- Implement traffic protection measures - Trained and competent operators must be used - Check plant and vehicles on daily basis before use and record inspections. Maintain vehicles in safe condition. - Medical certificates of fitness required for construction plant. - Crossing of road by construction vehicles or machines must be limited to the practical minimum - Plant and vehicles must be fitted with amber rotating beacons and reverse alarms. - Wear appropriate protective clothing/equipment, e.g. goggles, gloves, ear defenders, etc. as appropriate.



	HAZARD	RISK	MINIMUM CONTROL MEASURES
18.	Road Working – working in or next to road	Injury to workers caused by passing traffic Injury to road users and pedestrians by works	- Flagmen to be used where interface with construction plant with passers-by or where hazard posed by delivery vehicles turning into/out of site. - Traffic management plan to be approved by Municipality and, if necessary, traffic department - No construction activities to commence until adequate provision made to accommodate traffic in accordance with the South African Traffic Signs Manual. - Use safety signage to warn traffic and pedestrians of construction works - Where existing walk ways/pavements affected by works, must direct pedestrian traffic away to safe walking area. - Wear reflective waistcoats when working on or near the road or road shoulder as well as any other required personal protective clothing. - Crossing of road by personnel must be limited to the practical minimum - Use of fencing or other barriers as appropriate
19.	Live Services	Striking of live services	- Make all necessary enquiries to establish what services are in the area. Consult drawings and advice from service provider (e.g. Municipality or ESKOM) when planning work. - Assume all service to be live (Unless confirmation is received to confirm that services are isolated or otherwise made safe). Do not work near live services without authorisation from site management. - Comply with the requirements of the safe system of work for underground services. - Where available, locate services with a locator - Hand dig around services
20.	Working at Height	Personnel falling from height Falling debris Those beneath being injured	- All access equipment is properly constructed (inspections record must be maintained) - Only trained personnel construct, dismantle or control the access equipment - All access equipment must have full toe boards and guardrails - comply with SANS 10085 on erection, use and dismantling of scaffolding - No access equipment may be loaded above the level of the guardrail - No access equipment to be loaded above its safe working load - Where work involves leaning out on an open leading edge, then all personnel are to be fitted with full body harness. The harness must be connected at all times - All fall arrest equipment to be correctly maintained - Ensure if ladders are being used for access, they are either footed or tied. Also, the ladder must be set at the correct level of 1 in 4 or approximately 75°
21.	Work over or next to Water	Drowning	- Evaluate depth of water, height above water that work takes place, whether workers can swim or not and then determine safety precautions required: these may include such measures such as barriers, signage, life belts, safety harnesses, etc. - When working on river/harbour/dam edge - erect life saving devices and barriers to protect workers and vehicles (stop blocks may also be required). Only trained and competent persons to be used.
22.	Working with Effluent	Contact with effluent causing sickness or disease	- ensure good hygiene facilities - personnel to be competent in work activity - personnel to wear appropriate personal protective equipment such as goggles, overall, gloves and goggles



**ANNEXURE D – SAFETY SPECIFICATION AND BASELINE RISK ASSESSMENT
ISSUE REGISTER**

Date of Original Safety Specification Compilation	Compiled By	Issue Date
July 2023.	Mark Winter	22nd July 2023.

Revision Summary	Revised By	Revision Date

Acknowledgement:

I, _____ representing
_____(Contractor), have satisfied
myself with the content of this Health and Safety Specification and shall ensure that our employees
and contractors on site comply with the requirements of this document, our safety documentation and
health and safety legislation.

Signature of Contractor

Date

Comments:



SCALEBAR

075150

Meters1:2500

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ENGINEERS: _____

DATE: 2023-05-30

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CLIENT: _____

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LANGEBERG
MUNISIPALITEIT MUNICIPALITY MASIPALA

PROJECT

DIVERSION WEIR, PUMP STATION AND
DETENTION POND, NKQUBELA
ROBERTSON

TITLE

LOCALITY PLAN

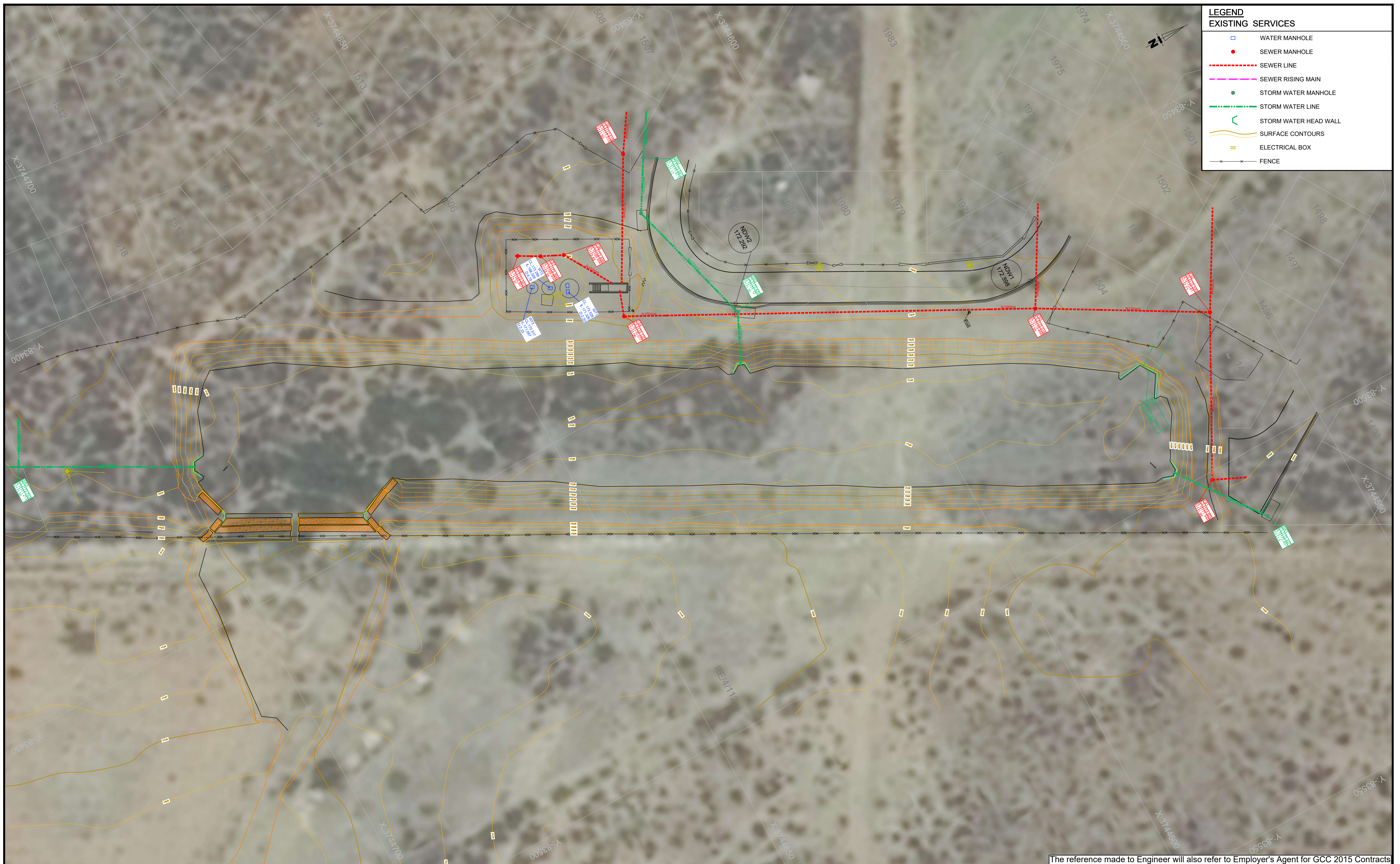
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CONTRACT No.PROJECT No.22098C

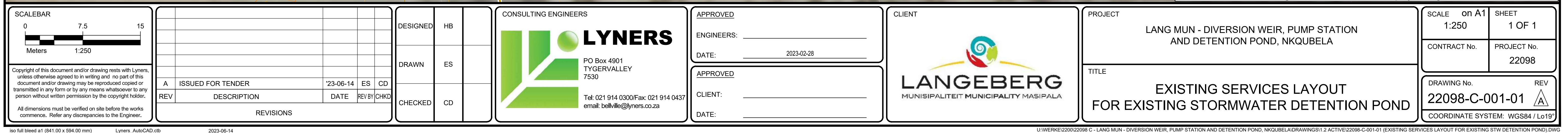
DRAWING No.22098-C-000REV

COORDINATE SYSTEM: WGS84 / Lo19

iso full bleed a1 (841.00 x 594.00 mm) Lyners_AutoCAD.ctb 2023-05-30 U:\WERKE\22098 C - LANG MUN - DIVERSION WEIR, PUMP STATION AND DETENTION POND, NKQUBELA\DRAWINGS\1.2 ACTIVE\22098-C-000 (LOCALITY PLAN).DWG



<u>LEGEND</u>	
	WATER MANHOLE
	SEWER MANHOLE
	SEWER LINE
	SEWER RISING MAIN
	STORM WATER MANHOLE
	STORM WATER LINE
	STORM WATER HEAD WALL
	SURFACE CONTOURS
	ELECTRICAL BOX
	FENCE



LEGEND

EXISTING SERVICES

SEWER RISING MAIN

SEWER PIPE

177.095
175.662
1.433

COVER LEVEL
INVERT LEVEL
DEPTH

SEWER MANHOLE

SEWER ERF CONNECTION

WATER PIPELINE

WATER ERF CONNECTION

WATER METER

WATER VALVE

WATER FIRE HYDRANT

CONTOURS

The reference made to Engineer will also refer to Employer's Agent for GCC 2015 Contracts

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01530

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MUNICIPALITEIT MUNICIPALITY MASIPALA

PROJECT

LANG MUN - DIVERSION WEIR, PUMP STATION AND
DETENTION POND, NKQUBELA
ROBERTSON

TITLE

EXISTING SERVICES LAYOUT FOR
REROUTE OF EXISTING SEWER RISING MAIN

SCALE on A1

1:500

SHEET

1 OF 1

CONTRACT No.

PROJECT No.

22098C

DRAWING No.

REV

22098-C-001-02

COORDINATE SYSTEM: WGS84 / L019

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LEGEND

EXISTING SERVICES

SEWER RISING MAIN

SEWER PIPE

COVER LEVEL
INVERT LEVEL
DEPTH

SEWER MANHOLE

SEWER ERF CONNECTION

WATER PIPELINE

WATER ERF CONNECTION

WATER METER

WATER VALVE

WATER FIRE HYDRANT

SEWER RISING MAIN

PROPOSED SERVICES

160mmØ PN16 uPVC
SEWER RISING MAIN

CONNECTION ARROW

- NOTES:**
- Contractor must verify location and extent of all the existing services prior to commencement of work.
 - Levels, position and material specification of existing sewer rising main network to be verified before construction. Any discrepancies are to be liaised with the engineer immediately.
 - All main sewer pipes to be 160mmØ PVC-U class 16, unless otherwise specified.
 - Pipes to be laid on bedding for flexible pipes according to SABS 1200 LB:DRAWING LB-2.

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PROJECT

LANG MUN - DIVERSION WEIR, PUMP STATION AND
DETENTION POND, NKQUBELA
ROBERTSON

TITLE

PROPOSED REROUTE OF EXISTING
SEWER RISING MAIN

SCALE on A1 1:500	SHEET 1 OF 1
CONTRACT No.	PROJECT No. 22098C
DRAWING No. 22098-C-003-01	
COORDINATE SYSTEM: WGS84 / Lo19	

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LEGEND

EXISTING SERVICES

WATER MANHOLE

SEWER MANHOLE

SEWER LINE

SEWER RISING MAIN

STORM WATER MANHOLE

STORM WATER LINE

STORM WATER HEAD WALL

SURFACE CONTOURS

ELECTRICAL BOX

PROPOSED SERVICESPRECAST TRAPEZOIDAL CHANNELPROPOSED 160mmØ SEWERMAJOR CONTOURSMINOR CONTOURSPROPOSED FENCE

SCALEBAR

07.515

Meters1:250

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MUNISIPALITEIT MUNICIPALITY MASIPALA

PROJECT

LANG MUN - DIVERSION WEIR, PUMP STATION
AND DETENTION POND, NKQUBELA

TITLE

PROPOSED LAYOUT OF STORMWATER
POND AND SEWER CHANNEL

SCALE on A1

1:250

SHEET

1 OF 1

CONTRACT No.

PROJECT No.

22098

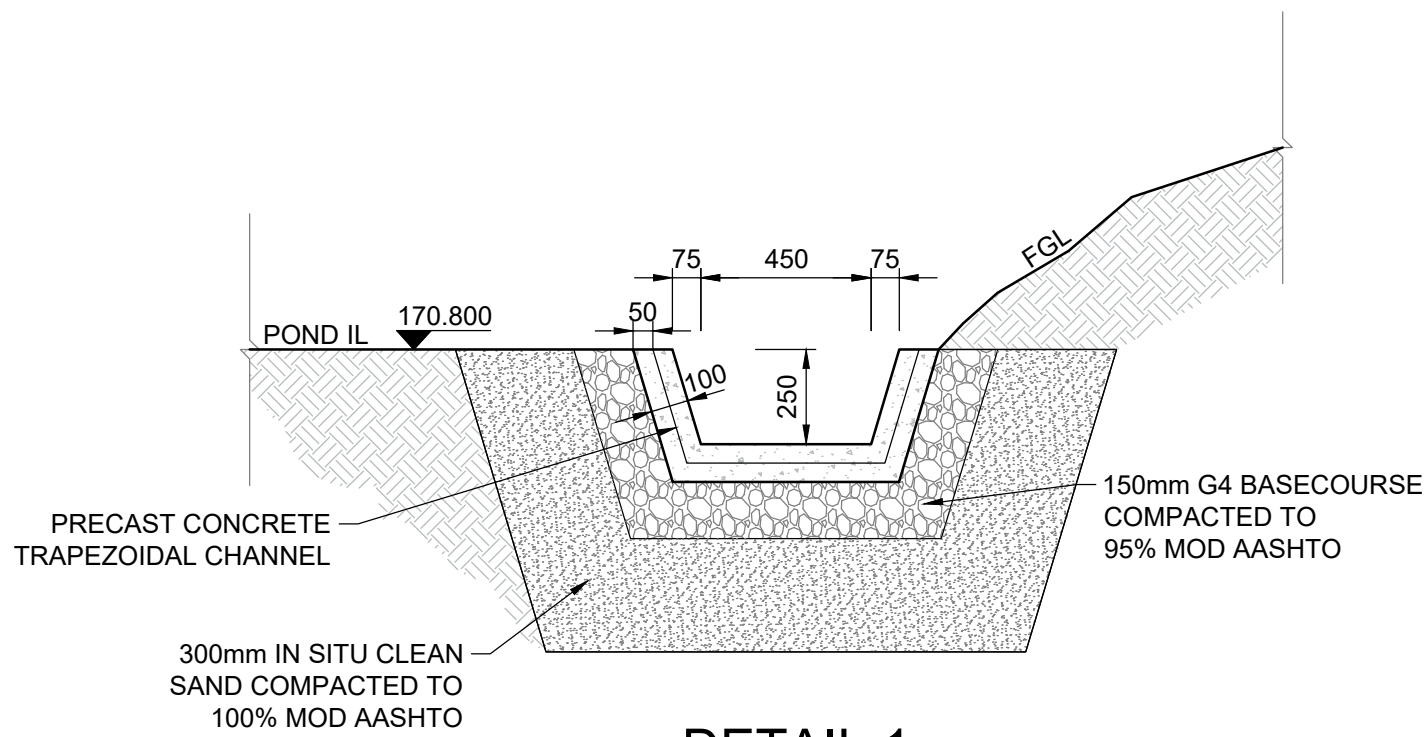
DRAWING No.

REV

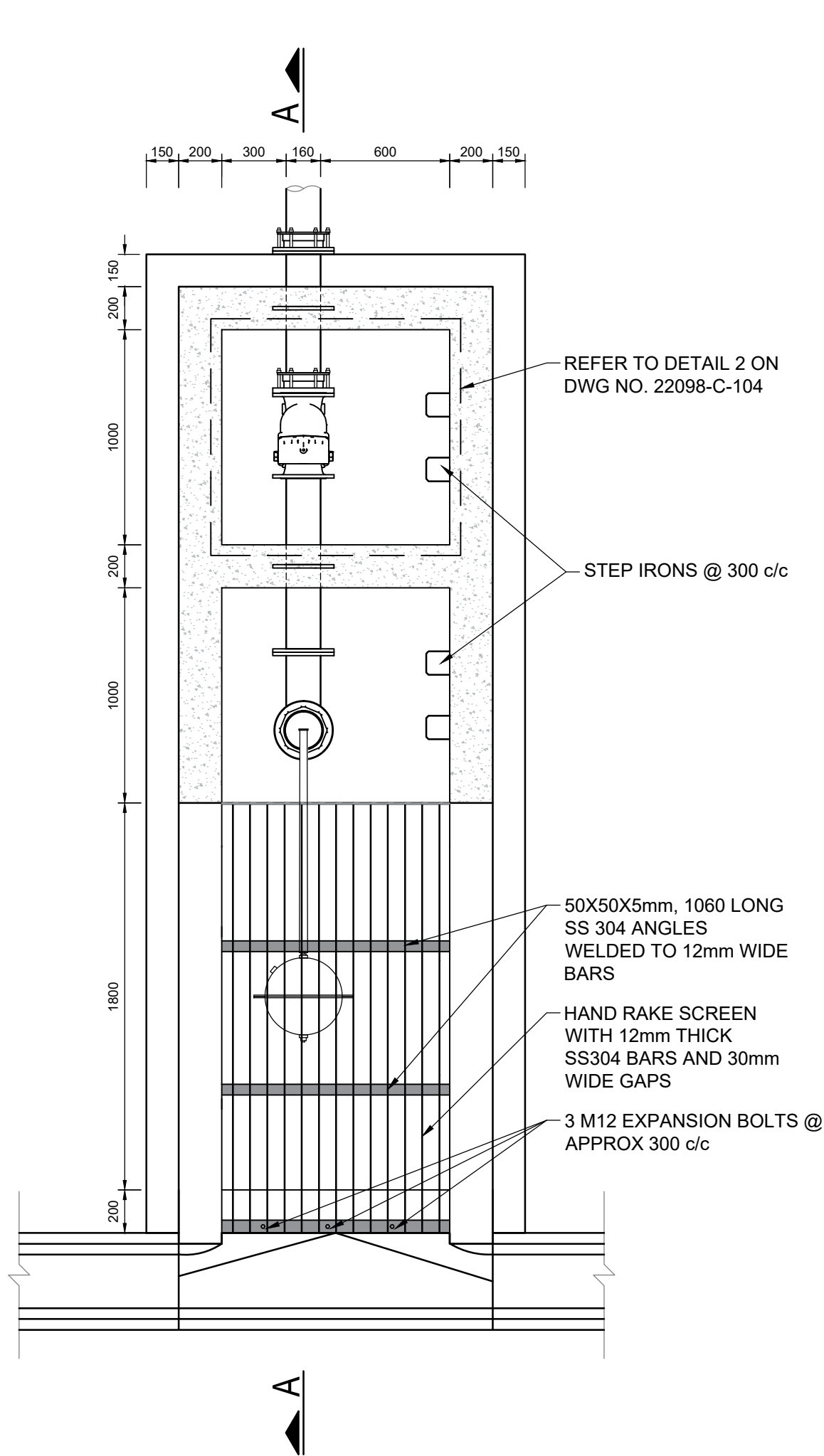
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COORDINATE SYSTEM: WGS84 / Lo19°

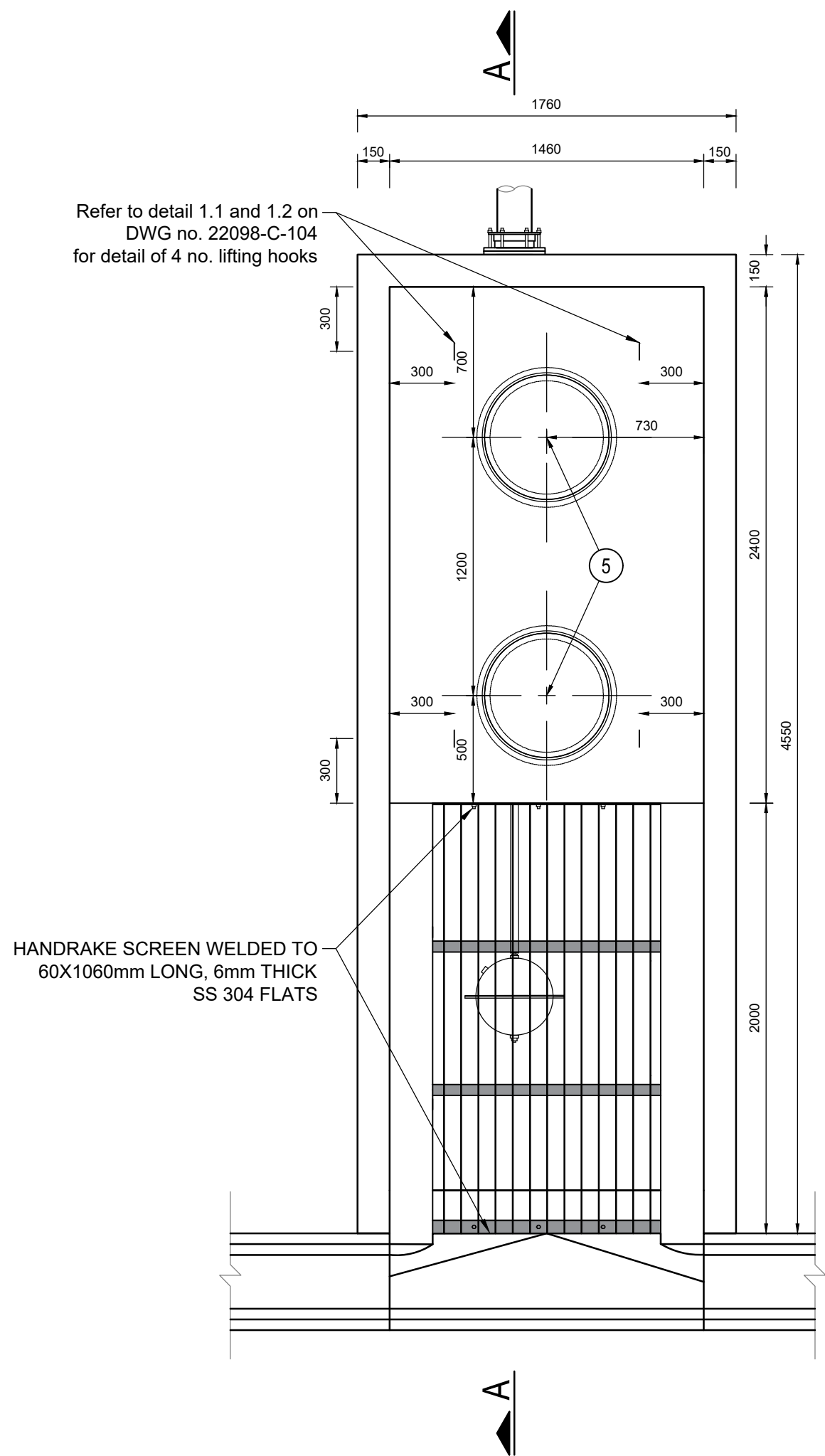
The reference made to Engineer will also refer to Employer's Agent for GCC 2015 Contracts



DETAIL 1:
PROPOSED POND CHANNEL
SCALE 1:20



DETAIL 2:
DETAIL OF PROPOSED INLET STRUCTURE
SCALE 1:25



DETAIL 3:
PLAN VIEW OF PROPOSED INLET STRUCTURE
SCALE 1:25

PIPE SCHEDULE										
Item No.	Shape	D1 (mm)	D2 (mm)	A (mm)	B (mm)	C (mm)	Θ (deg)	Flanges		
								a	b	c
1	BFV	150	-	-	-	-	-	x	x	-
2	▲V5	150	-	800	400	-	-	x	x	-
3	SCV	150	-	-	-	-	-	x	x	-
4	FA1	150	-	-	-	-	-	-	-	-
5	600mm Ø, 2800D, SMART LOCKING LOGIC SMC COVER AND FRAME (HINGED WITH SNAP LOCK MECHANISM)									
6	FA2	150	-	-	-	-	-	x	-	-

V1	V2	V3	V4	V5
V6	V7	SB	DJ	GV
			BV	AV
			PRV	FA

SHAPE		DESCRIPTION
FA1	VIKING JOHNSON OR SIMILAR APPROVED FLANGE ADAPTOR PN10 TO SUIT STEEL PIPE	
FA2	VIKING JOHNSON OR SIMILAR APPROVED FLANGE ADAPTOR PN10 TO SUIT PVC-U PIPES	
SCV	AVK OR SIMILAR APPROVED SWING CHECK VALVE PN10	
BFV	AVK OR SIMILAR APPROVED BALL FLOAT VALVE PN10 WITH FLOAT AMENDED	
LEGEND		
□	EXACT LENGTH TO BE DETERMINED ON SITE	
x	FLANGED END	
#	SCOUR TEE	
W	WELDED (ALL WELDING TO BE DONE BY MANUFACTURER OF PIPES AND NOT ON SITE)	
bW	CONTINUOUSLY BUTT WELDED ON SITE	
∞	THREAD FEMALE CONNECTION	
▲	MILD STEEL, CARBOGUARD 891 COATED	
8	THREAD MALE CONNECTION	

NOTES: PIPEWORK

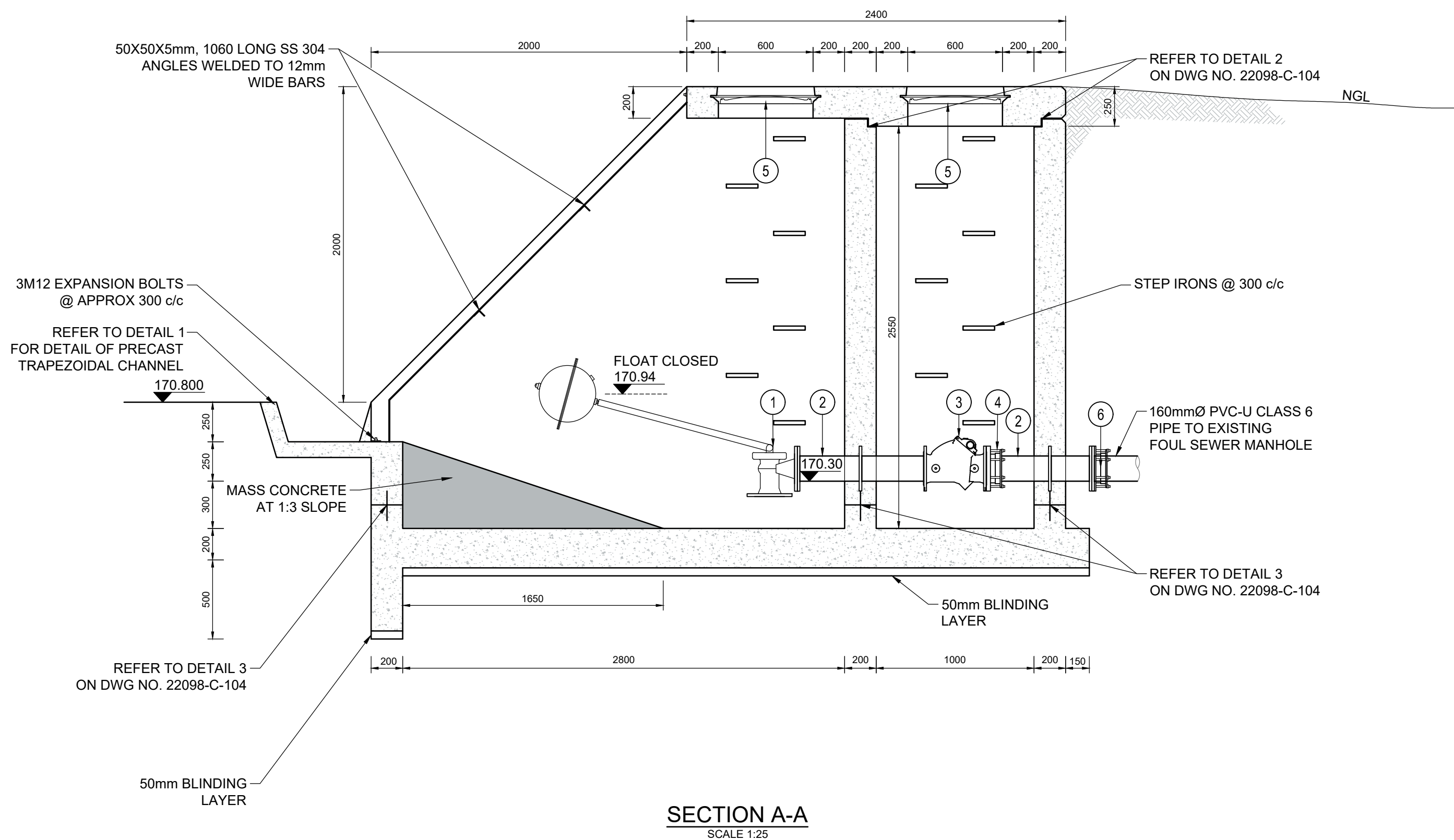
- Steel and stainless steel pipes shall comply with the following.
 - Stainless steel pipes shall be Grade 304 and shall comply with ANSI B36.19m Schedule 10S.
 - Mild steel pipes up to 150mmØ shall be seamless, medium class steel pipes manufactured in accordance with SANS 62.
 - Flange drilling shall be in accordance with SANS 1123:Table 1000/3.
- Dimensions of all pipes, fittings, valves, etc must be submitted for approval on a shopdrawing before any material is ordered
- Step irons to be Calcamite-type or approved equivalent
- All structural concrete shall be 30MPa/19mm concrete, unless stated otherwise on drawing with minimum 40mm cover for reinforcing
- All steel pipe work or fittings buried in the ground shall be externally protected by a wrapping system the specification for the wrapping system is as follows.
 - Clean surface to required standard (minimum preparation ST2 according to SI6 055900-1967)
 - Brush or spray denso priming solution or denso S105 paste denso mastic to create profile for denso tape, so as to ensure that there are no air voids forming beneath the denso tape
 - Denso tape (petrolatum tape) wrapped spirally around prepared area
 - Double wrap polyethelene tape (minimum 300 Micron thick)
- SANS approval certificates of all coatings to be delivered to the engineer for approval
- Mild steel pipes shall be coated with three layers of Carboguard 891, 125 Micron dry film thickness (dft) per layer
- Backfilled material compacted to 93% MOD AASHTO (100% for sand) unless otherwise specified
- Only S/S 316L nuts and bolts with anti seize compound may be used

NOTES GENERAL :

- All dimensions shown on this drawing shall be verified by the contractor in order to ensure that on-site requirements are met. Dimensions may vary depending on the type and make of items such as valves. Any discrepancies must be reported to the engineer prior to the ordering of any materials
- A calibration certificate must be submitted to the Engineer for the foot control valve

NOTES STRUCTURE :

- Cut & Bend mesh to suite cover opening & sump
- Provide 4 No. Y10 shape code 83 lifting hooks as per detail 1.1 and 1.2 on DWG no. 22098-C-104
- Chamber walls to be plastered external and internal (Plaster 13mm thick, steel toweled to smooth surface)



SECTION A-A
SCALE 1:25

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SCALEBAR

AS SHOWN

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REVISIONS				

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APPROVED

ENGINEERS: _____

DATE: 2023-06-13

APPROVED

CLIENT: _____

DATE: _____

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MUNICIPALITEIT MUNICIPALITY MASIPALA

PROJECT

LANG MUN - DIVERSION WEIR, PUMP STATION AND
DETENTION POND, NKQUBELA

TITLE

TYPICAL DETAILS OF
STORMWATER RETENTION POND

SCALE

on A1

AS SHOWN

CONTRACT No.

DRAWING No.

22098-C-100

COORDINATE SYSTEM: N/A

SHEET

1 OF 1

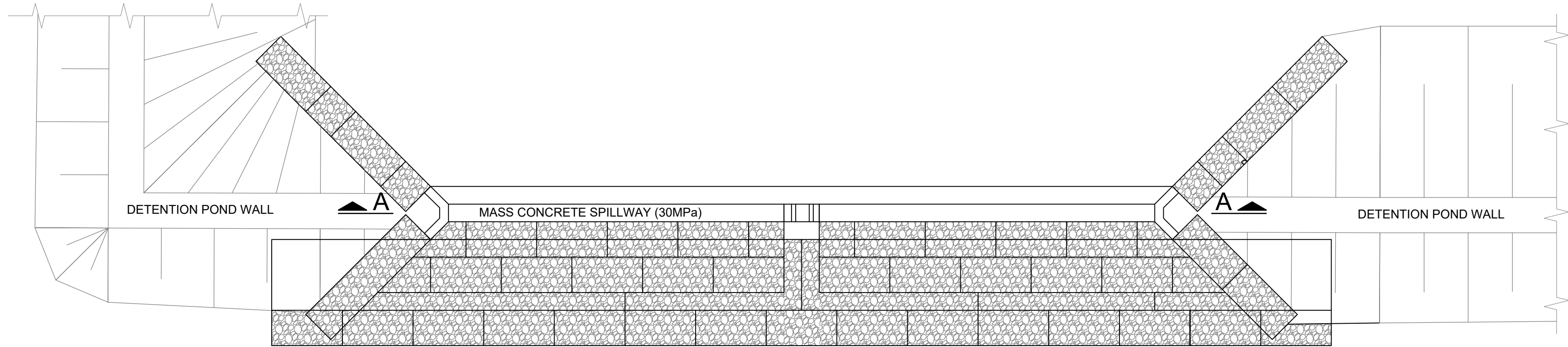
PROJECT No.

22098C

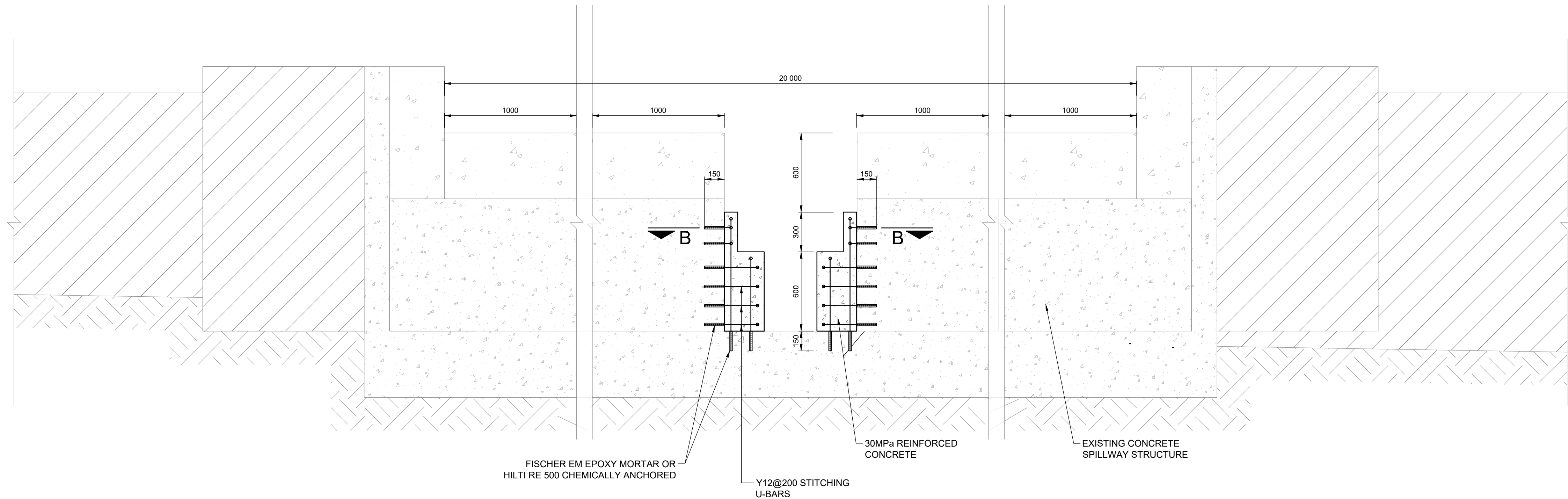
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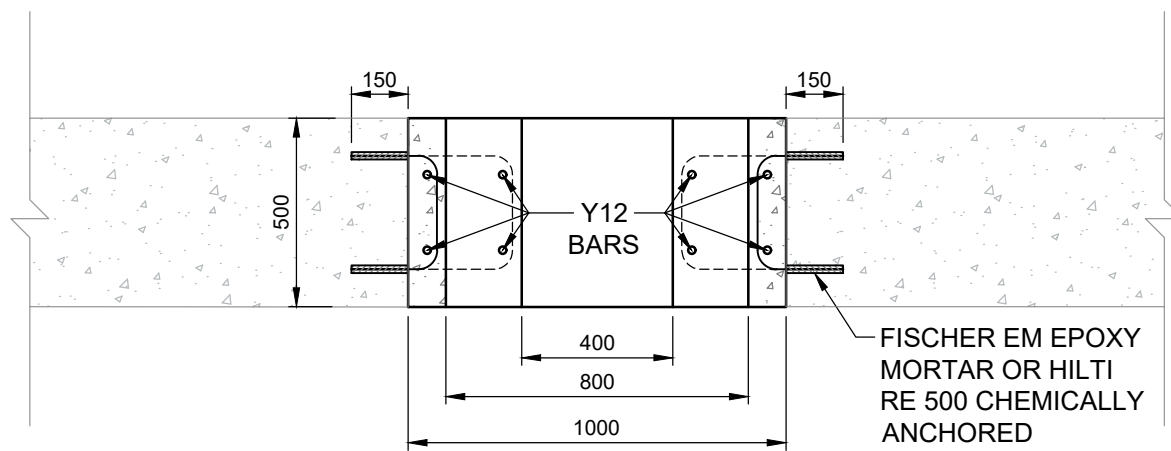
- NOTES GENERAL :
1. All dimensions shown on this drawing shall be verified by the contractor in order to ensure that on-site requirements are met. Any discrepancies must be reported to the engineer prior to the ordering of any materials.
- NOTES STRUCTURE :
1. All structural concrete to be 30MPa /19mm reinforced concrete unless otherwise stated on drawing with 40mm cover.



SPILLWAY STRUCTURE PLAN
SCALE 1:100



SECTION A-A
SCALE 1:20



SECTION B-B
SCALE 1:20

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SCALEBAR

0 0.2 0.4 0.6 0.8 1 m

Scale 1:20

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DATE: 2023-02-28

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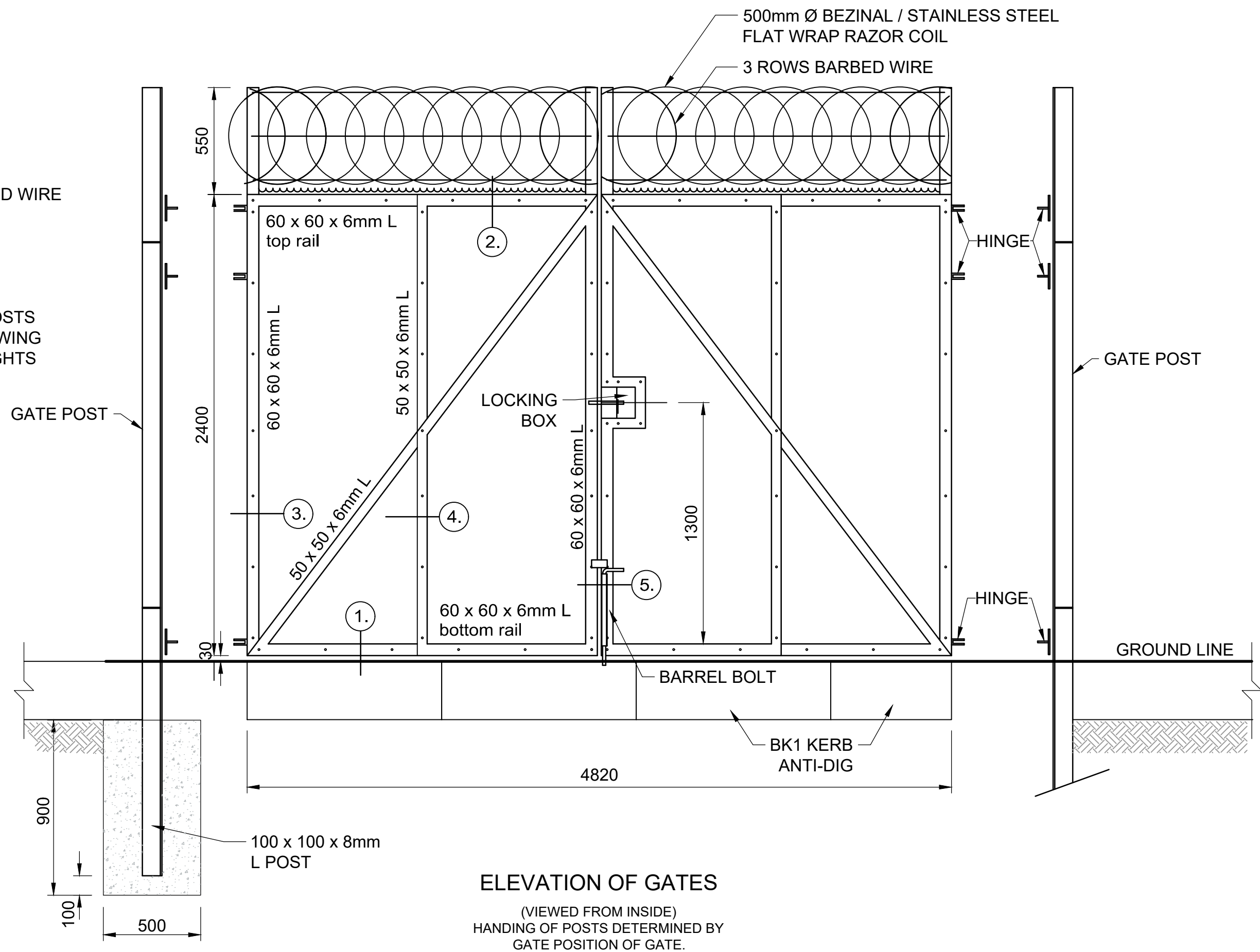
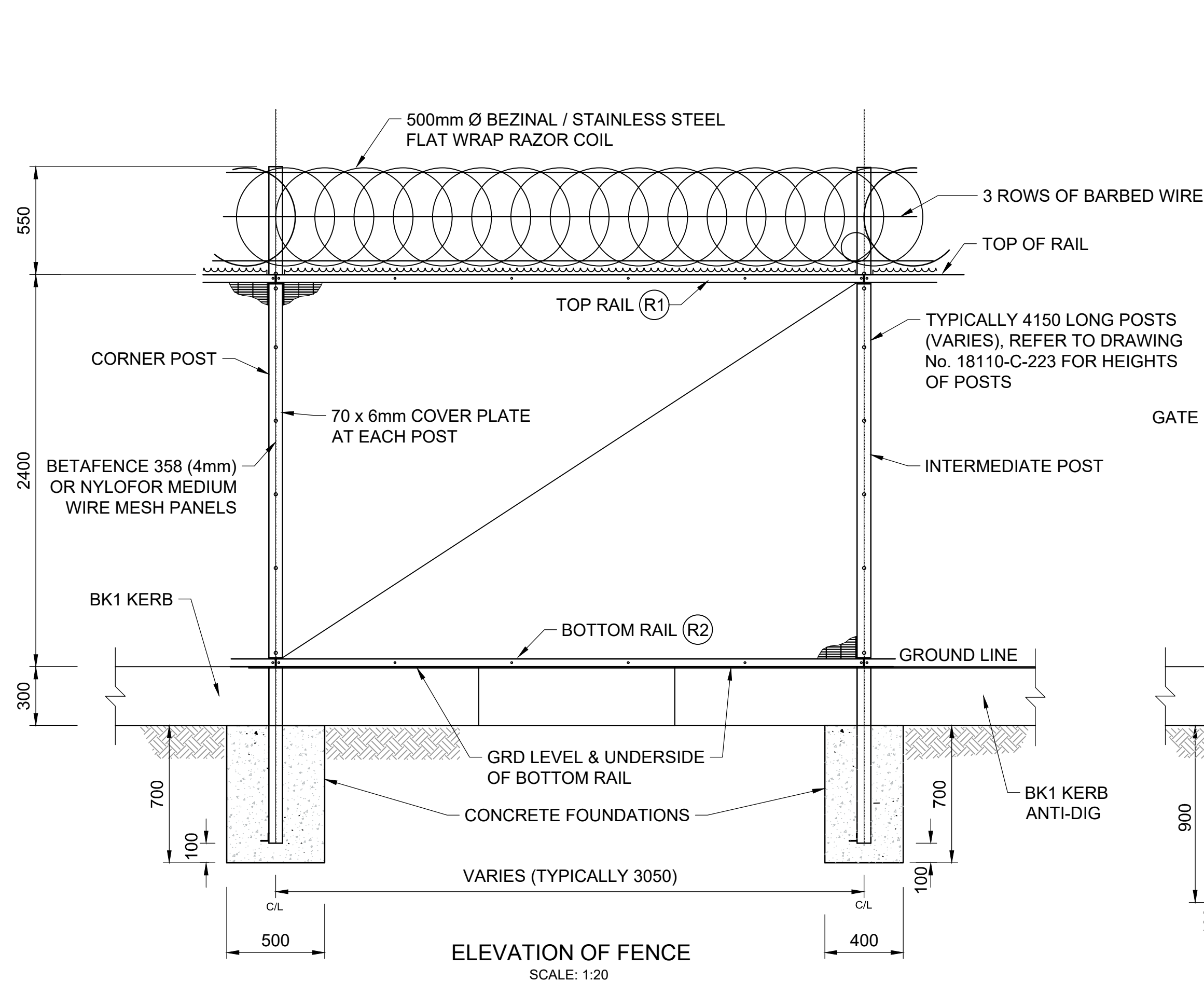
PROJECT

LANG MUN - DIVERSION WEIR, PUMP STATION
AND DETENTION POND, NKQUBELA

TITLE

DETAIL OF PROPOSED AMENDMENTS TO
EXISTING STORMWATER POND OUTLET
STRUCTURE

SCALE	on A1	SHEET
AS SHOWN		1 OF 1
CONTRACT No.		PROJECT No. 22098
DRAWING No.		REV
22098-C-101		A
COORDINATE SYSTEM: N/A		



SPECIFICATION

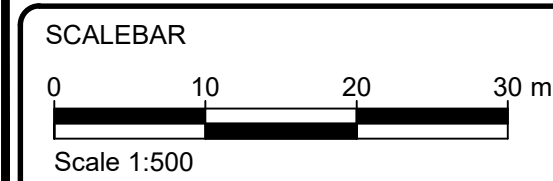
- POSTS:
70 X 70 X 6mm GALV. ANGLES SET VERTICALLY INTO FOUNDATIONS.
REFER TO POST DETAILS ELSEWHERE.
- FOUNDATIONS:
700 X 400 X 400 (25MPa/19mm) AT EACH INTERMEDIATE POST.
700 X 500 X 500 (25MPa/19mm) FOR CORNER POST GROUND CONDITIONS MAY REQUIRE ADDITIONAL CONCRETE.
- MESH PANELS:
CONSTRUCTED FROM HIGH TENSILE STEEL WITH A WELD STRENGTH OF 75%.
APERTURES ON TYPES 358 (4mm) ARE 72.2 X 8.7mm & 3510 (3mm) SINGLE ARE 73.2 X 9.7mm.
SINGLE MESH PANELS: CLASS A 'GALFAN AS PER SANS SPEC. 10244-2: 2003.
- RAILS:
REFER TO DETAILS OF TYPES OF RAILS ELSEWHERE.
- COVER STRIPS:
REFER TO DETAILS ELSEWHERE.
- ASSEMBLY DETAILS:
REFER TO DETAILS ELSEWHERE.

- FIXINGS:
RAILS TO POSTS: STAINLESS STEEL 8mm DIA. X 40mm CUP SQUARE SECURITY BOLTS WITH WASHERS & ANTI-VANDAL SHEAR OFF NUTS.
COVER PLATES TO POSTS: COUNTERSUNK STAINLESS STEEL 8mm DIA. X 40mm BUTTON HEAD SECURITY SCREWS WITH WASHERS & SHEAR OFF NUTS.
MESH TO RAIL: AS RAILS TO POSTS, LENGTH TO BE 30mm.
- GALVANISING:
ALL POSTS, RAILS AND COVER PLATES TO BE HOT DIP GALVANISED AFTER MANUFACTURE IN ACCORDANCE WITH ISO 1461, FOR TOP & BOTTOM RAILS TO BE 55 MICRONS, 70 MICRONS FOR POSTS & COVER PLATES.
- WORKMANSHIP:
ALL WELDS TO BE CONTINUOUS UNLESS OTHERWISE SPECIFIED. ALL WELD, CUTTING AND HOLES TO BE BUFFED SMOOTH PRIOR TO GALVANISING. ALL WELD SPLASHES TO BE REMOVED PRIOR TO GALVANISING.

SPECIFICATION

- GATE FRAMES:
EACH GATE TO CONSIST OF 2 LEAVES, EACH 2400 X 2410. FRAMES TO BE CONSTRUCTED OF 60 X 60 X 6mm L'S. BRACING AND CENTRE RAIL TO BE 50 X 50 X 6mm L'S. ALL WELDS TO BE CONTINUOUS. ALL HOLES TO BE DRILLED AND WELDING TO BE COMPLETE COMPLETE BEFORE GALVANISING.
- MESH PANELS:
REFER TO FENCE SPECIFICATION ELSEWHERE SPECIFIED. PANEL SIZE: 2 X 2400 HIGH X 3048 WIDE, 358 (4mm) OR 3510 (3mm) SINGLE MESH. MESH TO BE FITTED AFTER GALVANISING.
- GATE DETAIL DRAWINGS:
FRAME DETAILS: SPECIFIED ELSEWHERE
LOCKING DETAILS: SPECIFIED ELSEWHERE
HINGE BRACKETS: SPECIFIED ELSEWHERE
BARREL BOLT DETAILS: SPECIFIED ELSEWHERE
COVER PLATE DETAILS: SPECIFIED ELSEWHERE
POST DETAILS: SPECIFIED ELSEWHERE
- GALVANISING:
ALL WELDS TO BE BUFFED SMOOTH ON COMPLETION. ALL WELD SPLASHES TO BE REMOVED. ALL POSTS, FRAME, COVER PLATES AND HINGE BRACKETS TO BE HOT DIP GALVANISED AFTER MANUFACTURE IN ACCORDANCE WITH SABS 763 TO A MIN. THICKNESS OF 57 MICRONS.
- GATE POST FOUNDATIONS:
EACH POST TO BE ENCASED IN A 900 DEEP X 500 X 500 CONC. FOUNDATION, 25MPa/19mm. GROUND CONDITIONS MAY REQUIRE ADDITIONAL CONCRETE.

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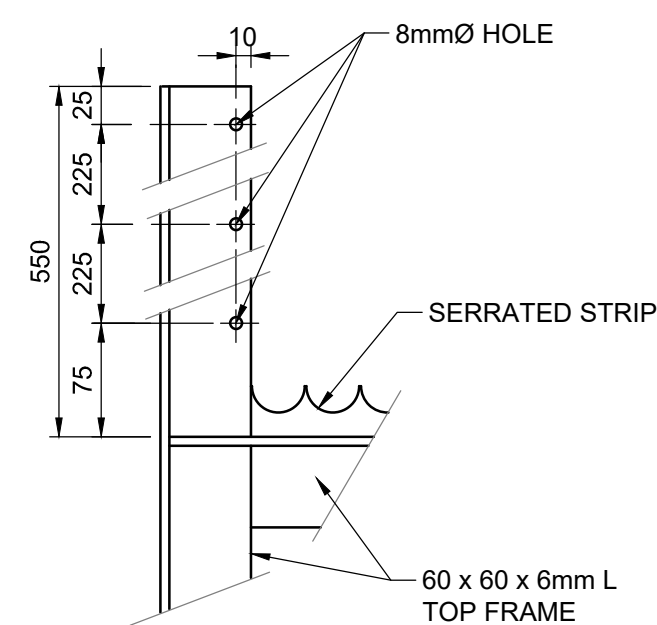
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DATE:	2023-06-14
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CLIENT:	
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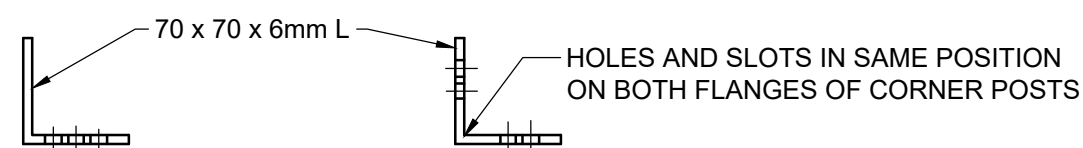
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PROJECT	LANG MUN - DIVERSION WEIR, PUMP STATION AND DETENTION POND, NKQUBELA
TITLE	TYPICAL DETAILS: SECURITY FENCE

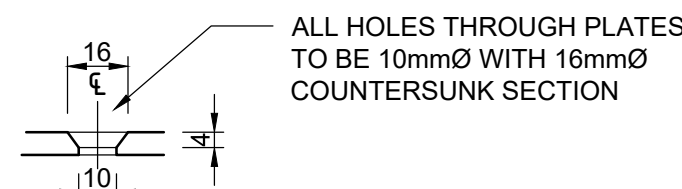
SCALE on A1 AS SHOWN	SHEET 1 OF 1
CONTRACT No.	PROJECT No. 22098
DRAWING No. 22098-C-102	REV A
COORDINATE SYSTEM: WGS84 / L019	



ELEVATION ON EXTENSION

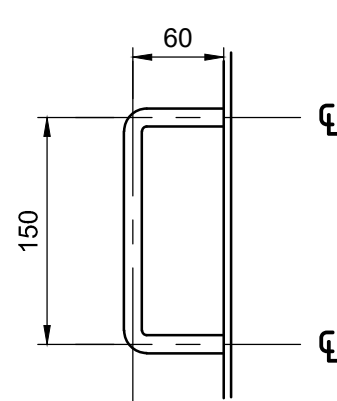


DETAIL 1
SCALE 1:2

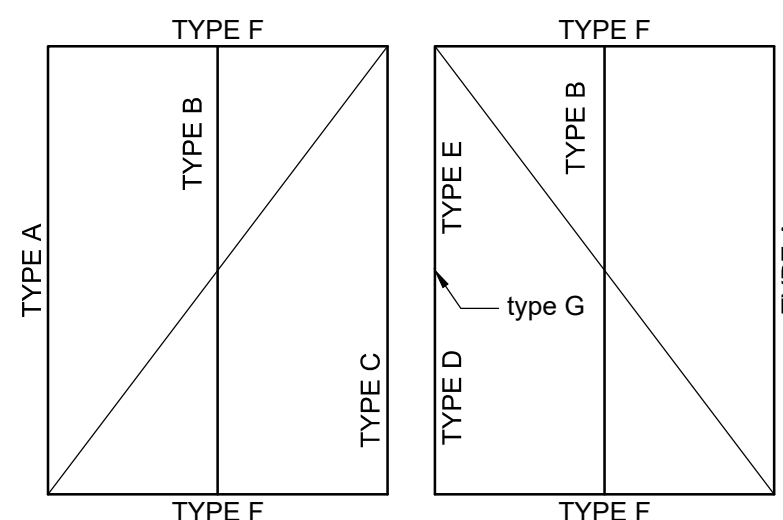


SECTIONS AT X

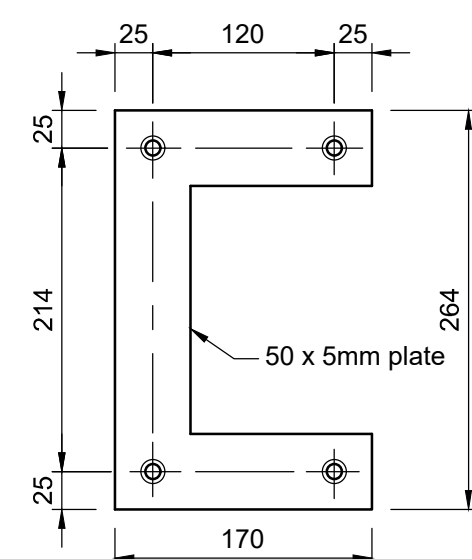
SCALE 1:5



PULL HANDLE



ELEVATION OF GATES

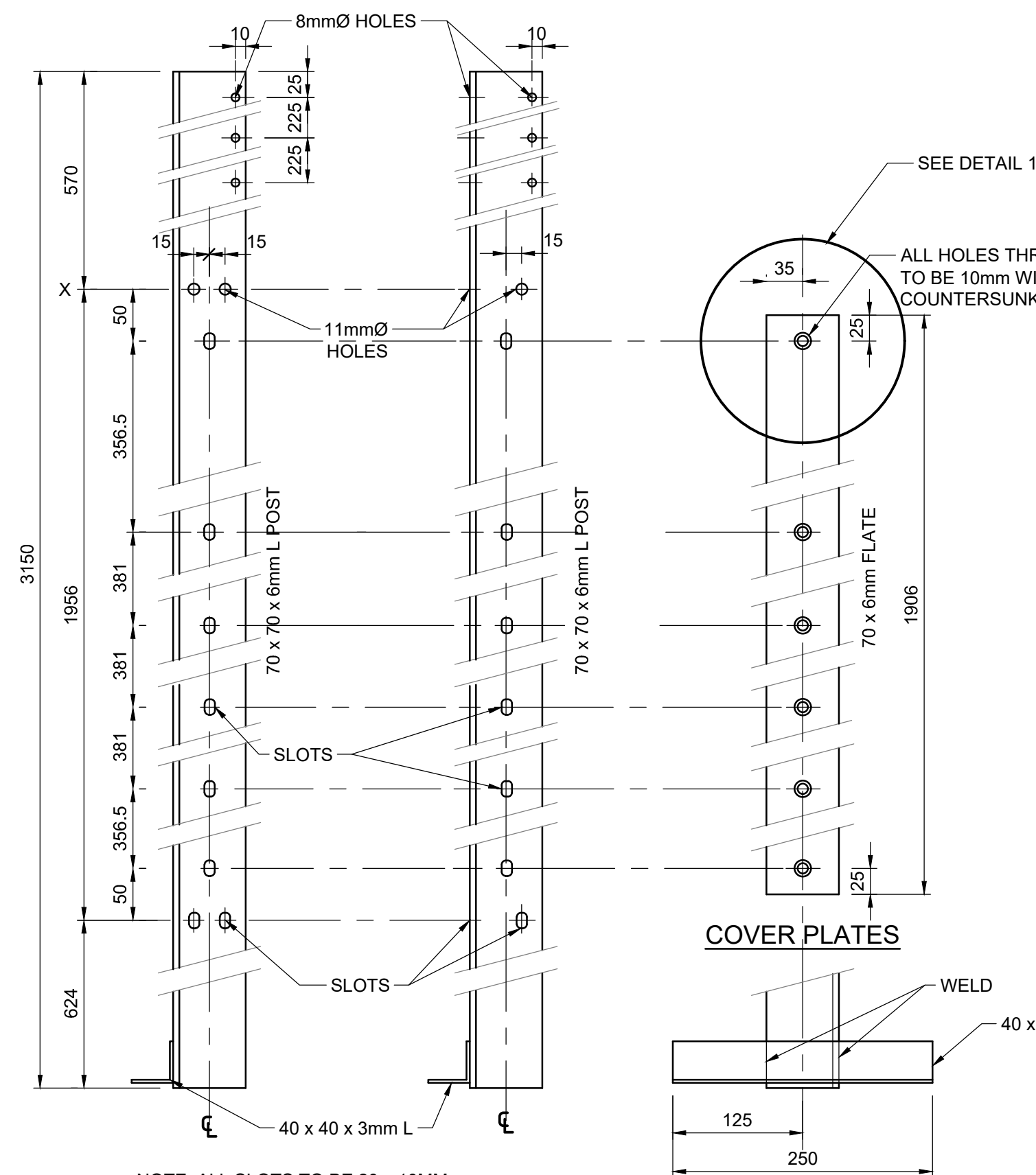


TYPE G

NO. OF COVER PLATES REQUIRED FOR EACH DOUBLE LEAF GATE

TYPE A: 2 OFF. (HINGE STILES)
TYPE B: 2 OFF. (MIDDLE RAILS)
TYPE C: 1 OFF. (MEETING STILE)
TYPE D: 1 OFF. (BELOW LOCKING BOX)
TYPE E: 1 OFF. (ABOVE LOCKING BOX)
TYPE F: 1 OFF. (TOP & BOTTOM RAILS)
TYPE G: 1 OFF. (AROUND BOX)

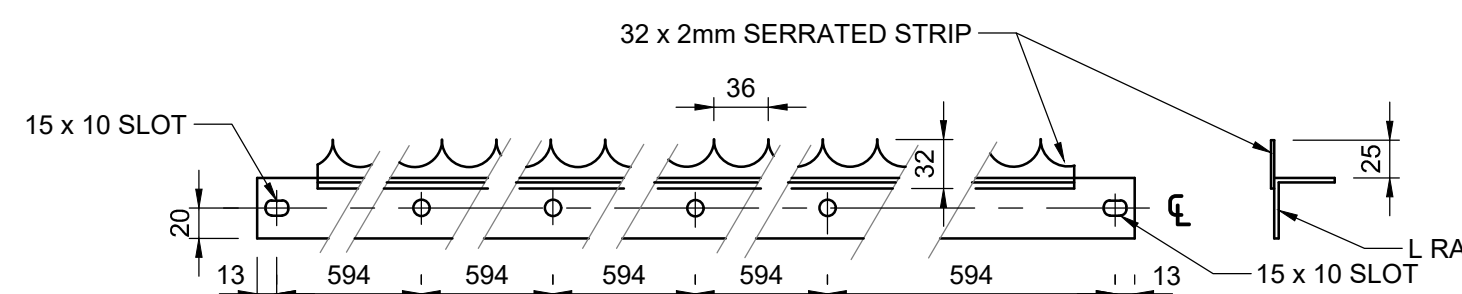
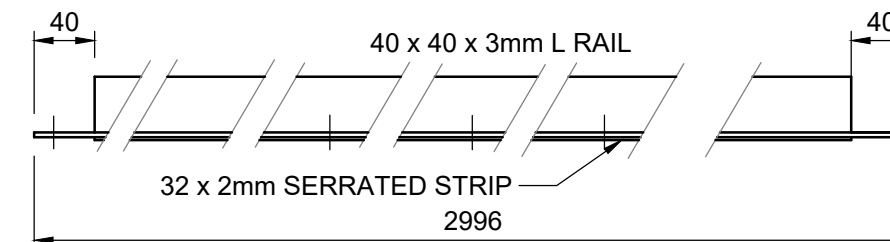
XT3;NB: 11mmØ HOLES TO BE DRILLED IN ANGLE
FRAME TO LINE UP WITH HOLES IN COVER
PLATES. HOLES IN FRAME AND COVER
PLATES TO LINE UP WITH HOLES IN MESH.



COVER PLATES

NOTE: ALL SLOTS TO BE 20 x 10MM

<u>ELEVATION</u>	<u>ELEVATION:</u>
(INTERMEDIATE POST)	(CORNER POST)

ELEVATION

RAIL TYPE (R1) AS INDICATED.

RAIL TYPE (R2) AS INDICATED WITHOUT SERRATED STRIP

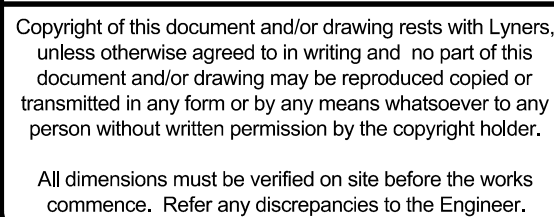
NOTE: ALL ROUND HOLES TO BE 11mmØ

PLAN
(RAIL DETAILS - TYPE R1)

3300 POST WITH S/E & COVER PLATE DETAILS

SCALE 1:5

SCALE 1:5



DESIGNED	HB	
DRAWN	HB	
CHECKED	CD	

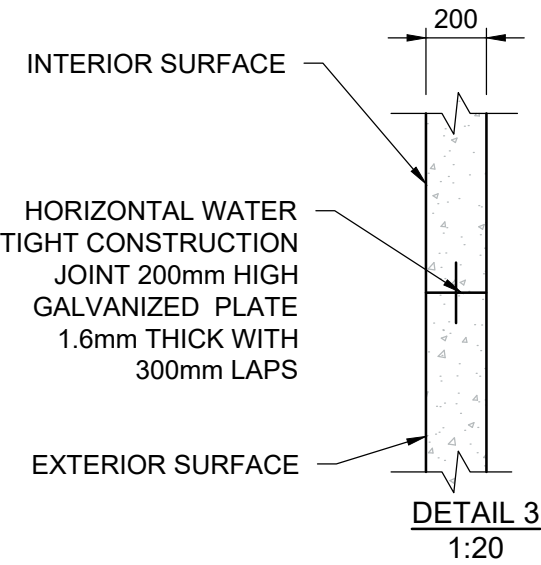
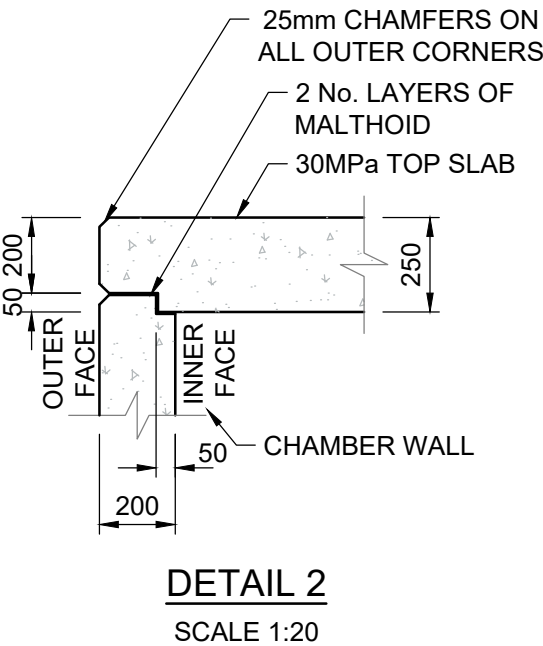
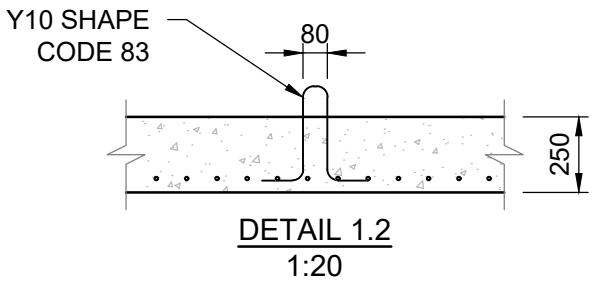
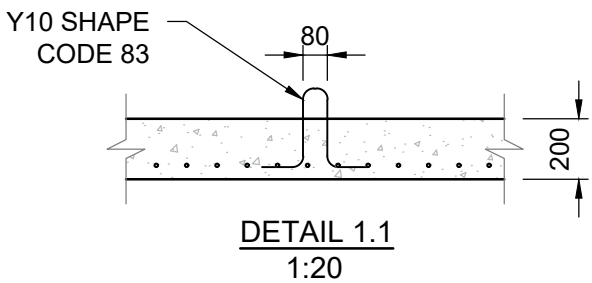
<u>APPROVED</u>	
ENGINEERS:	_____
DATE:	2023-06-14

<u>APPROVED</u>	
CLIENT:	_____
DATE:	_____

PROJECT	LANG MUN - DIVERSION WEIR, PUMP STATION AND DETENTION POND, NKQUBELA
TITLE	TYPICAL DETAILS: SECURITY FENCE DETAILS

SCALE on A1 AS SHOWN	SHEET 1 OF 1
CONTRACT No.	PROJECT No. 22098
DRAWING No. 22098-C-103	
REV 	
COORDINATE SYSTEM: WGS84 / UTM19°	

The reference made to Engineer will also refer to Employer's Agent for GCC 2015 Contracts



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All dimensions must be verified on site before the works commence. Refer any discrepancies to the Engineer.

A	ISSUED FOR TENDER	'23-06-05	HB	CD
REV	DESCRIPTION	DATE	REV BY	CHKD
REVISIONS				

DESIGNED	HB	
DRAWN	MG	
CHECKED	CD	

CONSULTING ENGINEERS



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PROJECTLANG MUN - DIVERSION WEIR,
PUMP STATION AND
DETENTION POND, NKQUBELA

TITLEGENERAL STRUCTURE DETAILS

SCALEAS SHOWN

SHEET1 OF 1

CONTRACT No.

PROJECT No.
22098

DRAWING No.
22098-C-104

COORDINATE SYSTEM: N/A

REV
A