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KAROO HOOGLAND MUNICIPALITY



KAROO HOOGLAND MUNISIPALITEIT
MUNICIPALITY

An amalgamation of Fraserburg, Sutherland, Williston and surrounding rural areas

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***SUTHERLAND EMERGENCY BULK WATER SUPPLY PHASE 2
CIVIL ENGINEERING***

TENDERER NAME:		
ADDRESS:		
CONTACT PERSON:		
CELL PHONE NUMBER:		
EMAIL ADDRESS:		
TENDER AMOUNT		
	(As per the form of Offer and Acceptance Page C1.1)	
POINTS FOR	Youth:	Locality:
SPECIFIC GOALS (MBD 6.1)	(As per the Preferential Procurement Schedule Page T2.12)	
Time for completion	(Weeks)	

October 2024



Issued by :

KAROO HOOGLAND MUNICIPALITY
P.O Box 165
WILLISTON
8920

TEL : (053) 285 0998



Prepared by:

NEIL LYNERS AND
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SUTHERLAND
6920

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FLY LEAF

NAME OF TENDERER:

ADDRESS:

CONTACT PERSON:

FAX NUMBER:

TELEPHONE NUMBER:

CELL PHONE NUMBER:

TENDER SUM :

CIDB REFERENCE NR:

AMENDMENTS OR QUALIFICATIONS:

YES

NO

CENTRAL SUPPLIER DATABASE NO.: MAAA

SIGNATURE :

DATE :

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PART T1: TENDERING PROCEDURES

T1.1 Tender Notice and Invitation to Tender

T1.2 Tender Data

FOR VIEWING PURPOSES ONLY

T1.1: TENDER NOTICE AND INVITATION TO TENDER**KAROO HOOGLAND MUNICIPALITY****INVITATION TO TENDER****CLOSING TIME: 12:00****CLOSING DATE: 25 NOVEMBER 2024****BID NO KHM T001/011/2024 C: Sutherland Emergency Bulk Water Supply Phase 2 – Civil Engineering**

Tenders are hereby invited from Contractors for the construction of bulk water supply pipelines with related infrastructure to connect boreholes in the Sutherland area and surrounds to the existing bulk water infrastructure.

A set of fully completed tender documents must be submitted on the **original documents** and remain valid for 90 days after the closing date of the tender. Enquiries about the tender can be addressed to Mr Awie Vlok at Neil Lyners and Associates (Pty) Ltd at telephone (023) 004 1444 / 072 345 6242 or email to awie@lynerns.co.za

Tender documents **will only be available for viewing** on the municipal website (www.karoohoogland.co.za) from 25 October 2024.

Only tenderers with CIDB Grading of **7CE** or higher are eligible to submit offers for this Tender.

A set of tender documents can be obtained at a non-refundable cost of **R 580.00** (including VAT) at the **compulsory clarification meeting** which will take place at **09h00 on 07 November 2024** at the **Karoo Hoogland Municipal Offices, 8 Northumberland Street, Sutherland**. The proof of payment should be e-mailed to Me Diana Vermeulen at d.vermeulen@karoohoogland.gov.za not later than **12h00 on 06 November 2024**. Bank details are as follow: Karoo Hoogland Municipality, Standard Bank, Account Number 083 212 442, Branch Number 051008, Reference: Tenderer Company Name.

PLEASE ENSURE THAT ALL PARTNERS OF A JOINT VENTURE ATTEND THIS COMPULSORY MEETING. FAILURE TO ATTEND THE MEETING WILL RESULT IN THE BID BEING NON-RESPONSIVE.

Please note: The Municipality prefer that Senior Company Staff members or Contract Managers and attend the compulsory site meeting as the Scope of Works, the Design and the Tender Specifications will be discussed in detail along with the Execution phase expectations and possible amendments. Representative may only represent one company at the clarification meeting. It remains the Bidder's responsibility to familiarise themselves with and fully understand the tender specifications to be able to submit a responsive tender.

Prospective bidders that arrive 15 minutes or more after the advertised time the meeting started will not be allowed to attend the meeting or to sign the attendance register. If a prospective bidder is delayed, he/she must inform the contact person before the meeting commence and will only be allowed to attend the meeting if the chairperson of the meeting, as well as all the other bidders attending the meeting, give permission to do so.

Documents will only be handed to prospective bidders at the clarification meeting after confirmation of a receipt for the payment of the tender document. Tender documents must be reserved not later than **16h00 on Thursday, 31 October 2024** from Mr Awie Vlok at Neil Lyners and Associates(RF) Pty Ltd at awie@lynerns.co.za.

Fully completed tender documents must be placed in a sealed envelope clearly marked: **Sutherland Emergency Bulk Water Supply Phase 2 – Civil Engineering** and must be placed in the **tender box at the Entrance of the Karoo Hoogland Municipality Offices, 2 Mulder Street, Williston by not later than 12:00 on 25 November 2024**.

Bids will be pre-evaluated on the following functionality criteria and bids that score less than 75 out of 100 points will be considered as non-responsive:

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Functionality criteria and weight:

1. Company (or JV) Experience carrying a weight of 40 points.
2. Relevant experience of the Construction Manager carrying a weight of 15 points.
3. Relevant experience of the Construction Foreman carrying a weight of 15 points.
4. Plant, Equipment, Tools & Machinery allocated/reserved for this Tender carrying a weight of 30 points.

Tenders will be evaluated and adjudicated in terms of the Preferential Procurement Policy Framework Act (Act 5 of 2000) Regulations 2022, where 80 preference points will be allocated to price and 20 preference points on specific goals subdivided into 10 points for Youth and 10 points for specific goals (location). A certified ID document and proof of address must be submitted with your tender offer.

Receipts will be issued on request only for tenders handed in during office hours from Mondays to Fridays. Receipts will not be issued for tenders placed in the tender box after hours or which are received by mail.

The tender box will be emptied just after **12:00 on 25 November 2024** (closing date), hereafter all bids will be opened in public. Late tenders or tenders submitted by e-mail or fax will under no circumstances be accepted.

The Municipality reserves the right to withdraw any invitation to tender and/or to re-advertise or to reject any tender or to accept a part of it. The Municipality does not bind itself to accepting the lowest tender or award a contract to the bidder scoring the highest number of points.

Bidders must ensure that they provide all applicable and relevant information required.

- A valid tax compliance pin number on an official document of SARS for the municipality to verify tax compliance must be submitted with the tender document.
- Potential service providers must be registered on the Central Supplier Database.
- Potential service providers who were found guilty of fraud or corruption or who willfully neglected reneged on or failed to comply with any government, municipal or other public sector contract during the past five years, will be excluded from this process.
- Potential service providers (or any of the directors) whose municipal rates and taxes or municipal services charges are in arrears for three months, at the municipality or any other municipality or entity, might be excluded from this process. Please submit a municipal account (not older than 3 (three) months as proof of payment with your tender. If the bidder is not responsible for municipal rates, a Sworn Affidavit or a Lease Agreement must be submitted which indicate the reasons why a municipal account cannot be submitted.
- The lowest or only tender will not necessarily be accepted.
- No late, faxed or e-mailed tenders will be accepted.
- Potential service providers might be subjected to security screening.

NB: No Bid will be considered from persons in the service of the state.

Only one offer per Tender document.

Tender document must be bind together or be in a file.

J Jonkers

KAROO HOOGLAND MUNICIPAL MANAGER

T1.2: TENDER DATA

The Conditions of Tender are the Standard Conditions of Tender as contained in **Annex C of August 2019**, Construction Industry Development Board (CIDB) Standard for Uniformity in Construction Procurement as amended. (see www.cidb.org.za). Tenderers must obtain their own copies of the Standard Conditions of Tender. The Standard Conditions of Tender make several references to the Tender Data for details that apply specifically to this tender. The Tender Data shall have precedence in the interpretation of any ambiguity or inconsistency between it and the standard conditions of tender. Each item of data given below is cross-referenced to the clause in the Standard Conditions of Tender to which it applies.

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

C.1 GENERAL**C.1.1 Actions**

C.1.1 The Employer is as stipulated in the Tender Notice and Invitation to Tender included in section T1.1.

C.1.2 Tender documents

C.1.2 The tender documents issued by the Employer comprise:

VOLUME 1: THE TENDER DOCUMENT (this document), in which is bound

THE TENDER**PART T1 : TENDERING PROCEDURES**

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: AGREEMENTS AND CONTRACT DATA**

C1.1: Form of Offer and Acceptance (Contract Agreement)

C1.2: Contract Data

C1.3: Form of Guarantee

C1.4: Occupational Health and Safety Agreement

PART C2 : PRICING DATA

C2.1: Pricing Data

C2.2: Schedule of Quantities

PART C3 : SCOPE OF WORKS

C3: Scope of Work

PART C4 : SITE INFORMATION

C4: Site Information

PART C5 : HEALTH AND SAFETY SPECIFICATIONS**PART C6 : DRAWINGS**

2. OTHER DOCUMENTS REQUIRED FOR TENDER EVALUATION PURPOSES

Joint Venture Agreement (if applicable)

Targeted enterprise declaration affidavit: small business enterprise

3. TARGETED ENTERPRISE DECLARATION AFFIDAVIT FOR TENDER EVALUATION PURPOSES

None included

4. RETURNABLE SCHEDULES THAT WILL BE INCORPORATED INTO THE CONTRACT (SEE LIST OF RETURNABLE SCHEDULES ABOVE)

All completed forms shall form part of the contract.

Add the following:

"The following documents form part of this contract, but is not issued by the Employer:

- (i) The General Conditions of Contract for Construction Works (Third Edition) 2015 as published by the South African Institution of Civil Engineering.
- (ii) SANS 1200 Standardized Specifications for Civil Engineering Construction as published by Standards South Africa.

C.1.4 Communication and employer's agent

C.1.4 The Employer's agent is Neil Lyners and Associates (Pty) Ltd

Full contact details and address of the Agent is included in the Appendix to Contract Data

C.2 TENDERER'S OBLIGATIONS**C.2.1 Eligibility**

Add the following to C.2.1

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

1. Quality control practices and procedures which ensure compliance with stated employer's requirements.
2. Availability of resources.
3. Capacity to mobilize own and subcontracting resources.
4. Availability of skills to manage and perform the contract (assigned personnel)
5. Previous work experience of a similar nature
6. Score required minimum points for functionality

C.2.1.1 Only those tenderers who are registered with the CIDB or are capable of being so prior to the closing date for tenders, 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, 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 required for the class of construction work as defined by the CIDB for various JV's; and
3. The combined contractor grading designation calculated in accordance with the Construction Industry Development Regulations is equal to or higher than a contractor grading designation determined in accordance with the sum tendered for a 7 CE class of construction work of value determined in accordance with Regulation 25(1B) or 25(7A) of the Construction Industry Development Regulations.

C.2.1.2 Construction Industry Development Board (CIDB) Registration

Only those tenders submitted by tenderers who are registered, or are capable of being registered, with an active status with the CIDB prior to the evaluation of submissions, in a contractor grading designation equal to or higher

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than a contractor grading designation determined in accordance with the sum tendered, or a value determined in accordance with Regulation 25(1B) or 25(7A) of the Construction Industry Development Regulations, for a **7 CE or higher** class of construction work, are eligible to have their tenders evaluated.

C.2.1.3 Minimum score for functionality

Minimum of 80 points required for functionality.

C.2.7 Clarification meeting

C.2.7.1 As per tender advertisement. Bidders should be represented at the compulsory clarification meeting and site inspection by a technical employee from the prospective bidder who is suitably qualified and experienced to comprehend the implications of the work involved. The Municipality prefer that Senior Company Staff members or Contract Managers attend the compulsory site meeting as the Scope of Works, the Design and the Tender Specifications will be discussed in detail along with the Execution phase expectations and amendments. It remains the Bidder's responsibility to familiarise themselves with and fully understand the tender specifications to be able to submit a responsive tender. Relevant representative may **only represent one company at meeting**. A single person cannot represent two Tenderers at the clarification meeting and site visit.

C.2.8 Seek Clarification

Add the following to C.2.8:

The tenderer warrants that he has:

- a) inspected the Specifications and read and fully understood the Conditions of Contract.
- b) read and fully understood the whole text of the Specifications and Price Schedule and thoroughly acquainted himself with the nature of the goods proposed and of all matters which may influence the Contract.
- c) visited the site(s) where delivery of the proposed works will take place, carefully examined existing conditions, the means of access to the site(s), the conditions under which the delivery is to be made, and acquainted himself with any physical limitations or restrictions or any such 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(s) and made the necessary provisions for any additional costs involved in the tendered rates.
- d) requested the Employer's Agent to clarify the requirements contained in the Specifications and Price Schedule, the exact meaning or interpretation of which is not clear to the tenderer.

The Employer will therefore not be liable for the payment of any extra costs resulting from any claim submitted by the tenderer arising from any alleged ambiguity or uncertainty contained in the tender document.

C.2.12 Alternative tender offers will be considered.

C.2.13 Submitting a tender offer

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

C.2.13.2 The original tender document including all returnable schedules must be completed fully in black ink and originally signed by the authorized signatory to validate the tender. Returnable schedule T2.2.1V must be completed and signed by the authorized signatory and returned. **Failure to do so will result in the disqualification of the tender.**

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

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

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

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

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The Employer's address for delivery of tender offers and identification details to be shown on each tender offer package are stipulated in the Tender Notice and Invitation to Tender in Section T1.1.

- C.2.13.6 A two-envelope procedure will not be followed.
- / C.3.5
- C.2.13.8 Accept that the employer will not assume any responsibility for the misplacement or premature opening of the tender offer if the outer package is not sealed and market as stated.
- C.2.13.9 Telephonic, telegraphic, telex, facsimile or e-mailed tender offers will not be accepted.

Add the following sub clause after C.2.13.9

- C.2.13.10 By signing the Offer part of C1.1 Form of Offer and Acceptance, the tenderer declared that all information provided in the tender submission is true and correct.
- C.2.13.11 **Tender documents may not be retyped. Retyped documents will result in the disqualification of the tender.**
- C.2.13.12 **The complete original tender document must be returned. Missing pages will result in the disqualification of the tender.**
- C.2.13.13 **No unauthorised alteration of this set of tender documents will be allowed. Any unauthorised alteration will disqualify the tender automatically. Any ambiguity must be cleared with contact person for the tender before the tender closure.**
- C.2.13.14 The tender document as provided by the Municipality's Supply Chain Management Section will be the prevailing document in the event of an inconsistency between the completed submitted tender document by a bidder and the tender document provided by the Municipality.

C.2.15 Closing time

- C.2.15 The closing time for submission of tender offers is stipulated in the Tender Notice and Invitation to Tender in Section T1.1.
- C.2.15.1 Tenderer must ensure that the employer received the tender offer at the address specified in the tender data not later than the closing time stated in the tender data. Accept that proof of posting shall not be accepted as proof of delivery.

C.2.16 Tender offer validity

Add the following to C.2.16.1

- C.2.16 The tender offer validity period is 90 Days.

C.2.17 Clarification of tender offer after submission

- C.2.17 *Add the following to C.2.17:*

A tender may 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. A tender may be rejected if the unit rates or lump sums for some of the items in the schedules of quantities are, in the opinion of the Employer, unreasonable or out of proportion, and the tenderer fails, within a period stated in the employers written request of having been notified in writing by the Employer or his agent to justify any specific rates or lump sums (i.e. to provide a financial breakdown of how such rates or sums were obtained) or to adjust the unit rates or lump sums for such items while retaining the total of the prices unchanged.

Each tenderer must also provide their financial account details. This information will be used to obtain a bank rating which information will be used in the risk assessment of the various tenders received. The Employer may decide not to award a tender to a specific tenderer if an unfavourable bank rating is obtained.

A Tenderer may be requested to 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.

C.2.18 Provide other material

Add the following to C.2.18.1

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C.2.18.1 Provide, on written request by the Employer, where the tendered amount inclusive of VAT **exceeds R10 million**:

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

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

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

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

In this regard the Tenderer shall submit with his tender a draft Health and Safety Plan in respect of the Works in sufficient detail to demonstrate the necessary competencies and resources to perform the construction work all in accordance with the Act, Regulations and Health and Safety Specification in the Scope of Work.

C.2.19 **Inspection, tests, and analysis**

C.2.19 Access to site for any additional tests required during the tendering period must be requested from the Engineer in writing.

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

C.2.23 **Certificates**

Add the following to C.2.23

C.2.23.1 The tenderer is required to submit with his tender:

Tax Compliance Status Pin issued by the South African Revenue Services.

Each party to a Consortium/Joint Venture shall submit a separate Tax 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 a Tax Compliance Status Pin to the Employer should any current Tax Compliance Status Pin expire during the contract. Failure to do so may lead to the withholding of payment to the Contractor until a valid Tax Compliance Status Pin is received by the Employer.

Tenderers must include in the tender submission or provide the employer with any certificates as stated in the tender data.

C.3 **EMPLOYER'S UNDERTAKINGS**

C.3.2 **Issue Addenda**

Add the following to C.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.

C.3.4 **Opening of tender submissions**

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C.3.4 The time and location for opening of the tender offers are stipulated in the Tender Notice and Invitation to Tender in Section T1.1.

C.3.8 Test for responsiveness

C.3.8 *Add the following to C.3.8:*

Tenders may be considered non-responsive by the Employer if, inter alia :

- The tender is not in compliance with the Scope of Work;
- The tenderer has not completed and/or signed the Offer portion of C1.1 Form of Offer and Acceptance.
- The tenderer has not completed and/or signed the Compulsory Enterprise Questionnaire in terms of the Supply Chain Management Policy and Local Government Municipal Finance Management Act;
- The tenderer failed to complete in full the returnable schedules,
- The tenderer has failed to clarify or submit any supporting documentation within the time for submission stated in the employers written request,
- The tenderer does not correct or accept the correction of arithmetical errors or refuses to amend or adjust, in the opinion of the employer an unreasonable, unbalanced rate in accordance with C3.9, and
- The tenderer has not obtained the minimum functionality score,
- Previous experience reference letters not submitted or duly completed.
- If the tender is not completed in non-erasable ink.

C.3.10 Clarification of a tender offer

The Employer may, after the closing date, request additional information or clarification from tenderer, in writing on any matter affecting the evaluation of the tender offer or that could give rise to ambiguity in a contract arising from the tender offer.

C.3.11 Evaluation of tender offer

Add the following to the C.3.11

C.3.11.2 The options which may be used to rank the tender offers are described below. The maximum points awarded for price and the maximum points for preference, shall either be 80 and 20 or 90 and 10 respectively, depending on the value of the lowest acceptable tender. If the latter is equal to or less than R50million then the 80/20 ratio will apply and if it exceeds R50 million, then 90/10 ratio will apply.

The methods which could be used to evaluate tenders are defined below and the method which will be applied to rank the tender offers received for this tender is Option 2

The preferred tender will be the tender which complies with all the requirements of the tender, and which attains the highest points by adding the points for price to the points scored for preference.

C.3.11.3 Option 1: Price and Preference

In the case of a price and preference:

- 1) Score tender evaluation points for price using the formula indicated below.
- 2) Score points for Specific Goals in accordance with the table included below.
- 3) Add the points scored for price and Specific Goals.

C.3.11.4 Option 2: Evaluation of Functionality, Price and Preference

In the case of a functionality, price, and preference:

- 1) Evaluate 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 shall be regarded as an acceptable tender if it fails to achieve the minimum qualifying score for functionality as indicated in the tender invitation or in the Tender Data.
- 3) Tenders that have achieved the minimum qualifying score for functionality will be evaluated further in terms of price and preference like Option 1.

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C.3.11.5 Determining the Points Scored for Price

The scoring of price and calculating the number of points for the tender price P , in comparison with the tender price of the most favourable comparative and lowest acceptable tender price P_m , will be in accordance with the following formulas.

$$A = \frac{(1 - (P - P_m))}{P_m}$$

And where

$$Nfo = W1 \times A$$

and where Nfo is the number of tender evaluation points awarded for price and where $W1$ is the maximum possible number of tender evaluation points awarded for price being either 80 or 90 points pending the value of the lowest acceptable tender offer as stated in the Tender Data.

The points will be calculated by rounding the calculation to 2 decimal places.

C.3.11.6 Determining the Points Scored for Preference

Preference Points will be based on the points scored for Youth and Locality (SPECIFIC GOALS). Each will represent 50% of points available for either 80/20- or 90/10-point system.

POINTS FOR SPECIFIC GOALS

Points for specified goals shall be scored in respect of Regulation 3(2) of the Preferential Procurement Regulations, 2022.

The maximum of 10 points will be allocated for youth (35 years and below of age) and another 10 points will be allocated for locality for 80/20

The maximum of 5 points will be allocated for youth (35 years and below of age) and another 5 points will be allocated for locality for 90/10

POINTS FOR YOUTH

The tender points, for tenderers eligible for preference points based on Youth (ID submitted with their tender offers), will be determined in accordance with the following table pending the value of the lowest acceptable tender offer:

Age of Participant	YOUTH	
	35 years and below of age	Above 35 years of age
80/20	10	4
90/10	5	2

POINTS FOR LOCALITY

- (a) Only one of the points set out below that best describes the enterprise's locality may be awarded if applicable.

Procurement Preference Points System	Location			
	Karoo Hoogland Municipal Area	Namakwa District Municipality Area	Northern Cape Province	Other Provinces of SA
80/20	10	7	5	2
90/10	5	4	3	1

- (b) Bidders must submit one of the following to receive points for the abovementioned criterion.
- The business premises Municipal Account of address as indicated in bid document;
 - If the address indicated in the bid document is not in the name of the bidder, the latest lease agreement for this address or affidavit of the owner stating occupancy.
 - The premises of the bidder as indicated in the MBD 6.1 of the bid document as the business address should be established prior to the tender advertisement date.

Failure to comply with these requirements shall result in the Tenderer being allocated zero Preference Points."

C.3.11.10 Risk Analysis

Notwithstanding compliance regarding CIDB registration or any other requirements of the tender, the employer will perform a risk analysis in respect of the following:

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- (a) reasonableness of the financial offer
- (b) reasonableness of unit rates and prices
- (c) acceptable bank rating
- (d) reputation and acceptable performance on previous contracts
- (e) 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.

C.3.13 Acceptance of tender offer

Add the following to C.3.13:

C.3.13.1 Tenders offers will only be accepted if:

- a) The Tenderer has in his or her possession a valid Tax Compliance Status Pin issued, or the PIN provided by the South African Revenue Services or has planned to meet outstanding tax obligations. A copy of a Tax Compliance Status Pin, printed from the South African Revenue Service (SARS) website, must accompany the bid documents. The onus is on the bidder to ensure that their tax matters with SARS are in order. In the case of a Consortium/Joint Venture every member must submit a separate Tax Compliance Status Pin, printed from the SARS website, with the bid documents. If a bid is not supported by a Tax Compliance Status Pin as an attachment to the bid documents, the Municipality reserves the right to obtain such documents after the closing date to verify that the bidder's tax matters are in order. If no such document can be obtained within a period as specified by the Municipality, the bid will be disqualified. The Tax Compliance Status Pin will be verified by the Municipality on the SARS website.
- b) The Tenderer or any of its directors/shareholders 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 is registered with the Construction Industry Development Board in an appropriate contractor grading designation;
- d) The Tenderer's tender Offer is signed by a person authorized to sign on behalf of the Tenderer;
- e) The tender offer is signed by a person authorized to sign on behalf of the Tenderer;
- f) 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;
- g) The Tenderer is registered and in good standing with the compensation fund or with a licensed compensation insurer;
- h) The Employer is reasonably satisfied that the Tenderer has in terms of the Construction Regulations, 2014, issued in terms of the Occupational Health and Safety Act, 1993, the necessary competencies and resources to carry out the work safely;
- i) The Tenderer must be registered on the Central Supplier Database;
- j) Tenderer who submitted a tender as a Joint Venture has included an acceptable Joint Venture Agreement with his/her tender or has provided a letter of intent to form a Joint Venture signed by all parties;
- k) Any Tenderer which is or whose directors are in arrears with their municipal rates and taxes or municipal charges due to any Municipality or any of its entities for more than three months and have not arranged for settlement of same before the bid closure date will be unsuccessful. A copy of the Tenderers and those of its directors' municipal accounts (for the Municipality where the bidder pays his account) for the month preceding the tender closure date must accompany the tender documents. If such a copy does not accompany the bid document of the successful Tenderer, the Municipality reserves the right to obtain such documents after the closing date to verify that their municipal accounts are in order. If a Tenderer rents their premises, proof must be submitted that the rental includes their municipal rates and taxes or municipal charges or that their rent is in arrears.
- l) The Tenderer has scored enough points for functionality.

C.3.13.2 Add the following after C.3.13.1

Notification of decision and appeal period

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If the Supply Chain Management Bid Adjudication Committee, Municipal Manager, or other delegated official has resolved that a tender be accepted, the successful and unsuccessful tenderers shall be notified in writing of this decision.

Paragraph 49 of the Municipal Supply Chain Management Policy as adopted in terms of section 111 of the Municipal Finance Management Act, 2003 (Act No. 56 of 2003) gives persons aggrieved by decisions or actions taken in the implementation of the Municipal Supply Chain Management System, the right to lodge within 14 days of notification of decision or action, a written objection or complaint against the decision or action.

Any tenderer wishing to exercise this right, must submit their appeal in writing to the Employer marked for the attention of the Head of the Procurement Section.

The format of the appeal must:

- set out the reasons for the appeal;
- state in which way the appellant's rights have been affected by the decision;
- state the remedy sought, and
- be accompanied by a copy of the notification advising the tenderer of the decision of the Supply Chain Management Bid Adjudication Committee.

Tenderers are hereby informed also of their right to request reasons for the decision in terms of the Promotion of Administrative Justice Act (No. 3 of 2000).

The notification of the decision sent to the successful tenderer is **not** acceptance of the tender and no rights shall accrue to the successful tenderer in terms of this notification. The successful tenderer will be notified in writing after 10 business days of the notification of any final decision (i.e., Acceptance) or of any developments with respect to the appeal process, and if applicable, procedures for the commencement of work.

- C.3.16 Notice to Tenderers
- C.3.16.1 Before accepting the tender of the successful tenderer, the Employer shall notify the successful tenderer in writing of the decision of the Employer's Bid Adjudication Committee to award the tender to the successful tenderer. No rights shall accrue to the successful tenderer in terms of this notice.
- C.3.16.2 The Employer shall, at the same time as notifying the successful tenderer of the Bid Adjudication Committee's decision to award the tender to the successful tenderer, also give written notice to the other tenderers informing them that they have been unsuccessful
- C.3.17 The number of paper copies of the signed contract to be provided by the employer is one.
- C.3.18 The number of copies of the signed contract to be provided by the employer is one (1).
- C.3.19 Transparency in the procurement process
- C3.19.1 The CIDB prescripts require that tenders must be advertised and be registered on the CIDB i Tender system.
- C3.19.2 The employer must adopt a transparency model that incorporates the disclosure and accountability as transparency requirements in the procurement process.
- C3.19.3 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.
- C3.19.4 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

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- C3.19.5 The employer must establish a Consultative Forum which will conduct a random audit in the implementation of the transparency requirements in the procurement process.
- C3.19.6 Consultative Forum must be an independent structure from the bid committees.
- C3.19.7 The information must be published on the employer's website.
- C3.19.8 Records of such disclosed information must be retained for audit purposes
- C.3.20 The additional conditions of Tender are:
- a) Karoo Hoogland Municipality may also request that the Tenderer provide written evidence that his/her financial, labour and resources are adequate for carrying out the project.
 - b) The Karoo Hoogland Municipality reserves the right to appoint a firm of chartered accountants and auditors and/or execute any other financial investigations on the financial resources of any Tenderer. The Tenderer shall provide all reasonable assistance in such investigations.
 - c) Tender documents must be completed in black ink, and prices must include VAT, only where applicable and requested in the schedule of activities.
 - d) Corrections may not be made by means of a correction fluid such as Tippex or a similar product. In the event of a mistake having been made it shall be crossed out in ink and be accompanied by a full signature at each alteration. The Municipality reserves the right to reject the Tender if corrections are not made in accordance with the above.

C.4 ADDITIONAL CONDITIONS OF TENDER

The additional conditions of tender are:

C.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 2014 issued in terms of Section 43 of the Act. The tenderer shall be deemed to have read and fully understood the requirements of the above Act and Regulations and to have allowed for all costs in compliance therewith and to comply with the requirements of the Health and Safety specifications included in this document in Part C5.

Tenderers are to note that the Contractor is required to ensure that all sub-contractors or others engaged in the performance of the contract must 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 always available for inspection on Site and handed over to the Employer on Final Completion of the project.

The Contractor is required to submit to the Employer the Occupational Health and Safety Agreement (included in Part T2: 1B – Returnable Documents of the Contract Document) and a letter of good standing from the Compensation Commissioner, or a licensed compensation insurer, within 14 days after the Commencement Date of the contract.

C.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:

- a) Inspected the Contract Drawings and read and fully understood the Conditions of Contract,
- C2.1 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 of all matters which may influence the Contract,
- C2.2 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 and plant to and from the site and made the necessary provisions for any additional costs involved thereby,
- C2.3 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; and
- C2.4 Before submission of any tender, the Tenderer must 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

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no liability will be admitted by the Employer/Employer's Agent in respect of errors in any tender due to the foregoing.

C.4.3 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 change in the competitive position of the tender.

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

C.4.4 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:

- 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;
- has indicated whether:
 - the provider is in the service of the state, or has been in the service of the state in the previous twelve months;
 - the provider is not a natural person, whether any of the directors, managers, principal shareholders, or stakeholders is in the service of the state, or has been in the service of the state in the previous twelve months;
 - whether a spouse, child, or parent of the provider or of a director, manager, shareholder, or stakeholder referred to above is in the service of the state, or has been in the service of the state in the previous twelve months; or
- 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;
 - if the person is not a natural person, a juristic entity of which any director, manager, principal shareholder, or stakeholder is in the service of the state; or
 - who is an advisor or consultant contracted with the client.

C.4.5 Combating abuse of the Supply Chain Management Policy

In terms of the Employers Supply Chain Management Policy, the Employer must reject the tender of any tenderer if that tenderer or any of its directors has:

1. 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;
2. failed, during the last five years, to perform satisfactorily on a previous contract with the Employer or any other organ of state after written notice was given to that tenderer that performance was unsatisfactory;
3. abused the supply chain management system of the Employer or has committed any improper conduct in relation to this system;
4. been convicted of fraud or corruption during the past five years;
5. wilfully neglected, reneged on, or failed to comply with any government, municipal or other public sector contract during the past five years; or
6. been listed with the Register of Tender Defaulters in terms of section 29 of the Prevention and Combating of Corrupt Activities Act (No 12 of 2004) or has been listed on National Treasury's database as a person or juristic entity prohibited from doing business with the public sector.

In this regard, tenderers shall complete Part T2: 1B – Returnable Documents: Declaration in terms of the Municipal Finance Management Act. Failure to complete this schedule may result in the tender not being considered.

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C.4.6 UIF payments

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

C.4.7 National Treasury's Centralized Supplier Database (CSD)

Supplier must be registered on the Centralized Supplier Database (CSD). Suppliers not registered on the Centralized Supplier Database (CSD) must apply on the centralised supplier database website.

C.4.8 Request for contract documents, or parts thereof, in electronic format

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

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

C.4.9 Evaluation of functionality of Tender Offer

- (a) Tenders will be evaluated on the functionality criteria as set out below. Bidders that score less than 75 out of 100 points for these criteria will be regarded as non-responsive and will not be evaluated on price and Specific Goals. Unclear, vague, fragmented, or incomplete information provided will result in no points being allocated.
- (b) Bidders must ensure that relevant information is submitted. If information is not submitted or referred to as an attachment, no points will be awarded.
- (c) The following criteria will be used to calculate points for the functionality of tenders and bidders should ensure that they submit all information to be pre-evaluated on the criteria mentioned below:

No.	CRITERIA	MAXIMUM POINTS	BIDDER SCORE
1	Relevant experience of the Main Civil Contractor	40	
2	Relevant experience of the Construction Manager	15	
3	Relevant experience of the Construction Foreman	15	
4	Plant, Equipment, Tools & Machinery allocated/reserved for this Tender	30	
TOTAL		100	

Functionality criteria are further divided, and points will be awarded as indicated on the following pages:

CRITERION 1: COMPANY (OR JV) EXPERIENCE

A maximum of forty (40) points will be awarded at the sole discretion of the Municipality's Bid Evaluation Committee based on the information provided. Please note that this section refers to the Company's and its legacy firms experience and is not a duplication of Criterion 3's Key staff and Personnel. Meaning this section takes into consideration that the company as an entity has gained relevant experience in the past and showcase that the company is in the business of said Scope of Works.

Relevant experience is defined as the accumulation of knowledge or skill that results from direct participation in relevant/similar events or activities and/or as determined by the Karoo Hoogland Municipality and/or professional consulting engineer where applicable.

Please note that this section refers to the Company's and its legacy firms' references related to the experience. It also considers that the references are related & relevant to the **successful completion of similar types of projects which relate to the installation of open trench bulk water pipelines of diameter 160mm or larger and accompanying infrastructure.**

To claim points for company experience of the main contractor the tender must submit a reference letter on an official letterhead of the referee for each of the projects listed in Schedule T.2.2.1S.

The following detail should be included in the reference letter:

- 1.Detail of the work that have been successfully completed (Scope of Works). Including period/duration of the project/service with start and finish dates.
- 2.Was the work completed within the contractual time frame.
- 3.Was the project completed within the project programme / schedule. *(Meaning did the bidder keep to the programme / schedule)*
- 4.Compliance with the Occupational Health & Safety regulations on the project.
- 5.Overall performance on the project.

The letter should also include who the contact person is with all his/her detail. The Municipality/Consultant reserves the right to validate and verify the information from the references or to ask more questions or proof to satisfy the evaluation process.

Please note that points will not overlap, meaning points are awarded only once per reference/company/entity per project experience. Please refrain from submitting multiple references from the same company on the same project. Please note it is the duty of the Bidder to ensure that the references given are relevant to the Scope of Works.

EXPERIENCE REQUIRED	MAXIMUM POINTS	BIDDER SCORE
Successful completion of similar types of projects which relate to the installation of open trench bulk water pipelines of diameter 160mm or larger and accompanying infrastructure.		
2 point per project: Value of R2m to R4m	10	
4 point per project: Value of R4m to R7m	20	
6 point per project: Value of R7m to R10m	30	
8 point per project: Value of > R10m	40	
TOTAL (MAXIMUM 40 POINTS)		

Points will only be awarded for those projects listed in Schedule T.2.2.1S verified by a reference letter as stated above. Projects listed in Schedule T.2.2.1S will not be considered for evaluation in the absence of a relevant reference letter and no points will be awarded to those projects listed and will therefore be found non-responsive.

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CRITERION 2: RELEVANT EXPERIENCE OF THE CONSTRUCTION MANAGER

A maximum of fifteen (15) points will be awarded at the sole discretion of the Municipality's Bid Evaluation Committee based on the information provided and will be split as follows. Points will only be awarded once for each staff/personnel allocated to this Tender, no multiple scoring per person.

SITE STAFF & PERSONNEL REQUIRED	MAXIMUM POINTS	BIDDER SCORE
CONSTRUCTION MANAGER (MUST BE ON SITE AT ALL TIMES DURING CONSTRUCTION)		
1 point per project: Value of R2m to R4m	5	
2 point per project: Value of R4m to R7m	8	
3 point per project: Value of R7m to R10m	12	
5 point per project: Value of > R10m	15	
TOTAL (MAXIMUM 15 POINTS)		

To claim points for the above bidders must complete schedule T.2.2.1R and submit detailed Curriculum Vitae (CV) of each key personnel to be used/allocated for this Tender. The staff or personnel listed above must currently be employed by the Bidder company, if not then a letter stating such intent to employ this person, including this person's signature of willingness & acceptance for the intended duration of the project. CV experience listed of key staff must be relevant and current. Points can only be allocated once, meaning one-person-one-score, no multiple scoring. Please note the staff allocated to this Tender must be on-site and used for this Tender. If the person is unavailable during time of execution, he/she must be replaced with someone of equal or better value and experience and proof as per CV submitted.

NB: Relevant experience is defined as the accumulation of knowledge or skill that results from direct participation in relevant similar events or activities and/or as determined by the Karoo Hoogland Municipality and/or professional consulting engineer where applicable.

CRITERION 3: RELEVANT EXPERIENCE OF THE CONSTRUCTION FOREMAN

A maximum of fifteen (15) points will be awarded at the sole discretion of the Municipality's Bid Evaluation Committee based on the information provided and will be split as follows. Points will only be awarded once for each staff/personnel allocated to this Tender, no multiple scoring per person.

SITE STAFF & PERSONNEL REQUIRED	MAXIMUM POINTS	BIDDER SCORE
CONSTRUCTION FOREMAN (MUST BE ON SITE AT ALL TIMES DURING CONSTRUCTION)		
1 point per project: Value of R2m to R4m	5	
2 point per project: Value of R4m to R7m	8	
3 point per project: Value of R7m to R10m	12	
5 point per project: Value of > R10m	15	
TOTAL (MAXIMUM 15 POINTS)		

To claim points for the above bidders must complete schedule T.2.2.1R and submit detailed Curriculum Vitae (CV) of each key personnel to be used/allocated for this Tender. The staff or personnel listed above must currently be employed by the Bidder company, if not then a letter stating such intent to employ this person, including this person's signature of willingness & acceptance for the intended duration of the

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project. CV experience listed of key staff must be relevant and current. Points can only be allocated once, meaning one-person-one-score, no multiple scoring. Please note the staff allocated to this Tender must be on-site and used for this Tender. If the person is unavailable during time of execution, he/she must be replaced with someone of equal or better value and experience and proof as per CV submitted.

NB: Relevant experience is defined as the accumulation of knowledge or skill that results from direct participation in relevant similar events or activities and/or as determined by the Karoo Hoogland Municipality and/or professional consulting engineer where applicable.

CRITERION 4: PLANT / TOOLS / EQUIPMENT

If the Bidder intend to use plant / tools / equipment other than those stipulated in the Tender Specifications the Bidder must qualify/declare this in their tender document, for the evaluation process. If nothing is qualified or declared, then those stipulated in the Tender Specifications are applicable to this Tender.

A maximum of thirty (30) points will be awarded based on the information provided.

The tenderer shall record on schedule T2.2.1U what plant / tools / equipment will be available specifically for this Contract. The tenderer shall differentiate, if applicable, between plant / tools / equipment immediately available plant / tools / equipment will be acquired or hired for the work should he be awarded the tender.

If no information is provided below or referred to an additional attachment **NO POINTS WILL BE AWARDED. Information must be provided under T2.2.1U.**

EQUIPMENT	OWNED BY BIDDER	INTENT TO RENT / HIRE	BIDDER SCORE
Excavator (> 25 ton)	10	6	
Hydraulic Breaking Hammer Rock Breaker for Excavator	5	3	
TLB	5	3	
Tip truck (minimum 6 m ³)	5	3	
Water truck	5	3	
TOTAL (MAXIMUM 30 POINTS)			

To claim points for the above "owned by bidder", bidders must submit the following information:

- (i) Relevant vehicle ownership certificates;
- (ii) Relevant plant verification details;
- (iii) If ownership certificates for the above-mentioned items are not available bidder can supply any other proof of ownership to be considered.
- (iv) If plant / tools / equipment, as stipulated above, will be rented, proof of the intention to lease it from the supplier must be submitted with the tender document. No points will be awarded if proof is not submitted.

Points will only be awarded for those equipment/plant/tools listed in Schedule T2.2.1U accompanied by the relevant documentation and the absence of information no points will be awarded to those equipment/plant/tools listed and will therefore be found non-responsive.

C.4.11 Subcontracting

- (a) The Contractor shall not subcontract the whole of the Contract. The Proposed Target for Local SMME Sub-Contracting will be 20 % of the contract value (excluding P&G, Contingencies, Lump Sumps, and Vat). The 20% represents both material and labour components. The main contractor will be responsible for all actions with regards to the execution of work by relevant local SMME Subcontractors. These actions should include the following but not be limited to:
 - Identify suitable portions of work;
 - Compilation of tender documents (must be presented to employer for approval);
 - Advertising for potential subcontractors;
 - Evaluation and appointment of subcontractors;
 - Appointing, managing and payment of subcontractors;

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- Monthly financial reporting.

The main contractor is responsible to adhere to the latest revision of the Participation Goal.

All matters pertaining to subcontractors (including Nominated Subcontractors) and the work executed by them shall be dealt with directly between the Employer's Agent and the Contractor in the context of all subcontract work being an integral part of the Works for which the Contractor is responsible.

The Employer's Agent will not liaise directly with any subcontractors, nor will he issue instructions concerning the subcontract works directly to any subcontractor. A list of possible local subcontractors can be obtained from the Employer's Agent.

All matters arising out of the subcontract agreements shall be dealt with directly between the Contractor and the subcontractors and the Employer's Agent will not become involved.

- (b) Except where otherwise provided by the Contract, the Contractor shall not subcontract any part of the Contract without the prior written consent of the Municipality, which consent shall not be unreasonably withheld.
- (c) The contractual relationship between the Contractor and any subcontractors selected by the Contractor in consultation with the Municipality in accordance with the requirements of and a procedure contained within the Scope of Work, shall be the same as if the Contractor had appointed the subcontractor in terms of paragraph (b) above.
- (d) Any consent granted in accordance with paragraph (b) or appointment of a subcontractor in accordance with paragraph (c) shall not imply a contract between the Municipality and the subcontractor, or a responsibility or liability on the part of the Municipality to the subcontractor and shall not relieve the Contractor from any liability or obligation under the Contract and he shall be liable for the acts, defaults and neglects of any subcontractor, his agents or employees as fully as if they were the acts, defaults or neglects of the Contractor, his agents or employees.
- (e) The Contractor shall not be required to obtain such consent for –
 - the provision of labour, or
 - the purchase of materials which are in accordance with the Contract, or
 - the purchase or hire of Construction Equipment.
- (f) Only Contractors registered on the Contractor Development Programme database of Karoo Hoogland Municipality to be used for any sub-contracting. Where there is a need for specialised sub-contractor not appearing on the database, approval must be sought from the Engineer and Employer to appoint specialised subcontractor.

C.4.13 Letter of Good Standing from the Commissioner of Compensation

- (a) A valid Letter of Good Standing from the Compensation Commissioner or a copy thereof, must accompany the bid documents.
- (b) In the case of a Consortium/Joint Venture every member must submit a separate valid Letter of Good Standing from the Compensation Commissioner or a copy thereof with the bid documents.
- (c) If a bid is not supported by a valid Letter of Good Standing from the Compensation Commissioner or a copy thereof, as an attachment to the bid documents, the Municipality reserves the right to obtain such document after the closing date. If no such document can be obtained within a period as specified by the Municipality, the bid will be disqualified.
- (d) If a bid is accompanied by proof of application for valid Letter of Good Standing from the Compensation Commissioner, the original or copy thereof must be submitted on/or before the final date of award.
- (e) Should a bidder's Letter of Good Standing from the Compensation Commissioner expire during the contract period, a valid certificate must be submitted within an agreed upon time.
- (f) The right is reserved to not award a tender if a valid Letter of Good Standing from the Compensation Commissioner or a copy thereof is not submitted within the requested time.

C.4.14 Joint Venture Information

In the case of a Trust, Consortium or Joint venture the following will apply:

The Trust, Consortium or Joint venture agreement must be submitted as part of the bid documents.

No amendments to Trust, Consortium or Joint venture agreement may be made without the prior approval of the Municipality; if not accepted by the Municipality and the Trust, Consortium or Joint venture continue without approval the Trust, Consortium or Joint venture contract can be cancelled as if poor performance had taken place. All members of the Trust, Consortium or Joint venture must submit, with the bid documents:

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- a) A valid tax clearance certificate or SARS tax pin, individually.
- a) An agreement that clearly provides clarity of Profit and liability sharing; and
- b) A resolution taken by the board of directors of the Consortium or Joint venture and other information that agrees with the Trust, Consortium or Joint venture agreement.

For the evaluation of functionality regarding a Consortium or Joint venture refer to the functionality section.

C.4.15

Proof of Locality: Should be in the form of lease agreement or municipal account registered to the tenderer's name. Should have permanently employed technical as well as administration staff available at the office.

FOR VIEWING PURPOSES ONLY

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CIDB Standard Conditions of Tender

Annexure C

C.1 General

C.1.1 Actions

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

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

Note: 1) *A conflict of interest may arise due to a conflict of roles which might provide an incentive for improper acts in some circumstances. A conflict of interest can create an appearance of impropriety that can undermine confidence in the ability of that person to act properly in his or her position even if no improper acts result.*

2) *Conflicts of interest in respect of those engaged in the procurement process include direct, indirect, or family interests in the tender or outcome of the procurement process and any personal bias, inclination, obligation, allegiance, or loyalty which would in any way affect any decisions taken.*

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

C.1.2 Tender Documents

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

C.1.3 Interpretation

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

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

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

- **conflict of interest** means any situation in which:
 - someone in a position of trust has competing professional or personal interests which make it difficult to fulfil his or her duties impartially;
 - an individual or tenderer can exploit a professional or official capacity in some way for their personal or corporate benefit; or
 - incompatibility or contradictory interests exist between an employee and the tenderer who employs that employee.
- **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;
- **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;
- **fraudulent practice** means the misrepresentation of the facts 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;

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C.1.4 Communication and employer's agent

Each communication between the employer and a tenderer shall be to or from the employer's agent only, and in a form that can be readily read, copied, and recorded. Communications shall be in the English language. The employer shall not take any responsibility for non-receipt of communications from or by a tenderer. The name and contact details of the employer's agent are stated in the tender data.

C.1.5 Cancellation and Re-Invitation of Tenders

C.1.5.1 An employer may, prior to the award of the tender, cancel a tender if:

- due to changed circumstances, there is no longer a need for the engineering and construction works specified in the invitation;
- funds are no longer available to cover the total envisaged expenditure; or
- no acceptable tenders are received.
- there is a material irregularity in the tender process.

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

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

C.1.6 Procurement procedures

C.1.6.1 General

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

C.1.6.2 Competitive negotiation procedure

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

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

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

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

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

C.1.6.3 Proposal procedure using the two stage-system

C.1.6.3.1 Option 1

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

C.1.6.3.2 Option 2

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

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

C.2 Tenderer's obligations

C.2.1 Eligibility

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

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

C.2.2 Cost of tendering

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

C.2.2.2 Payment for tender documents, if specified, can be made via EFT or cash payments to the Municipality. Documents can be obtained on the Municipality website.

C.2.2.3 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.

C.2.3 Check documents

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

C.2.4 Confidentiality and copyright of documents

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

C.2.5 Reference documents

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

C.2.6 Acknowledge addenda

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

C.2.7 Clarification meeting

Bidders should be represented at the compulsory clarification meeting and site inspection by a technical employee from the prospective bidder who is suitably qualified and experienced to comprehend the implications of the work involved. Relevant representative may only represent one company at meeting. A single person cannot represent two Tenderers at the clarification meeting and site visit. The attend representing the Tenderer at the clarification meeting must familiarize themselves with aspects of the proposed work, services or supply and raise questions. Details of the meeting(s) are stated in the tender data.

C.2.8 Seek clarification

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

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C.2.9 Insurance

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

C.2.10 Pricing the tender offer

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

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

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

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

C.2.11 Alterations to documents

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

C.2.12 Alternative tender offers

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

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

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

C.2.13 Submitting a tender offer

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

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

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

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

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

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

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

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

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

C.2.14 Information and data to be completed in all respects

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

C.2.15 Closing time

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

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

C.2.16 Tender offer validity

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

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

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

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

C.2.17 Clarification of tender offer after submission

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

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

C.2.18 Provide other material

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

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

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

C.2.19 Inspections, tests, and analysis

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

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C.2.20 Submit securities, bonds, and policies

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

C.2.21 Check final draft

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

C.2.22 Return of other tender documents

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

C.2.23 Certificates

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

C.3 The employer's undertakings

C.3.1 Respond to requests from the tenderer

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

C.3.1.2 Consider any request to make a material change in the capabilities or formation of the tendering entity (or both) or any other criteria which formed part of the qualifying requirements used to prequalify a tenderer to submit a tender offer in terms of a previous procurement process and deny any such request if consequently:

- an individual firm, or a joint venture, or any individual member of the joint venture fails to meet any of the collective or individual qualifying requirements;
- the new partners to a joint venture were not prequalified in the first instance, either as individual firms or as another joint venture; or
- in the opinion of the Employer, acceptance of the material change would compromise the outcome of the prequalification process.

C.3.2 Issue Addenda

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

C.3.3 Return late tender offers

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

C.3.4 Opening of tender submissions

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

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

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

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C.3.5 Two-envelope system

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

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

C.3.6 Non-disclosure

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

C.3.7 Grounds for rejection and disqualification

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

C.3.8 Test for responsiveness

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

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

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

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

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

C.3.9 Arithmetical errors, omissions, and discrepancies

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

C.3.9.2 Check the highest ranked tender or tenderer with the highest number of tender evaluation points after the evaluation of tender offers in accordance with C.3.11 for:

- the gross misplacement of the decimal point in any unit rate;
- omissions made in completing the pricing schedule or bills of quantities; or
- arithmetic errors in:
 - line-item totals resulting from the product of a unit rate and a quantity in bills of quantities or schedules of prices; or
 - the summation of the prices.

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

C.3.9.4 Where the tenderer elects to confirm the tender offer as tendered, correct the errors as follows:

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If bills of quantities or pricing schedules apply and there is an error in the line-item total resulting from the product of the unit rate and the quantity, the line-item total shall govern and the rate shall be corrected. Where there is an obviously gross misplacement of the decimal point in the unit rate, the line-item total as quoted shall govern, and the unit rate shall be corrected.

- b) Where there is an error in the total of the prices either because of other corrections required by this checking process or in the tenderer's addition of prices, the total of the prices shall govern, and the tenderer will be asked to revise selected item prices (and their rates if bills of quantities apply) to achieve the tendered total of the prices.

C.3.10 Clarification of a tender offer

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

C.3.11 Evaluation of tender offers

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

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

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

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The activities associated with evaluating tender offers are as follows:

- Open and record tender offers received.
- Determine whether tender offers are complete.
- Determine whether tender offers are responsive.
- Evaluate tender offers.
- Determine if there are any grounds for disqualification.
- Determine acceptability of preferred tenderer
- Prepare a tender evaluation report.
- Confirm the recommendation contained in the tender evaluation report.

C.3.11.1 General

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

C.3.12 Insurance provided by the employer

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

C.3.13 Acceptance of tender offer

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

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

C.3.14 Prepare contract documents

C.3.14.1 If necessary, revise documents that shall form part of the contract and that were issued by the employer as part of the tender documents to take account of:

- addenda issued during the tender period,
- inclusion of some of the returnable documents and
- other revisions agreed between the employer and the successful tenderer.

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

C.3.15 Complete adjudicator's contract

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

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C.3.16 Registration of the award

An employer must, within twenty-one (21) working days from the date on which a contractor's offer to perform drilling project is accepted in writing by the employer, register and publish the award on the tender platform advertised.

C.3.17 Provide copies of the contracts

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

C.3.18 Provide written reasons for actions taken

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

FOR VIEWING PURPOSES ONLY

PART T2: RETURNABLE DOCUMENTS

T2.1 List of Returnable Documents

T2.2 Returnable Schedules

FOR VIEWING PURPOSES ONLY

T2.1: LIST OF RETURNABLE DOCUMENTS

The following documents are to be completed and returned as they constitute the tender. Whilst many of the returnable are required for the purpose of evaluating the tenders, some will form part of the subsequent contract, as they form the basis of the tender offer. For this reason, it is very important that tenderers return **all information requested**. Tender to confirm in right hand column by inserting a tick that document has been completed and returned.

1	Returnable Schedules required for tender evaluation purposes (Included hereafter for completion)	
	T2.2.1A Certificate of Attendance of the Tender Information Meeting	☐
	T2.2.1B Record of Addenda to Tender Documents	☐
	T2.2.1C Compulsory Enterprise Questionnaire	☐
	T2.2.1D Certificate of Authority for Joint Venture	☐
	T2.2.1E Proposed Amendments and Qualifications	☐
	T2.2.1F Declaration of Interest	☐
	T2.2.1G Declaration of Bidder's past Supply Chain Management Practices	☐
	T2.2.1H Preferential Procurement Schedule (MDB 6.1)	☐
	T2.2.1I Schedule of Estimated Monthly Expenditure	☐
	T2.2.1J Certificate of Independent BID Determinate (MBD 9)	☐
	T2.2.1K Schedule of Special Materials	☐
	T2.2.1L Company Details	☐
	T2.2.1M Schedule of Estimated Local Labor to be Employed on this Contract	☐
	T2.2.1N Preliminary Program	☐
	T2.2.1O 'Preliminary and General' Variation Applicable to the Negative Variation of the Scope of the Works	☐
	T2.2.1P Certificate for Authority of Signatory	☐
	T2.2.1R Details of Construction Manager's & General Foreman's Experience	☐
	T2.2.1S Schedule of Tenderer's Experience	☐
	T2.2.1U Schedule of Plant and Equipment	☐
	T2.2.1V Declaration	☐
	T2.2.1W The Resolution Taken by The Board of Directors of a Consortium Or Joint Venture	☐
	T.2.21X Municipal Rates and Taxes	☐
	T.2.2.1Y Declaration for procurement above 10 million (MBD5)	☐
2	Other documents required for tender evaluation purposes	
	T2.2.2A Proof of Address and South African Identity Document	☐
	T2.2.2B Tax Compliance Status Pin	☐
	T2.2.2C Bid for the Requirements of the Karoo Hoogland Municipality	☐
	T2.2.2D Certificate of Contractor Registration issued by the Construction Industry Development Board (CIDB)	☐
3	Returnable Schedules that will be incorporated into the Contract	
	T2.2.3A Schedule of Sub-Contractors	☐
4	Other documents that will be incorporated into the Contract	
	(Part C1.1) Form of Offer and Acceptance	☐
	(Part C1.2) Contract Data	☐
	(Part C2.2) Schedule of Quantities	☐

T2.2

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T2.2.1: RETURNABLE SCHEDULES REQUIRED FOR TENDER EVALUATION PURPOSES

FOR VIEWING PURPOSES ONLY

T2.2.1A: CERTIFICATE OF ATTENDANCE OF THE TENDER INFORMATION MEETING

This is to certify that:

____ (Tenderer)

of _____ (address)

was represented by the person(s) named below at the meeting held for all tenderers at Sutherland

(location) on _____ (date), starting at _____

We acknowledge that the purpose of the meeting was to acquaint ourselves with the site of the works and / or matters incidental to doing the work specified in the tender documents for us to take account of everything necessary when compiling our rates and prices included in the tender.

Particulars of person(s) attending the meeting:

Name _____

Signature _____

Capacity _____

Name _____

Signature _____

Capacity _____

Attendance of the above persons at the meeting is confirmed by the Employer's representative, namely

Name Awie Vlok

Signature _____

Capacity Employers Agent

Date & Time _____

T2.2.1B: RECORD OF ADDENDA TO TENDER DOCUMENTS

We confirm that the following communications received from the Procuring Department before the submission of this tender offer, amending the tender documents, have been considered in this tender offer:

No.	Date	Title or Details
1.		Clarification Meeting Minutes (If meeting were held)
2.		
3.		
4.		
5.		
6.		
7.		
8.		
9.		
10.		

Attach additional pages if more space is required.

Name _____ Signature _____

Capacity _____ Date _____

T2.2.1C: COMPULSORY ENTERPRISE QUESTIONNAIRE

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

Section 1: Name of enterprise:

Section 2: VAT registration number, if any:

Section 3: cidb registration number, if any:

Section 4: CSD number:

Section 5: 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 6: Particulars of companies and close corporations

Company registration number:

Close corporation number:

Tax reference number:

Section 7: SBD4 issued by National Treasury must be completed for each tender and be attached as a tender requirement.

Section 8: SBD 6 issued by National Treasury must be completed for each tender and be attached as a tender requirement.

Section 9: SBD8 issued by National Treasury must be completed for each tender and be attached as a tender requirement.

Section 10: SBD9 issued by National Treasury must be completed for each tender and be attached as a tender requirement.

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

- authorizes the employer to verify the tenderers tax clearance status from the South African Revenue Services that it is 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; and
- confirms that the contents of this questionnaire are within my personal knowledge and are to the best of my belief both true and correct.

Signed		Date	
Name		Position	
Enterprise name			

T2.2.1D: CERTIFICATE OF AUTHORITY FOR JOINT VENTURES

This Returnable Schedule is to be completed by joint ventures.

We, the undersigned, are submitting this tender offer in Joint Venture and hereby authorise Mr/Ms
, authorised signatory of the company
, 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 AUTHORISED SIGNATORY
Lead partner		Signature. Name Designation
.....		Signature. Name Designation
.....		Signature. Name Designation
.....		Signature. Name Designation

T2.2.1E: PROPOSED AMENDMENTS AND QUALIFICATIONS

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 to his tender and reference such letter in this schedule.

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

Tenderers must not include deviations or qualifications relating to the scope of work in this schedule where they are required to submit an Approach Paper.

Page	Clause or item	Proposal

Name _____ Signature _____

Capacity _____ Date _____

T2.2.1F: DECLARATION OF INTEREST (MBD 4)

1. No bid will be accepted from persons in the service of the state*.
2. Any person, having a kinship with persons in the service of the state, including a blood relationship, may make an offer or offers in terms of this invitation to bid. In view of possible allegations of favouritism, should the resulting bid, or part thereof, be awarded to persons connected with or related to persons in service of the state, it is required that the bidder or their authorised representative declare their position in relation to the evaluating/adjudicating authority.

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

- 3.1 Full Name of bidder or his or her representative:.....
- 3.2 Identity Number:.....
- 3.3 Position occupied in the Company (director, trustee, shareholder?):.....
- 3.4 Company registration number:.....
- 3.5 Tax Reference Number:
- 3.6 VAT Registration Number:
- 3.7 The names of all directors / trustees / shareholders members, their individual identity numbers and state employee numbers must be indicated in paragraph 4 below.
- 3.8 Are you presently in the service of the state? **YES / NO**
- 3.8.1 If so, furnish particulars.
.....
.....
- 3.9 Have you been in the service of the state for the past twelve months? **YES / NO**
- 3.9.1 If so, furnish particulars.
.....

* MSCM Regulations: "in the service of the state" means to be –

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

- 3.10 Do you, have any relationship (family, friend, other) with persons in the service of the state and who may be involved with the evaluation and or adjudication of this bid? **YES / NO**
- 3.10.1 If so, furnish the following particulars:
.....

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

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3.11.1 If so, furnish particulars.

.....

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

3.12.1 If so, furnish particulars.

.....

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

3.13.1 If so, furnish particulars.....

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

3.14.1 If yes, furnish particulars:.....

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

Full Name	Identity Number	State Employee Number	Income Tax Number

.....
Signature

.....
Date

.....
Position

.....
Name of Bidder

T2.2.1G: DECLARATION OF BIDDER'S PAST SUPPLY CHAIN MANAGEMENT PRACTICES (MBD 8)

- (a) This Municipal Bidding Document must form part of all bids invited.
- (b) 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.
- (c) 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).
- (d) 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 of Restricted Suppliers as companies or persons prohibited from doing business with the public sector? (Companies or persons who are listed on this Database were informed in writing of this restriction by the Accounting Officer/Authority of the institution that imposed the restriction after the <i>audi alteram partem</i> rule was applied). The Database of Restricted Suppliers now resides on the National Treasury's website (www.treasury.gov.za) and can be accessed by clicking on its link at the bottom of the home page.	Yes ☐	No ☐
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)? The Register for Tender Defaulters can be accessed on the National Treasury's website (www.treasury.gov.za) by clicking on its link at the bottom of the home page.	Yes ☐	No ☐
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 three months?	Yes ☐	No ☐

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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 ☐
4.7.1	If so, furnish particulars:		

CERTIFICATION

I, THE UNDERSIGNED (FULL NAME) CERTIFY THAT THE INFORMATION FURNISHED ON THIS DECLARATION FORM 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.

Name _____ Signature _____

Capacity _____ Date _____

FOR VIEWING PURPOSES ONLY

T2.2.1H: PREFERENTIAL PROCUREMENT SCHEDULE**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

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

- (a) The 90/10 or 80/20 preference point system will be applicable in this tender. The lowest (goods and services) / highest (sales and leases) 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	POINTS
PRICE	80	90
SPECIFIC GOALS	20	10
Total points for Price and SPECIFIC GOALS	100	100

1.5 Failure on the part of a tenderer to claim points for specific goals with the tender, will be interpreted to mean that preference points for specific goals are not claimed. The tenderer is however required to submit the proof or documentation required in terms of the specific goals. That documentation may be requested by the municipality.

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

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public auctions; and

(e) “The Act” means the Preferential Procurement Policy Framework Act, 2000 (Act No. 5 of 2000).

3. FORMULAE FOR PROCUREMENT OF GOODS AND SERVICES

3.1. POINTS AWARDED FOR PRICE

3.1.1 THE 80/20 OR 90/10 PREFERENCE POINT SYSTEMS

A maximum of 80 or 90 points is allocated for price on the following basis:

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

80/20 or 90/10

Were

Ps = Points scored for price of tender under consideration

Pt = Price of tender under consideration

Pmin = Price of lowest acceptable tender

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

3.2.1. POINTS AWARDED FOR PRICE

A maximum of 80 or 90 points is allocated for price on the following basis:

$$Ps = 80 \left(1 + \frac{Pt - P_{max}}{P_{max}} \right) \quad \text{or} \quad Ps = 90 \left(1 + \frac{Pt - P_{max}}{P_{max}} \right)$$

80/20 or 90/10

Were

Ps = Points scored for price of tender under consideration

Pt = Price of tender under consideration

Pmax = Price of highest acceptable tender

4. POINTS AWARDED FOR SPECIFIC GOALS

4.1. In terms of Karoo Hoogland Municipality Preferential Procurement Policy, preference points must be awarded for specific goals stated in the tender. For the purposes of this tender the tenderer will be allocated points based on the goals stated in table 1 below as may be supported by proof/ documentation stated in the conditions of this tender:

4.2. In cases where organs of state intend to use Regulation 3(2) of the Regulations, which states that, if it is unclear whether the 80/20 or 90/10 preference point system applies, an organ of state must, in the tender documents, stipulate in the case of:

- (a) an invitation for tender for income-generating contracts, that either the 80/20 or 90/10 preference point system will apply and that the highest acceptable tender will be used to determine the applicable preference point system; or
- (b) any other invitation for tender, that either the 80/20 or 90/10 preference point system will apply and that the lowest acceptable tender will be used to determine the applicable preference point system, then the organ of state must indicate the points allocated for specific goals for both the 90/10 and 80/20 preference point system.

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

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

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

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- 4.3.** 50% of the 20/10 points will be allocated to promote this goal and points will be allocated in terms of the scorecard as follows.

The specific goals allocated points in terms of this tender	Number of points allocated (90/10 system) (To be completed by the organ of state)	Number of points allocated (80/20 system) (To be completed by the organ of state)	Number of points claimed (90/10 system) (To be completed by the tenderer)	Number of points claimed (80/20 system) (To be completed by the tenderer)
Youth				
Age of participant				
Above 35 years of age	2	4		
35 years and below of age	5	10		
*Locality	5	10		
Total Points	10	20		

4.3.1 YOUTH CLAIMED IN TERMS OF PARAGRAPHS 4.3

Youth (indicate as per table above) :

(Official South African Identity will be used to establish whether the individual falls 35 and below of age to be classified as youth)

4.4. Points for specific goals to promote suppliers or service providers located in a province, district or municipal area / (hereafter referred to as locality)

- (a) Each tender must specify in the invitation to tender that a maximum of 50% of the 20/10 points will be allocated to promote the specific goal of locality.
- (b) Only one of the points as set out below that best describes the enterprise's locality may be awarded if applicable.

Procurement Preference Points System	Location			
	Karoo Hoogland Municipal Area	Nama Khoi District Municipality Area	Northern Cape Province	Other Provinces of SA
80/20	10	7	5	2
90/10	5	4	3	1

- (a) Bidders must submit one of the following to receive points for the abovementioned criterion.

- (i) Municipal Account of address as indicated in bid document.
- (ii) If the address as indicated in the bid document is not in the name of the bidder, the latest lease agreement for this address or affidavit of the owner stating occupancy.
- (iii) The premises of the bidder as indicated in MBD6.1 of the bid document as the business address should be established prior to the advertisement date.

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4.4.1 LOCALITY CLAIMED IN TERMS OF PARAGRAPHS 4.4

Locality (indicate as per table above) :

(The address provided in 4.5 below, will be used to determine the locality as per 4.4 above)

4.5. MUNICIPAL INFORMATION

Municipality where business is situated :

Registered Account Number :

Stand Number :

DECLARATION WITH REGARD TO COMPANY/FIRM

4.6. Name of company/firm.....

4.7. Company registration number:

4.8. TYPE OF COMPANY/ FIRM

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

[TICK APPLICABLE BOX]

4.9. 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 because 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 because of that person's conduct;
 - (c) cancel the contract and claim any damages which it has suffered because 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.

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WITNESSES

1.

2.

.....
SIGNATURE(S) OF BIDDERS(S)

DATE:

ADDRESS:

.....

.....

FOR VIEWING PURPOSES ONLY

T2.2.1I: 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
SUBTOTAL	R
CONTINGENCIES(10%)	R
SUBTOTAL	R
VAT (15%)	R
TOTAL	R VAT @ 15%)

Name _____

Signature_____

Capacity _____

Date_____

T2.2.1J: CERTIFICATE OF INDEPENDENT BID DETERMINATION**MBD 9****CERTIFICATE OF INDEPENDENT BID DETERMINATION**

- 1 This Municipal Bidding Document (MBD) must form part of all bids¹ invited.
- 2 Section 4 (1) (b) (iii) of the Competition Act No. 89 of 1998, as amended, prohibits an agreement between, or concerted practice by, firms, or a decision by an association of firms, if it is between parties in a horizontal relationship and if it involves collusive bidding (or bid rigging).² Collusive bidding is a per se prohibition meaning that it cannot be justified under any grounds.
- 3 Municipal Supply Regulation 38 (1) prescribes that a supply chain management policy must provide measures for the combating of abuse of the supply chain management system, and must enable the accounting officer, among others, to:
 - a. take all reasonable steps to prevent such abuse;
 - b. reject the bid of any bidder if that bidder or any of its directors has abused the supply chain management system of the municipality or municipal entity or has committed any improper conduct in relation to such system; and
 - c. cancel a contract awarded to a person if the person committed any corrupt or fraudulent act during the bidding process or the execution of the contract.
- 4 This MBD serves as a certificate of declaration that would be used by institutions to ensure that, when bids are considered, reasonable steps are taken to prevent any form of bid-rigging.
- 5 In order to give effect to the above, the attached Certificate of Bid Determination (MBD9) must be completed and submitted with the bid:

¹ Includes price quotations, advertised competitive bids, limited bids, and proposals.

² Bid rigging (or collusive bidding) occurs when businesses, that would otherwise be expected to compete, secretly conspire to raise prices, or lower the quality of goods and / or services for purchasers who wish to acquire goods and / or services through a bidding process. Bid rigging is, therefore, an agreement between competitors not to compete.

CERTIFICATE OF INDEPENDENT BID DETERMINATION

I, the undersigned, in submitting the accompanying bid:

 (Bid Number and Description)

in response to the invitation for the bid made by:

Karoo Hoogland Municipality
 (Name of Municipality / Municipal Entity)

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 Bidder)

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MBD 9

1. I have read, and I understand the contents of this Certificate;
2. I understand that the accompanying bid will be disqualified if this Certificate is found not to be true and complete in every respect;
3. I am authorized by the bidder to sign this Certificate, and to submit the accompanying bid, on behalf of the bidder;
4. Each person whose signature appears on the accompanying bid has been authorized by the bidder to determine the terms of, and to sign, the bid, on behalf of the bidder;
5. For the purposes of this Certificate and the accompanying bid, I understand that the word "competitor" shall include any individual or organization, other than the bidder, whether affiliated with the bidder, who:
 - (a) has been requested to submit a bid in response to this bid invitation;
 - (b) could potentially submit a bid in response to this bid invitation, based on their qualifications, abilities or experience; and
 - (c) provides the same goods and services as the bidder and/or is in the same line of business as the bidder
6. The bidder has arrived at the accompanying bid independently from, and without consultation, communication, agreement, or arrangement with any competitor. However, communication between partners in a joint venture or consortium³ will not be construed as collusive bidding.
7. In particular, without limiting the generality of paragraphs 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 bid;
 - (e) the submission of a bid which does not meet the specifications and conditions of the bid; or
 - (f) bidding with the intention not to win the bid.
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 bid invitation relates.
9. The terms of the accompanying bid have not been, and will not be, disclosed by the bidder, directly or indirectly, to any competitor, prior to the date and time of the official bid opening or of the awarding of the contract.
10. I am aware that, in addition and without prejudice to any other remedy provided to combat any restrictive practices related to bids and contracts, bids that are suspicious will be reported to the Competition Commission for investigation and possible imposition of administrative penalties in terms of section 59 of the Competition Act No. 89 of 1998 and or may be reported to the National Prosecuting Authority (NPA) for criminal investigation and or may be restricted from conducting business with the public sector for a period not exceeding ten (10) years in terms of the Prevention and Combating of Corrupt Activities Act No. 12 of 2004 or any other applicable legislation.

Name _____ Signature _____

Capacity _____ Date _____

³ Joint venture or Consortium means an association of persons for the purpose of combining their expertise, property, capital, efforts, skill and knowledge in an activity for the execution of a contract.

T2.2.1L: COMPANY DETAILS**Notes to tenderer:**

- a) The tenderer shall attach to this form a letter from the bank at which he declares he conducts his account. The contents of the bank's letter must state the credit rating that it, in addition to the information required below, accords to the tenderer for the business envisaged by this tender. The minimum acceptable credit rating applicable to tenderers for this project is a C credit rating. Failure to provide the required letter with the tender submission may render the tenderer's offer nonresponsive in terms of tender condition C.3.8.
- b) The tenderer's banking details as they appear below shall be completed.
- c) If the tenderer is a joint venture enterprise, details of all the members of the joint venture shall be similarly provided and attached to this form.

The following company details schedule must be completed to ensure that the prerequisite requirements to tendering are met.

Registered Company Name:

.....

Company Registration Number:

VAT Number:

SARS Tax Reference:

Bank Name and Branch:

Branch Number

Bank Account Number:

Bank Rating:

Type of Account

Contact Person at Bank

Telephone number of contact person at bank

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

Name

Signature

Capacity

Date

T2.2.1M: SCHEDULE OF ESTIMATED LOCAL LABOUR TO BE EMPLOYED ON THIS CONTRACT

DESCRIPTION OF TASK/ELEMENT/TRADE	NO. OF ARTISANS AND/OR SKILLED LABOUR	NO. OF SEMI-SKILLED LABOUR	NO. OF LABOURERS	NO. OF OTHERS	TOTAL LABOUR/TASK
TOTAL ACTUAL LABOUR: _____					

Note: Where the same labour is to be re-used on various tasks the Total Labour/Tasks and the Total Actual Labour will differ.

Name _____ Signature _____

Capacity _____ Date _____

T2.2.1N: PRELIMINARY PROGRAM (FOR INFORMATION PURPOSES ONLY)

The tenderer shall attach a preliminary programme, to this schedule.

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.

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).

Name _____ Signature _____

Capacity _____ Date _____

FOR VIEWING PURPOSES ONLY

T2.2.10: 'PRELIMINARY AND GENERAL' VARIATION APPLICABLE TO THE NEGATIVE VARIATION OF THE SCOPE OF THE WORKS

The tenderer must insert in the spaces provided below the variation amount applicable with respect to the items in the Preliminary and General Section should the scope of the works be varied negatively (reduced) to comply with the budget allowance.

The amount inserted in this schedule must indicate by how much the tendered rates will be reduced if the tender amount (Excluding VAT) is reduced by one of the three values shown at the top of the column.

PAYMENT REFERS	ITEM No	SHORT DESCRIPTION	UNIT	VALUE OF NEGATIVE VARIATION		
				R1 000 000	R2 000 000	R3 000 000
SABS 1200A		<u>GENERAL</u> as specified in SABS 1200A and in the project specifications				
PSA 8.3		Scheduled fixed charge and value-related items:				
PSA 8.3.1		.01 Fixed preliminary and general charges	sum			
PSA 8.4.1		Time-related preliminary and general charges				
		.01 Time-related preliminary and general charges	sum			

Name _____ Signature _____

Capacity _____ Date _____

T2.2.1P: CERTIFICATE FOR AUTHORITY OF SIGNATORY

Indicate the status of the tenderer by ticking the appropriate box hereunder. The tenderer must complete the certificate set out below for the relevant category.

A Company	B Partnership	C Joint Venture	D Sole Proprietor	E Close Corporation

- Certificate for Company**

I, _____, chairperson of the board of directors of _____, hereby confirm that by resolution of the board (copy attached) taken on _____ 20____, Mr/Ms _____ acting in the capacity of _____, was authorized to sign all documents in connection with this tender and any contract resulting from it on behalf of the company.

As witnesses:

- _____ Chairman _____

_____ Date _____
- _____

- Certificate for Partnership**

We, the undersigned, being the key partners in the business trading as _____, hereby authorize Mr/Mrs _____ acting in the capacity of _____ to sign all documents in connection with the tender for Contract _____ and any contract resulting from it on our behalf.

NAME	ADDRESS	SIGNATURE	DATE

NOTE : This certificate is to be completed and signed by all of the key partners upon whom rests the direction of the affairs of the Partnership as a whole

- Certificate for Joint Venture**

We, the undersigned, are submitting this tender offer in Joint Venture and hereby authorize Mr/Mrs _____, authorized signatory of the company, close corporation or partnership,

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_____, acting in the capacity of lead partner, to sign all documents in connection with the tender offer for Contract _____ and any contract resulting from it on our behalf.

This authorization is evidenced by the attached power of attorney signed by legally authorized signatories of all the partners to the Joint Venture.

NAME OF FIRM	ADDRESS	AUTHORISING SIGNATURE, NAME & CAPACITY
Lead partner		

NOTE: A copy of the Joint Venture Agreement clearly showing the percentage contribution of each partner to the Joint Venture shall be appended to this schedule.

• **Certificate for Sole Proprietor**

I, _____ hereby confirm that I am the sole owner of the business trading as _____

As witnesses:

Signature : Sole owner

1.

Date

2.

• **Certificate for Close Corporation**

We, the undersigned, being the key members in the business trading as _____

_____ hereby authorize Mr/Mrs _____

acting in the capacity of _____, to sign all documents in connection with the tender

for Contract _____

and any contract resulting from it on our behalf.

NAME	ADDRESS	SIGNATURE	DATE

NOTE: This certificate is to be completed and signed by all of the key partners upon whom rests the direction of the affairs of the Partnership as a whole.

T2.2.1R: DETAILS OF CONSTRUCTION MANAGER & CONSTRUCTION FOREMAN

Tenderers shall set out in the Schedule hereunder details of the relevant personnel experience for 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. **CV's must be attached to this schedule for personnel listed below. (Refer to variations to Standard Conditions of Tender Clause C.4.9 for detail on functionality scoring of proposed personnel.)**

FAILURE TO PROVIDE INFORMATION AS STIPULATED IN THE TABLES BELOW WITH YOUR TENDER SUBMISSION, WILL RESULT IN CRITERION 2 OF FUNCTIONALITY NOT BEING EVALUATED.

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

FAILURE TO PROVIDE INFORMATION AS STIPULATED IN THE TABLES BELOW WITH YOUR TENDER SUBMISSION, WILL RESULT IN CRITERION 3 OF FUNCTIONALITY NOT BEING EVALUATED.

CONSTRUCTION FOREMAN	NAME: _____				
	NQF LEVEL QUALIFICATION _____				
CONTRACT & CLIENT	NATURE OF WORK	POSITION HELD	VALUE OF WORK	YEAR COMPLETED	DURATION

Name _____ Signature _____

Capacity _____ Date _____

T2.2.1S: SCHEDULE OF TENDERER'S EXPERIENCE

Information requested under **Criterion 1** of the functionality, must be attached to this schedule. To claim points for company experience of the main contractor the tender must submit a reference letter, as stated in *Criterion 1: Reference Related to Experience* for each of the projects listed in Schedule T.2.2.1S.

Points will only be awarded for those projects listed in Schedule T.2.2.1S verified by a reference letter as stated above. Projects listed in Schedule T.2.2.1S will not be considered for evaluation in the absence of a relevant reference letter and no points will be awarded to those projects listed and will therefore be found non-responsive.

Project 1	
Employer, contact person and telephone number	
Consulting Engineer	
Contact person and telephone number	
Description of Contract and nature of work	
Value of Work Inclusive of VAT (Rand)	
Start and completion date (month and year) Duration	
Project 2	
Employer, contact person and telephone number	
Consulting Engineer	
Contact person and telephone number	
Description of Contract and nature of work	
Value of Work Inclusive of VAT (Rand)	
Start and completion date (month and year) Duration	

Name _____ Signature _____

Capacity _____ Date _____

T2.2.1S: SCHEDULE OF TENDERER'S EXPERIENCE

Information requested under Criterion 1 of the functionality, must be attached to this schedule. To claim points for company experience of the main contractor the tender must submit a reference letter, as stated in *Criterion 1: Reference Related to Experience* for each of the projects listed in Schedule T.2.2.1S.

Points will only be awarded for those projects listed in Schedule T.2.2.1S verified by a reference letter as stated above. Projects listed in Schedule T.2.2.1S will not be considered for evaluation in the absence of a relevant reference letter and no points will be awarded to those projects listed and will therefore be found non-responsive.

Project 3	
Employer, contact person and telephone number	
Consulting Engineer	
Contact person and telephone number	
Description of Contract and nature of work	
Value of Work Inclusive of VAT (Rand)	
Start and completion date (month and year) Duration	

Project 4	
Employer, contact person and telephone number	
Consulting Engineer	
Contact person and telephone number	
Description of Contract and nature of work	
Value of Work Inclusive of VAT (Rand)	
Start and completion date (month and year) Duration	

Name _____ Signature _____

Capacity _____ Date _____

T2.2.1S: SCHEDULE OF TENDERER'S EXPERIENCE

Information requested under Criterion 1 of the functionality, must be attached to this schedule. To claim points for company experience of the main contractor the tender must submit a reference letter, as stated in *Criterion 1: Reference Related to Experience* for each of the projects listed in Schedule T.2.2.1S.

Points will only be awarded for those projects listed in Schedule T.2.2.1S verified by a reference letter as stated above. Projects listed in Schedule T.2.2.1S will not be considered for evaluation in the absence of a relevant reference letter and no points will be awarded to those projects listed and will therefore be found non-responsive.

Project 5	
Employer, contact person and telephone number	
Consulting Engineer	
Contact person and telephone number	
Description of Contract and nature of work	
Value of Work Inclusive of VAT (Rand)	
Start and completion date (month and year) Duration	

Project 6	
Employer, contact person and telephone number	
Consulting Engineer	
Contact person and telephone number	
Description of Contract and nature of work	
Value of Work Inclusive of VAT (Rand)	
Start and completion date (month and year) Duration	

Name _____ Signature _____

Capacity _____ Date _____

T2.2.1S: SCHEDULE OF TENDERER'S EXPERIENCE

Information requested under Criterion 1 of the functionality, must be attached to this schedule. To claim points for company experience of the main contractor the tender must submit a reference letter, as stated in *Criterion 1: Reference Related to Experience* for each of the projects listed in Schedule T.2.2.1S.

Points will only be awarded for those projects listed in Schedule T.2.2.1S verified by a reference letter as stated above. Projects listed in Schedule T.2.2.1S will not be considered for evaluation in the absence of a relevant reference letter and no points will be awarded to those projects listed and will therefore be found non-responsive.

Project 7	
Employer, contact person and telephone number	
Consulting Engineer	
Contact person and telephone number	
Description of Contract and nature of work	
Value of Work Inclusive of VAT (Rand)	
Start and completion date (month and year) Duration	

Project 8	
Employer, contact person and telephone number	
Consulting Engineer	
Contact person and telephone number	
Description of Contract and nature of work	
Value of Work Inclusive of VAT (Rand)	
Start and completion date (month and year) Duration	

Name _____ Signature _____

Capacity _____ Date _____

T2.2.1U: SCHEDULE OF PLANT AND EQUIPMENT
--

(INFORMATION MUST BE SUBMITTED WITH INITIAL TENDER SUBMISSION)

The following are lists of major items of relevant equipment that I/we **presently** own or lease and will have available for this contract or will acquire or hire for this contract if my/our tender is accepted.

- (a) Details of major equipment that is owned by and immediately available for this contract.

[illegible]

Attach additional pages if more space is required.

- (b) Details of major equipment that will be hired or acquired for this contract if my/our tender is acceptable.

[illegible]

If plant / tools / equipment, as stipulated above, will be rented, proof of the intention to lease it from the supplier must be submitted with the tender document. No points will be awarded if proof is not submitted.

After the award of the contract, the contractor must satisfy the engineer that all the above equipment or equivalent equipment will be always on the site when required. The contractor shall maintain all equipment in a good working order for the duration of the contract. The contractor also undertakes to bring onto the site, without additional costs to the employer, any additional equipment which, in the opinion of the engineer, is necessary for completing the contract within the tendered contract period.

Name _____ Signature _____

Capacity _____ Date _____

FOR VIEWING PURPOSES ONLY

T2.2.1V: DECLARATION

SECTION 5: DECLARATION

I hereby declare that I have read, understood, agree and comply with all of the sections below, if included, that it shall be deemed to form and be construed as part of this agreement:

- Bidding documents;
- Invitation to bid;
- Tax clearance certificate;
- Pricing schedule(s);
- Technical Specification(s);
- Preference claims for Broad Based Black Economic Empowerment Status Level of Contribution in terms of the Preferential Procurement Regulations, 2017;
- Declaration of interest;
- Declaration of bidder's past SCM practices;
- Certificate of Independent Bid Determination
- Special Conditions of Contract;
- General Conditions of Contract; and
- Other (specify)

I confirm that I am duly authorised to sign this document.

NAME (PRINT)

CAPACITY

SIGNATURE

NAME OF FIRM

DATE

WITNESSES

1.

2.

DATE:

**T2.2.1W: THE RESOLUTION TAKEN BY THE BOARD OF DIRECTORS OF A
CONSORTIUM OR JOINT VENTURE**

RESOLUTION of a meeting of the Board of Directors / Members / Partners of

NAME OF TENDERER (Must agree with bidder details)

Held at _____ on _____
(Place) (Date)

RESOLVED THAT:

The enterprise submits a Tender to Karoo Hoogland Municipality in respect of the following:

Sutherland Emergency Bulk Water Supply Phase 2 - Civil Engineering

(list all the legally correct full names and registration numbers, if applicable, of the Enterprises forming the Consortium / Joint Venture).

_____ and

_____ and

_____ and

_____ and

_____ and

_____ and

Mr./Mrs./Ms. _____

In his/her capacity as _____

and who will sign as follows: _____

(SPECIMEN SIGNATURE)

be, and is hereby, authorised to sign the Tender and all other documents and/or correspondence in connection with and relating to the Tender, as well as to sign any contract, and or all documentation resulting from the award of the Tender to the **Consortium/ Joint Venture** enterprise mentioned above.

The enterprise in the form of a consortium or joint venture accept jointly and several liability with parties under item 1 above for the fulfilment of the obligations of the joint venture deriving from, and in any way

connected with the contract to be entered with the Karoo Hoogland Municipality in respect of the project described above under item 1.

The **Consortium / Joint Venture** enterprise chooses as its domicilium citandi et executandi for all purposes arising from the joint venture agreement and contract with the Karoo Hoogland Municipality in respect of the project under item 1:

(Physical Address)

Note: The resolution **must be signed by all directors or members / partners** of the bidding enterprise. Should the space provided below not be enough for all the directors to sign, please provide a separate sheet in the same format below:

NB: **COMPULSORY TO BE COMPLETED** IN CASE OF CONSORTIUM OR JOINT VENTURE

	NAME	ID NUMBER	DIRECTORS/OWNERS PERSONAL TAX NO	SIGNATURE
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				

Name of Joint Venture		
Names of Each Enterprise:		
Name and Address of Enterprise:		
Name and Address of Enterprise:		
Name and Address of Enterprise:		
Has an original valid Tax Clearance Certificate been submitted for each enterprise:	Yes ☐	
	No ☐	
CIDB Registration Number(s), if any:		

Submit your Joint Venture Agreement together with this tender document. If no Joint Venture Agreement is submitted, the tender will be seen as non-responsive.

SIGNED ON BEHALF OF JOINT VENTURE

T2.2.1X: MUNICIPAL RATES AND SERVICES

Names of Directors/Partners/Senior Managers	Physical residential address of the Director/Partner/Senior Manager	Residential Municipal Account number(s)	Name of Municipality

NB: Please attach copy/copies of Municipal Account(s)

DECLARATION

I, THE UNDERSIGNED (NAME)

.....

CERTIFY THAT THE INFORMATION FURNISHED ABOVE IS CORRECT. I ACCEPT THAT THE STATE MAY ACT AGAINST ME SHOULD THIS DECLARATION PROVE TO BE FALSE.

.....
Signature

.....
Date

.....
Position

.....
Name of Bidder

T2.2.1Y: DECLARATION FOR PROCUREMENT ABOVE R10 MILLION (MDB5)

KAROO HOOGLAND MUNICIPALITY			
DECLARATION FOR PROCUREMENT ABOVE R10 MILLION			
For all procurement expected to exceed R10 million (VAT included), bidders must complete the following questionnaire:			
1. Are you by law required to prepare annual financial statements for auditing?	YES / NO		
1.1. If yes, submit audited annual financial statements for the past three years or since the date of establishment if established during the past three years.			
2. Do you have any outstanding undisputed commitments for municipal services towards a municipality or any other service provider in respect of which payment is overdue for more than 30 days?	YES / NO		
2.1. If no, this serves to certify that the bidder has no undisputed commitments for municipal services towards a municipality or other service provider in respect of which payment is overdue for more than 30 days.			
2.2. If yes, provide particulars.			
3. Has any contract been awarded to you by an organ of state during the past five years, including particulars of any material non-compliance or dispute concerning the execution of such contract?	YES / NO		
3.1. If yes, furnish particulars			
4. Will any portion of goods or services be sourced from outside the Republic, and, if so, what portion and whether any portion of payment from the municipality / municipal entity is expected to be transferred out of the Republic?	YES / NO		
4.1. If yes, furnish particulars			
CERTIFICATION			
I CERTIFY THAT THE INFORMATION FURNISHED ON THIS DECLARATION FORM IS CORRECT. I ACCEPT THAT THE STATE MAY ACT AGAINST ME SHOULD THIS DECLARATION PROVE TO BE FALSE.			
NAME OF ENTERPRISE:			
NAME (PRINT):		DATE:	
CAPACITY:		SIGNATURE:	

T2.2.2: OTHER DOCUMENTS REQUIRED FOR TENDER EVALUATION PURPOSES

FOR VIEWING PURPOSES ONLY

T2.2.2A: PROOF OF ADDRESS AND SOUTH AFRICAN IDENTITY DOCUMENT

FOR VIEWING PURPOSES ONLY

T2.2.2B: TAX CLEARANCE CERTIFICATE

Tenderers shall attach to this page a copy of the South African Revenue Services Tax Compliance Status Pin in respect of his/ her company, close corporation, or partnership. In the case of a joint venture between two or more firms, the tenderer shall attach a copy of the Tax Compliance Status Pin for each of the joint venture partners.

Bidders must provide their Master Registration Number and tax compliance status PIN to enable the municipality to verify the bidder's tax compliance status.

FOR VIEWING PURPOSES ONLY

T2.2.2C: BID FOR THE REQUIREMENTS OF THE KAROO HOOGLAND MUNICIPALITY

PART A INVITATION TO BID

YOU ARE HEREBY INVITED TO BID FOR REQUIREMENTS OF THE KAROO HOOGLAND MUNICIPALITY

BID NUMBER:	KHM T001/011/2024 C	CLOSING DATE:	25 NOVEMBER 2024	CLOSING TIME:	12:00
-------------	---------------------	---------------	------------------	---------------	-------

DESCRIPTION	SUTHERLAND EMERGENCY BULK WATER SUPPLY PHASE 2 - CIVIL ENGINEERING
-------------	--

THE SUCCESSFUL BIDDER WILL BE REQUIRED TO FILL IN AND SIGN A WRITTEN CONTRACT FORM (MBD7).

BID RESPONSE DOCUMENTS MAY BE DEPOSITED IN THE BID BOX SITUATED AT (STREET ADDRESS)

The Tender Box

Karoo Hoogland Municipality

Karoo Hoogland Municipality Building, 2 Mulder Street

WILLISTON

8920

SUPPLIER INFORMATION 1

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:		OR	CSD No:	
PROOF OF ADDRESS [TICK APPLICABLE BOX]	☐ Yes ☐ No		SOUTH AFRICAN IDENTITY DOCUMENT		☐ Yes ☐ No

SUPPLIER INFORMATION 2

ARE YOU THE ACCREDITED REPRESENTATIVE IN SOUTH AFRICA FOR THE GOODS /SERVICES /WORKS OFFERED?	☐ Yes ☐ No [IF YES ENCLOSE PROOF]	ARE YOU A FOREIGN BASED SUPPLIER FOR THE GOODS /SERVICES /WORKS OFFERED?	☐ Yes ☐ No [IF YES, ANSWER PART B:3]
TOTAL NUMBER OF ITEMS OFFERED		TOTAL BID PRICE	R
SIGNATURE OF BIDDER		DATE	

CAPACITY UNDER WHICH THIS BID IS SIGNED

BIDDING PROCEDURE ENQUIRIES MAY BE DIRECTED TO:

TECHNICAL INFORMATION MAY BE DIRECTED TO:

DEPARTMENT	SCM	Karoo Hoogland Infrastructure
CONTACT PERSON	Diana Vermeulen	Frannie Lotter
TELEPHONE NUMBER	053 391 3003	083 655 1438
FACSIMILE NUMBER	(053) 391 3294	(053) 391 3294
E-MAIL ADDRESS	d.vermeulen@karoohoogland.gov.za	f.lotter@karoohoogland.gov.za

PART B
TERMS AND CONDITIONS FOR BIDDING

BID SUBMISSION:

- BIDS MUST BE DELIVERED BY THE STIPULATED TIME TO THE CORRECT ADDRESS. LATE BIDS WILL NOT BE ACCEPTED FOR CONSIDERATION.
- **ALL BIDS MUST BE SUBMITTED ON THE OFFICIAL FORMS PROVIDED-(NOT TO BE RE-TYPED) OR ONLINE**
- 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.

TAX COMPLIANCE REQUIREMENTS

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

QUESTIONNAIRE TO BIDDING FOREIGN SUPPLIERS

- | | |
|---|---|
| ○ IS THE ENTITY A RESIDENT OF THE REPUBLIC OF SOUTH AFRICA (RSA)?
NO | ☐ YES ☐ |
| ○ DOES THE ENTITY HAVE A BRANCH IN THE RSA?
NO | ☐ YES ☐ |
| ○ DOES THE ENTITY HAVE A PERMANENT ESTABLISHMENT IN THE RSA?
NO | ☐ YES ☐ |
| ○ DOES THE ENTITY HAVE ANY SOURCE OF INCOME IN THE RSA?
NO | ☐ YES ☐ |
| ○ IS THE ENTITY LIABLE IN THE RSA FOR ANY FORM OF TAXATION?
NO | ☐ YES ☐ |

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.**

Name _____ Signature _____

Capacity _____ Date _____

**T2.2.3: RETURNABLE SCHEDULES THAT WILL BE INCORPORATED INTO THE
CONTRACT**

FOR VIEWING PURPOSES ONLY

T2.2.3A: SCHEDULE OF SUB-CONTRACTORS

The tenderer shall state in the schedule below the names of all sub-contractors he wishes to employ in the Works and shall define their duties and outline their experience.

	Name and address of Sub-Contractor	Nature and extent of work	Experience
1.			
2.			
3.			
4.			
5.			

Name _____ Signature _____

Capacity _____ Date _____

PART C1: AGREEMENTS 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**

FOR VIEWING PURPOSES ONLY

C1.1: FORM OF OFFER AND ACCEPTANCE (CONTRACT AGREEMENT)**Offer**

The employer, identified in the acceptance signature block, has solicited offers to enter into a contract for the procurement of ***SUTHERLAND EMERGENCY BULK WATER SUPPLY PHASE 2 - CIVIL ENGINEERING***

The tenderer, identified in the offer signature block, has examined the documents listed in the tender data and addenda thereto as listed in the returnable schedules, and by submitting this offer has accepted the conditions of tender.

By the representative of the tenderer, deemed to be duly authorized, signing this part of this form of offer and acceptance, the tenderer offers to perform all the obligations and liabilities of the contractor under the contract including compliance with all its terms and conditions according to their true intent and meaning for an amount to be determined in accordance with the conditions of contract identified in the contract data.

THE OFFERED TOTAL OF THE PRICES INCLUSIVE OF VALUE ADDED TAX IS:

.....
Rand (in words);

R..... (in figures) (or other suitable wording)

This offer may be accepted by the employer by signing the acceptance part of this form of offer and acceptance and returning one copy of this document to the tenderer before the end of the period of validity stated in the tender data, whereupon the tenderer becomes the party named as the contractor in the conditions of contract identified in the contract data.

Acceptance

By signing this part of this form of offer and acceptance, the employer identified below accepts the tenderer's offer. In consideration thereof, the employer shall pay the contractor the amount due in accordance with the conditions of contract identified in the contract data. Acceptance of the tenderer's offer shall form an agreement between the employer and the tenderer upon the terms and conditions contained in this agreement and in the contract that is the subject of this agreement.

The terms of the contract, are contained in:

- Part C1 Agreements and contract data, (which includes this agreement)
- Part C2 Pricing data
- Part C3 Scope of work
- Part C4 Site information and drawings and documents or parts thereof, which may be incorporated by reference into the above listed Parts.

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

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

Notwithstanding anything contained herein, this agreement comes into effect on the date when the tenderer receives one fully completed original copy of this document, including the schedule of deviations (if any). Unless the tenderer (now contractor) within five (5) working days of the date of such receipt notifies the employer in writing of any reason

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why he/she cannot accept the contents of this agreement, this agreement shall constitute a binding contract between the parties.

Signature			
Name(s)			
Capacity			
For the tenderer			
(Name and address of Tenderer)			
Name and Signature of witness		Date	

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Schedule of Deviations

Notes:

1 Subject _____

Details _____

2 Subject _____

Details _____

3 Subject _____

Details _____

4 Subject _____

Details _____

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

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

Signature			
Name(s)			
Capacity			
For the tenderer			
(Name and address of Tenderer)			
Name and Signature of witness		Date	

C1.2: CONTRACT DATA**Part 1: Contract Data provided by the Employer.****GENERAL CONDITIONS OF CONTRACT**

The following standardised General Conditions of Contract:

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

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

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 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.

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

The Contract Data must be read in conjunction with the schedule of Contract Specific Data included in Part C1.2.

C1.2.1 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 or replaced, as set out herein. (Amendments/replacements are shown in italics).

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

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1.1 Definitions

- (a) "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 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.
- 1.1.1.14 "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.
- 1.1.1.32 "*Temporary Works*" means the temporary works required for or in connection with the execution of the Permanent Works and shall include items which are not intended to be permanent or to form part of the Permanent Works, including but not limited to dewatering, shoring, lateral support, access roads, haul roads, shuttering, jacking pits and method, scaffolding, etc.:
- 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.
- 1.1.1.37 "*Drawings*" means all drawings, calculations and technical information forming part of the Contract Documents and any modifications thereof or additions thereto from time to time approved in writing by the Employer's Agent or delivered to the Contractor by the Employer's Agent.
- 1.1.1.38 "*Letter of Notification*" means the letters of formal notification, signed by the Employer, of the decision of the Supply Chain Management Bid Adjudication Committee sent to all tenderers. The notification of the decision does not form part of the Employer's Acceptance of the successful tenderer's Offer and no rights shall accrue.

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.

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- 1.3.5 Except where otherwise stated in the Contract, the Contractor shall retain the copyright and other intellectual property rights in documents supplied by the Employer or Employer's Agent under the Contract. The Contractor shall legally be deemed to have given the Employer a non-terminable, transferable, non-exclusive, royalty-free licence to copy, use and communicate the Contractor's documents, including making and using modifications of such documents for the purpose of further work required to the Works.

The Contract Specific Data, Specifications (other than Standardized Specifications), Bill of Quantities and Drawings are the copyright of Lyners Consulting Engineers.

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

- 2.4.1 *The several documents forming the Contract are to be read and taken as mutually complementary to and explanatory to each other.*
- 2.4.2 *Any obscurity or ambiguity or discrepancy between the contract documents shall be referred to the Employer's Agent before the due date of submission of tenders for decision as to the true intent and meaning and the Employer's Agents' interpretation. This decision shall be final and binding.*
- 2.4.3 *No claims will be entertained from the contractor on the grounds of any misunderstanding of the contract requirements, which should have and could have been clarified in this manner prior to tendering.*

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 party's 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*

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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.

4.1.3 *The Contractor shall be responsible for the design of the Temporary Works, such responsibility shall be that the relevant part of the Temporary Works shall be fit for such purposes for which it is intended and, 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.*

4.1.4 *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.*

An agreement is included in the Contract Document (C1.4 of Contract Data) and shall be completed and submitted to the Employer together with a letter of good standing from the Compensation Commissioner (if not insured with a Licenced Compensation Insurer) within fourteen (14) days after the Commencement Date. The Contractor shall ensure that any letter of good standing shall be timeously renewed in order that it remains in full force for the duration of the Contract.

4.5 Notices and Fees

4.5.2 *The Employer shall be responsible for obtaining any planning approval required in respect of the Permanent Works. The Contractor shall be responsible for obtaining any planning approval required in respect of the Temporary Works.*

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.*

The documentation required before commencement with Works execution are:

- (a) *Health and Safety Plan (Refer to Clause 4.3)*
- (b) *Signed 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 thereunder.*
- (c) *Initial programme (Refer to Clause 5.6)*
- (d) *Security (Refer to Clause 6.2)*
- (e) *Insurance (Refer to Clause 8.6)"*
- (f) *Letter of Good Standing from the Compensation Commissioner (if not insured with a Licensed Compensation Insurer).*

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,*

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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 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 and float.
- 5.6.3 *The Employer's Agent shall, within 14 days after the Contractor has submitted an initial or adjusted programme, approved such programme or rejected 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, it 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 monthly. *The Contractor shall monthly 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), 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*

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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 prior to the Contractor commencing to accelerate progress.

5.9 Instructions

- 5.9.3 The Contractor shall give adequate *and appropriate* 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 or the Employers Agent 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 are delaying or will 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 consider 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 *Abnormal climatic conditions provided that 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, if delays to critical activities exceed the number of working days listed below, then abnormal climatic conditions shall be deemed to exist, and an extension of time shall be granted in accordance with the provisions of that Clause.*

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

January	2 days
February	2 days
March	2 days
April	2 days
May	2 days
June	5 days
July	6 days
August	4 days
September	3 days
October	2 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.

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Should an extension of time be granted by the Employer's Agent such extension of time will be added to the Time for Completion or set off against any over-provision that may have occurred in the above-mentioned schedule and any other claim.

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 contractors 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 As per 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. only once the complete set of As-built drawings and information were submitted by the Contractor to the Employer's Agent.

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.

5.16.3 The Contractor's liability for any latent defects shall continue beyond the date of the Final Approval Certificate but the Employer shall have no claim against the Contractor arising out of any latent defect which first manifests itself later than the period, stated in the Contract Data, after the issue of the Final Approval Certificate in terms of this Clause.

The Contractor's liability for any latent defects shall continue for 10 years from the date of the issue of the Final Approval Certificate.

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.

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- 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 Certificate of Completion is issued. The expiry date shall be specified in the performance guarantee as the date on which the Certificate of Completion is issued.*
- 6.5 Dayworks**
- 6.5.1.2.3 The percentage allowances, stated in the Contract Data, in respect of the said remuneration of workmen and the cost of materials, which allowances shall be held to cover all charges for the Contractor's and subcontractor's overheads and administration costs, profits, timekeeping, clerical work, insurances, establishment, superintendence and the use of hand tools, and
- For items not included in the daywork schedule, the percentage allowance will be 10%.*
- 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 considered 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 a MOS Guarantee in accordance with the pro forma MOS Guarantee, approved in writing by the Employer, against any claim to or in respect of such Plant and/or materials, including but not limited to claims by reason of the Contractor's sequestration or liquidation, or of any defect in the Contractor's title to the Plant and/or materials; and*
- Provided that the total amount of Plant and/or materials referred to in Clause 6.9.1 not yet supplied to Site or built into the Permanent Works certified for payment in terms of the Contract, notwithstanding the percentage limit stated in the Contract Data, shall be limited to the Guaranteed MOS Sum as reflected in the MOS Guarantee.*
- 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. Any dissatisfaction in respect of such payment certificate shall be dealt with in terms of Clause 10.2. *The Employer or the Contractor 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 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

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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. RISKS AND RELATED MATTERS

8.6 Insurances

- 8.6.1.6 *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 Plant and 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.*
- (e) *Lateral Support liability insurance.*

- 8.6.8 *The evidence that the insurances have been affected in terms of Clause 8.6.1, shall be in the form of an insurance broker's warranty worded precisely as given in part C1.6 Insurance Broker's Warranty.*

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*
- 9.2.1.3.9 *The Contractor fails to submit the documents within the number of days stipulated or if the documents submitted are found to be unacceptable in accordance with Clause 5.3.2*
- 9.2.1.3.10 *The Contractor committed a corrupt or fraudulent act during the procurement process or the execution of the Contract.*
- 9.2.1.3.11 *An official or other role player committed any corrupt or fraudulent act during the procurement process or in the execution of the Contract that benefited the Contractor.*

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*

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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 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.

Should the Contractor fail to give an early warning notice in terms of Clause 10.1.2 which an experienced Contractor could have given, then the claim shall be assessed by the Employer's Agent and the ruling in terms of Clause 10.1.5 shall consider the lack of mitigation measures that could have been employed if the Contractor had given an 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 3.2.2 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;*

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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 Dispute Notice

- 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 Time for Completion 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*

10.10 Common Provisions

- 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* 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, 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.*

11. ADDITIONAL CONDITIONS OF CONTRACT**11.1 Details to be confidential.**

- 11.1.1 *The Contractor shall treat the details of the Works comprised in this Contract as private and confidential (save in so far as may be necessary for the purposes hereof) and shall not publish or disclose the same or any particulars thereof in any trade or technical paper elsewhere without the prior written consent of the Engineer.*

PART 2 : DATA PROVIDED BY THE CONTRACTOR

Clause	
1.18	The Legal name of the Contractor
1.2.2	The Contractor's address for receipt of communications and notices is : Telephone: Facsimile: E-mail : Address (Postal) : Address (Physical) :
1.1.1.14	The Works shall be completed in weeks.

C1.3: FORM OF GUARANTEE

Contract No. _____

WHEREAS _____

(hereinafter referred to as "the Employer") entered into, a Contract with _____

(hereinafter called "the Contactor") on the _____ day of _____ 20____

for the construction of _____

at _____

AND WHEREAS it is provided by such Contract that the Contractor shall provide the Employer with security by way of a guarantee for the due and faithful fulfilment of such Contract by the Contractor;

AND WHEREAS _____

has/have at the request of the Contractor, agreed to give such guarantee;

NOW THEREFORE WE, _____

do hereby guarantee and bind ourselves jointly and severally as Guarantor and Co-principal Debtors to the Employer under renunciation of the benefits of division and execution for the due and faithful performance by the Contractor of all the terms and conditions of the said Contract, subject to the following conditions:

1. The Employer shall, without reference and/or notice to us, have complete liberty of action to act in any manner authorized and/or contemplated by the terms of the said Contract, and/or to agree to any modifications, variations, alterations, directions or extensions of the Completion Date of the Works under the said Contract, and that its rights under this guarantee shall in no way be prejudiced nor our liability hereunder be affected by reason of any steps which the Employer may take under such Contract, or of any modification, variation, alterations of the Completion Date which the Employer may make, give, concede or agree to under the said Contract.
2. This guarantee shall be limited to the payment of a sum of money.
3. The Employer shall be entitled, without reference to us, to release any guarantee held by it, and to give time to or compound or make any other arrangement with the Contractor.
4. This guarantee shall remain in full force and effect until the issue of the Certificate of Completion in terms of the Contract, unless we are advised in writing by the Employer before the issue of the said Certificate of his intention to institute claims, and the particulars thereof, in which event this guarantee shall remain in full force and effect until all such claims have been paid or liquidated.
5. Our total liability hereunder shall not exceed the Guaranteed Sum of _____

(R_____)

6. The Guarantor reserves the right to withdraw from this guarantee by depositing the Guaranteed Sum with the beneficiary, whereupon our liability hereunder shall cease.

7. We hereby choose our address for the serving of all notices for all purposes arising here from as _____

IN WITNESS WHEREOF this guarantee has been executed by us at _____

on this _____ day of _____ 20_____

As witnesses:

1. _____

Signature _____

2. _____

Duly authorized to sign on behalf of

Address _____

FOR VIEWING PURPOSES ONLY

C1.4: OCCUPATIONAL HEALTH AND SAFETY AGREEMENT

AGREEMENT MADE AND ENTERED INTO BETWEEN **KAROO HOOGLAND MUNICIPALITY** HERE IN AFTER
CALLED THE "EMPLOYER" AND

(Contractor/Mandatory/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
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 always comply therewith.

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

Signed at _____ on the _____ day of _____ 2023

Witness

Mandatory

Signed at _____ on the _____ day of _____ 2023

Witness

for and on behalf of

PART C2: PRICING DATA

- C2.1** **Pricing Instructions**
- C2.2** **Schedule of Quantities**

FOR VIEWING PURPOSES ONLY

C2.1: PRICING INSTRUCTIONS**i. PREAMBLE TO THE BILL OF QUANTITIES**

1. The method of measurement published by the South African Bureau of Standards in Clause 8 of the Standardised Specifications for Civil Engineering Construction is applicable, subject to the variations and amendments contained in the section "Applicable SANS 1200 standardised specifications".
2. Descriptions in the Schedule/Bill of Quantities are abbreviated and comply with those in the Standardised Specifications. Clause 8 of each Standardised Specification, read together with the relevant clauses of the Scope of Work, set out what ancillary or associated activities are included in the rates for the operations specified. Should any requirements of the measurement and payment clause of the applicable Standardised Specification, or the Scope of Work, conflict with the terms of the Schedule/Bill, the requirements of the Standardised or Scope of Work, as applicable, shall prevail.
3. The clauses in a specification in which further information regarding the schedule/bill item can be obtained appear under "Reference clause" in the Schedule. The reference clauses indicated are not necessarily the only sources of information in respect of schedule items. Further information and set specifications may be found elsewhere in the contract documents. Standardised Specifications are identified by the letter or letters which follow SANS in the SANS 1200 series of specifications, e.g., G for SANS 1200 G.
4. Unless otherwise stated, items are measured nett in accordance with the drawings, and no allowance is made for waste.
5. The quantities set out in the Schedule/Bill of Quantities are the estimated quantities of the Contract Works, but the Contractor will be required to undertake whatever quantities may be directed by the Engineer from time to time. The Contract Price for the completed contract shall be computed from the actual quantities of work done, valued at the relevant unit rates and prices.
6. The prices and rates to be inserted in the Schedule/Bill of Quantities are to be the full inclusive prices for the work described under the several items. Such prices and rates shall cover all costs and expenses that may be required in and for the execution of the work described, and shall cover the cost of all general risks, liabilities, and obligations set forth or implied in the documents on which the tender is based, as well as overhead charges and profit. Reasonable prices shall be inserted as these will be used as a basis for assessment of payment for additional work that may have to be carried out.
7. A price or rate is to be entered against each item in the Schedule/Bill of Quantities, whether the quantities are stated or not. An item against which no price is entered will be covered by the other prices or rates in the Schedule.
8. Except where rates only are required, the Tenderer shall insert all amounts to be included in his total tendered price in the "Amount" column and show the corresponding total tendered price.
9. The units of measurement described in the Schedule/Bill of Quantities are metric units. Abbreviations used in the Schedule/Bill of Quantities are as follows:

mm	=	millimetre	h	=	hour
m	=	metre	kg	=	kilogram
km	=	kilometre	m ²	=	square metre
No.	=	number	sum	=	lump sum
P C sum	=	Prime Cost sum	ℓ	=	litre
Prov sum	=	Provisional sum			
10. The Tenderer must price each item in the schedule of quantities in **BLACK INK**.
11. All prices and rates shall exclude value added tax (VAT). The Tenderer shall calculate value added tax and enter it at the end of the summary of the Bill of Quantities.

C2.2: SCHEDULE OF QUANTITIES

FOR VIEWING PURPOSES ONLY

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KAROO HOOGLAND MUNICIPALITY

KHM T001/011/2024 C: SUTHERLAND EMERGENCY BULK WATER SUPPLY - PHASE 1

C2.2 BILLS OF QUANTITIES

SCHEDULE A: PRELIMINARY AND GENERAL

ITEM NO	PAYMENT	DESCRIPTION	UNIT	QTY	RATE	AMOUNT R
	SABS 1200 A	PRELIMINARY AND GENERAL				
A.1	8.3	FIXED-CHARGE AND VALUE-RELATED ITEMS				
A.1.1	8.3.1	Contractual requirements	Sum	1		
	8.3.2	Establish facilities on the Site:				
	8.3.2.1	a) Facilities for Engineer (SABS 1200 AB)				
A.1.2		Two contract nameboards	No	2		
A.1.3	8.3.3	Other fixed-charge obligations (Specify)	Sum	1		
A.2	8.4	TIME-RELATED ITEMS				
A.2.1	8.4.1	Contractual Requirements	Sum	1		
	8.4.2	Operate and maintain facilities on the Site:				
	8.4.2.1	a) Facilities for Engineer for duration of construction (SABS 1200 AB)				
A.2.2		Two contract nameboards	Nr	2		
	8.4.2.2	b) Facilities for Contractor for duration of construction, except where otherwise stated				
A.2.3		Offices and storage sheds	Sum	1		
A.2.4		Workshops	Sum	1		
A.2.5		Laboratories	Sum	1		
A.2.6		Living accommodation	Sum	1		
A.2.7		Ablution and latrine facilities	Sum	1		
A.2.8		Tools and equipment	Sum	1		
A.2.9		Water supplies, electric power and communications	Sum	1		
A.2.10		Dealing with water	Sum	1		
A.2.11		Access	Sum	1		
A.2.12		Plant	Sum	1		
A.2.13	8.4.3	Supervision	Sum	1		
TOTAL CARRIED FORWARD						0.00

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KHM T001/011/2024 C: SUTHERLAND EMERGENCY BULK WATER SUPPLY - PHASE 1

C2.2 BILLS OF QUANTITIES

SCHEDULE A: PRELIMINARY AND GENERAL

ITEM NO	PAYMENT	DESCRIPTION	UNIT	QTY	RATE	AMOUNT R
BROUGHT FORWARD						0.00
A.2.14	8.4.4	Company and head office overhead costs	Sum	1		
A.2.15	8.4.5	Other time-related obligations (Specify)	Sum	1		
	PS A 8.4.6	Standing time costs				
A.2.16		a) Plant	Sum/day	10		
A.2.17		b) Labour	Sum/day	10		
A.2.18		c) Other resources (to be specified by contractor)	Sum/day	10		
A.2.19	PS A 8.8.2	Accommodation of traffic	Sum	1		
A.2.20	PS A 8.8.7	Special water control in terms of project specification	Sum	1		
		Sum stated provisionally by Engineer				
A.2.21		SMME Contractor work sections to be used to Engineers discretion on selective items	Sum	1		
A.2.22		Overheads, charges and profit on item above	%			
A.3	8.8.7	DAYWORKS				
A.3.1		Unskilled - Labourer	h	100		
A.3.2		Skilled - Labourer	h	20		
A.3.3		Foreman	h	10		
A.3.4		Digger	h	20		
A.3.5		Excavator	h	20		
A.3.6		Truck (10 ton)	h	20		
A.3.7		LDV	h	20		
A.3.8		Generator	h	20		
A.4	PS A 8.12	HEALTH AND SAFETY				
A.4.1		Health and Safety Requirements (Construction Regulations 2014)	Sum	1		
A.4.2		Health and Safety Plan	Sum	1		
TOTAL CARRIED FORWARD						

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C2.2 BILLS OF QUANTITIES

SCHEDULE A: PRELIMINARY AND GENERAL

ITEM NO	PAYMENT	DESCRIPTION	UNIT	QTY	RATE	AMOUNT R
BROUGHT FORWARD						270 000.00
A.4.3		Health and Safety File	Sum	1		
A.4.4		Provision for CLO for duration of contract	Sum	1		
TOTAL CARRIED FORWARD TO SUMMARY						

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C2.2 BILLS OF QUANTITIES

SCHEDULE B: SITE CLEARANCE

ITEM NO	PAYMENT	DESCRIPTION	UNIT	QTY	RATE	AMOUNT R
B.1	SABS 1200 C	SITE CLEARANCE				
B.1.1	PS C 8.2.1	Clear and grub - Pipelines	m	3 530		-
B.1.2	PS C 8.2.13	Remove and re-erect existing stockproof fences	m	50		-
		Remove and grub all trees and tree stumps with girth of				
		Over and Up to				
		0,5 m 1,0 m	No	10		-
		1,0 m 2,0 m	No	5		-
		2,0 m 3,0 m	No	3		-
TOTAL CARRIED FORWARD TO SUMMARY						0.00

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C2.2 BILLS OF QUANTITIES

SCHEDULE C: WATER PIPE LINES

ITEM NO	PAYMENT	DESCRIPTION	UNIT	QTY	RATE	AMOUNT R
C	SABS 1200 DB	EARTHWORKS (PIPE TRENCHES)				
C.1	8.3.2	EXCAVATION				
	PS DB 8.3.2(a)	Excavate in all materials for trenches, select, backfill, compact and dispose of all surplus material to site determined by contractor for main pipes with: Dia up to 160 mm for depths: Over and Up to				
C.1.1		0,5 m 1,0 m	m	2 670		
C.1.2		1,0 m 1,5 m	m	880		
	8.3.2(b)	Extra-over items PS DB 8.3.2(a)				
C.1.9		1) Intermediate excavation	m³	320		
C.1.10		2) Hard rock excavation	m³	170		
C.1.11	PS DB 8.3.2(b)	Excavate unsuitable material from trench bottom	m³	30		
C.1.12		Extra over PD DB 8.3.2(a) for temporary stockpiling of material	m³	50		
C.1.13	PS D 8.3.8.1	Hand excavation to expose existing services	m³	10		
C.2	8.3.3	EXCAVATION ANCILLARIES				
	8.3.3.1	Make up deficiency in backfill material				
C.2.1		From Municipal quarries ± 5 km away	m³	700		
C.2.2	PS D 8.3.3.4	Extra over items 8.3.2(a) and (f) inclusive of truck haul for dumping of unsuitable material to a dump site determined by the contractor (Provisional quantity)	m³	550		
C.3	8.3.5	EXISTING SERVICES				
	PSDB 8.3.5(b)	Services that intersect a trench				
C.3.1		Low Voltage Cable (Underground)	No	2		
C.3.2		Medium Voltage Cable (Underground)	No	1		
C.3.3		High Voltage Cable (Underground)	No	2		
C.3.4		Overhead Electric Cable	No	2		
C.3.5		Telkom Cable (Underground)	No	3		
TOTAL CARRIED FORWARD						

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KHM T001/011/2024 C: SUTHERLAND EMERGENCY BULK WATER SUPPLY - PHASE 1

C2.2 BILLS OF QUANTITIES

SCHEDULE C: WATER PIPE LINES

ITEM NO	PAYMENT	DESCRIPTION	UNIT	QTY	RATE	AMOUNT R	
BROUGHT FORWARD							
C.3.6	PSDB 8.3.5(b)	Telkom Cable (Overhead)	No	2			
C.3.7		Water line - Bulk	No	3			
C.3.8		Storm water culvert	No	4			
C.3.9		Fencing	No	5			
		Services that adjoin a trench					
C.3.10		Low Voltage Cable (Underground)	m	10			
C.3.11		Medium Voltage Cable (Underground)	m	20			
C.3.12		High Voltage Cable (Underground)	m	30			
C.3.13		Overhead Electric Pole	No	3			
C.3.14		Telkom Cable (Underground)	m	30			
C.3.15		Telkom Cable overhead electric pole	No	20			
C.3.16		Water line - Bulk	m	40			
C.3.17		Storm water culvert	m	20			
C.3.18		Fencing	m	70			
C.3.19		Manhole Chamber	No	2			
C.4		SABS 1200 LB	BEDDING (PIPES)				
		PS LB 8.2.2.2	Provision of bedding material compacted to 93% of MOD AASHTO density (100% for sand) with material from municipal sources ±5 km away (including overhaul)				
C.4.1			Selected granular material	m³	870		
C.4.2			Selected fill material	m³	450		
TOTAL CARRIED FORWARD							

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C2.2 BILLS OF QUANTITIES

SCHEDULE C: WATER PIPE LINES

ITEM NO	PAYMENT	DESCRIPTION	UNIT	QTY	RATE	AMOUNT R
BROUGHT FORWARD						0.00
C.5	SABS 1200 L	MEDIUM-PRESSURE PIPELINES				
	PS L 8.2.1	Supply, lay and bed on bedding according to SABS 1200 drawing LB-2, joint including cut pipes to lengths where required, test and disinfect with necessary couplings				
C.5.1		90 mm dia HDPE PN 12.5 PE100	m	1 100		
C.5.2		160 mm dia HDPE PN 12.5 PE100	m	2 450		
C.6		SPECIALS AND FITTINGS				
	8.2.2	Supply, lay and bed on bedding according to SABS 1200 drawing LB-2, joint including cut pipes to lengths where required, test and disinfect with necessary couplings				
		HDPE bends for HDPE pipes				
C.6.1		90mm dia HDPE PN 12.5 PE100 11¼°	No	2		
C.6.2		90mm dia HDPE PN 12.5 PE100 22½°	No	4		
C.6.3		90mm dia HDPE PN 12.5 PE100 45°	No	1		
C.6.4		90mm dia HDPE PN 12.5 PE100 90°	No	1		
C.6.5		160mm dia HDPE PN 12.5 PE100 11¼°	No	1		
C.6.6		160mm dia HDPE PN 12.5 PE100 22½°	No	1		
C.6.7		160mm dia HDPE PN 12.5 PE100 45°	No	2		
		HDPE T-Pieces				
C.6.8		160mm x 90mm dia HDPE PN 12.5 PE100	No	3		
C.6.9		160mm x 160mm dia HDPE PN 12.5 PE100	No	1		
TOTAL CARRIED FORWARD						

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C2.2 BILLS OF QUANTITIES

SCHEDULE C: WATER PIPE LINES

ITEM NO	PAYMENT	DESCRIPTION	UNIT	QTY	RATE	AMOUNT R
BROUGHT FORWARD						
C.7		VALVES				
	PS L 8.2.3	Supply, install on concrete support, joint, include cut pipes where necessary and test complete with T-pieces, fittings, pipe work and couplings where necessary				
		25mm Air valves for HDPE pipes as per drawing STE/W-02C				
C.7.1		90 mm dia	No	5		
		50mm Air valves for HDPE pipes as per drawing STE/W-02C				
C.7.2		90 mm dia	No	1		
C.7.3		160 mm dia	No	7		
		Scour valves for HDPE pipes as per drawing STE/W-06A				
C.7.4		90 mm dia	No	5		
C.7.5		160 mm dia	No	6		
		Reflux valves for HDPE pipes as per drawing STE/W-03C				
C.7.6		90 mm dia	No	3		
C.7.7		160 mm dia	No	5		
		Gate valve for HDPE pipes as per drawing STE/W-01C				
C.7.8		90 mm dia	No	3		
C.7.9		160 mm dia	No	2		
C.8		ANCILLARIES				
		Supply, install and test pipes, fittings and valves for				
C.8.1	PS L 8.2.10	Temporary valves, etc	No	2		
C.8.2	PS L 8.2.11	Anchor/Thrust blocks, Transverse anchor blocks and Vertical anchor blocks	m³	6		
C.8.3	8.2.12	Concrete encasing of pipes with grade 15/19 MPa concrete complete to dwg nr STE/R-21	m³	30		
C.9	PS L 8.2.13	VALVE CHAMBERS AND MANHOLES				
TOTAL CARRIED FORWARD						

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C2.2 BILLS OF QUANTITIES

SCHEDULE C: WATER PIPE LINES

ITEM NO	PAYMENT	DESCRIPTION	UNIT	QTY	RATE	AMOUNT R
BROUGHT FORWARD						
C.9.1		Air valve chambers complete as shown on drawing STE/W-02C	No	13		
C.9.2		Scour valve chambers complete for river crossings as shown on drawing STE/W-06A	No	11		
C.9.3		Gate valve chambers complete as shown on drawing STE/W-01C for depth up to 1,5 m	No	5		
C.9.4		Reflux valve chambers complete as per drawing STE/W-03C	No	8		
C.9.5		Extra-over items C.10.1 to C10.4				
C.9.5		For steel reinforcing in chamber toplabs	t	1		
C.9.6		Supply, lay and install 150 mm steel pipes in 3 m lengths. Pipes must be 6 mm thick, flanged and hot dip galvanized. Pipe will be installed inside existing 750 mm concrete pipe crossing a road. Rate must be all inclusive, labour, plant, material.	m	20		
C.10		SUNDRIES				
	PS L 8.2.18	Cut into and connect to existing services				
C.10.1		Connect new 160 mm dia HDPE pipe to existing 160 mm HDPE pipe. Rate to be all inclusive, labour, plant and material	No	1		
C.10.2	PS L 8.2.17	Pipeline marker posts, complete as shown on drawing STE/W-40	No	40		
C.10.3	PS L 8.2.17	Valve markers complete to dwg no STE/W-37	No	37		
C.10.4		Connect 90mm dia HDPE pipe onto existing outlet valve at "Dorps Dam"	PC Sum	1		
C.10.5		Overhead charges and profit on item C.10.4	%	20 000		
TOTAL CARRIED FORWARD						

KHM T001/011/2024 C
KAROO HOOGLAND MUNICIPALITY

KHM T001/011/2024 C: SUTHERLAND EMERGENCY BULK WATER SUPPLY - PHASE 1

C2.2 BILLS OF QUANTITIES

SCHEDULE C: WATER PIPE LINES

ITEM NO	PAYMENT	DESCRIPTION	UNIT	QTY	RATE	AMOUNT R
BROUGHT FORWARD						
C.11	SABS 1200 DK	GABIONS AND PITCHING				
		Excavate in all materials and use for fill against:				
C.11.1	PS D 8.3.2(a)	Gabions and mattresses	m³	80		
		Extra over items C.11.1 above for:				
C.11.2		1) Intermediate excavation	m³	60		
C.11.3		2) Hard rock excavation	m³	20		
	8.2.1	Surface preparation for bedding of gabions				
C.11.4		a) Cavities filled with approved excavated material or rock	m³	50		
	8.2.2	Supply, transport and complete construction of double twisted hexagonal wire mash to SANS 1580:2005				
C.11.5		3 m x 2 m x 0,3 m mattresses (Mesh type 80 with 3,7mm class galfan and PVC coated wire for sizes)	m³	72		
C.11.6		1 m x 1 m x 2 m gabions (Mesh type 80 with 3,7 mm class galfan and PVC coated for sizes)	m³	40.0		
	8.2.4	Geotextile (Grade 3)				
C.11.7		Underneath mattresses and gabions	m³	560		
C.12	8.2.5	PITCHING				
C.12.1		Stone pitching	m³	15		
TOTAL CARRIED FORWARD TO SUMMARY						

KHM T001/011/2024 C
KAROO HOOGLAND MUNICIPALITY

KHM T001/011/2024 C: SUTHERLAND EMERGENCY BULK WATER SUPPLY - PHASE 1

C2.2 BILLS OF QUANTITIES

SUMMARY OF SECTIONS		
SECTION	DESCRIPTION	Amount (R)
A	PRELIMINARY AND GENERAL	
B	SITE CLEARANCE	
C	WATER PIPE LINES	
	Sub-total	
	Contingencies @ 10%	
	Sub-total	
	VAT @ 15%	
	TOTAL CARRIED FORWARD TO SUMMARY OF SCHEDULES	

KHM T001/011/2024 C
KAROO HOOGLAND MUNICIPALITY

DECLARATION

I/we, the undersigned, do hereby declare that these are the properly priced Bills of Quantities forming part C2.2 of this Contract Document upon which my/our tender for ***Sutherland Emergency Bulk Water Supply Phase 2 – Civil Engineering*** has been based.

Signed.....

Date.....

Name.....

Position.....

Enterprise Name.....

FOR VIEWING PURPOSES ONLY

PART C3: SCOPE OF WORKS

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PART C3 : SCOPE OF WORK

C3.1 : DESCRIPTION OF WORK

FOR VIEWING PURPOSES ONLY

PART C3.1: Description of Works**CONTENT****PORTION 1: THE WORKS****C 3.1.1 Employer's Objectives**

The Karoo Hoogland Municipality requires a reputable civil engineering contractor to do the following:

- (i) To install new bulk water supply pipelines from boreholes according to the relevant specifications and quality standards specified in the contract document within cost and time constraints.
- (ii) To deliver public services infrastructure.
- (iii) To alleviate poverty through the provision of job opportunities to the unemployed.
- (iv) To comply with the requirements of the grant funding conditions (where applicable)

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.

C 3.1.2 Overview of The Works

The work to be carried out includes the construction of bulk water supply pipelines with related infrastructure to connect the boreholes out of town to the existing bulk water infrastructure.

C 3.1.3 Scope of Works

The work to be carried out under this contract consists of the following:

- (a) The construction of water rising mains from boreholes, consisting of approximately 75 mm diameter to 160mm diameter HDPE pipelines.
- (b) The construction of relevant chamber and valves etc.
- (c) Locating and connecting to existing services.

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.

Approximate quantities of each type of work are given in the schedule of quantities.

C 3.1.4 Description of Site and Conditions

The following site conditions shall be taken into consideration:

- Warm weather conditions
- Hard ground conditions
- Remote location of site
- Limited resources available in Sutherland

C 3.1.5 Site Access

Access to the site may be gained from District Road R354 entering Sutherland from Matjiesfontein.

The operation of construction vehicles on existing roads or streets shall be limited to traffic with an axle load not exceeding that allowed by the Road Traffic Ordinance of the authority concerned, or any amendment thereof.

The Contractor must note that no additional payment will be made for the construction of temporary access roads to the construction sites, borrow-areas or to the spoil sites, except for payment made under payment item 8.3.2.2 of SANS 1200 A.

The Contractor shall clear any spillage caused by his activities on or near any roads, by whatever means necessary, within 24 hours after such spillage has occurred. No additional payment will be made for the clearance of spillage and all related costs will be deemed to be covered under the relevant items.

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C 3.1.6 Nature of geological conditions

A full geotechnical investigation was not performed. The following typical subsoil profile is however expected :

- Hard rock excavations over most of the site.

C 3.1.7 Temporary Works

The contractor shall be responsible for designing and providing any temporary works required. Such temporary works shall be removed upon completion of the Works.

Such works and the positioning thereof are to be approved by the Engineer before erection and operation on site.

Such temporary works shall be removed upon completion of the Works and the site of such temporary works re-instated to a condition acceptable to the Environmental requirements.

C 3.1.8 Work to be carried out by others (under separate contracts)

The following works will be carried out under separate contracts by others:

- Mechanical and electrical works for equipping the newly drilled production boreholes.

FOR VIEWING PURPOSES ONLY

PART C3: SCOPE OF WORK

C3.2: ENGINEERING

FOR VIEWING PURPOSES ONLY

PART C3.2: Engineering

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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

Reduced drawings form part of the tender documents and shall be used for tender purposes only.

The Contractor shall use only the dimensions stated in figures on the Drawings in setting out the Works, and dimensions shall not be scaled from the Drawings, unless required by the Employer's Agent. The Employer's Agent will, at the request of the Contractor in accordance with the provisions of the Conditions of Contract, provide such dimensions as may have been omitted from the Drawings.

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 Employer's Agent's Representative on a regular basis and at least monthly.

All information in possession of the Contractor, required by the Employer's Agent to verify the as built/record drawings, must be submitted to the Employer's Agent before a Certificate of Practical Completion will be issued.

The Employer reserves the right to issue amended and/or additional drawings during the Contract.

The following drawings are applicable to this contract and will form part of the contract documents.

Additional construction drawings will, in terms of the General Conditions of Contract, be issued to the Contractor by the Employer or the Employer's Agent on the commencement date and from time to time as required.

DRAWING NUMBER	DRAWING TITLE
	Bulk Water Layout Plan – Sheet 1 of 3
	Bulk Water Layout Plan – Sheet 2 of 3
	Bulk Water Layout Plan – Sheet 3 of 3

PART C3: SCOPE OF WORK

C3.3: PROCUREMENT

FOR VIEWING PURPOSES ONLY

PART C3.3: Procurement

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FOR VIEWING PURPOSES ONLY

C3.3.1 Preferential Procurement

Tenders will be evaluated in terms of the criteria and selected method included in Part T1.2 : Tender Data.

C3.3.2 Subcontractors

The Contractor shall not subcontract more than 25% of the value of the contract to subcontractors.

Where monetary allowances for provisional sums or prime cost items have been provided in the Bills of Quantities, and where the work is to be executed/supplied by sub-contractors/suppliers then the following selection process shall be followed in respect of the required sub-contractors/suppliers:

- Where monetary allowances for provisional sums or prime cost items allowed and the monetary allowance is less than R 300 000, the Contractor shall invite three quotations from suitably qualified sub-contractors/suppliers, the selection of which shall be in consultation with, and to the approval of the Employer's Agent, for the required work or items.
- Where these monetary allowances exceed R 300 000 an open tender process will have to be followed in respect of a subcontractor for this work, unless otherwise advised and approved by the Employer. In such cases where a tender process is to be followed, the tender will be issued by the Employer's Agent on behalf of the Contractor.

The quotes shall include full technical descriptions as well as a breakdown of prices, which shall be submitted to the Engineer for approval.

The evaluation of the quotation received must include a preference points system as described in C3.11 of the Tender Data.

C3.3.3 Attendance on subcontractors

Approval given in terms of subcontracting shall not relieve the Contractor of any responsibility, duty or obligation imposed upon him by the Contract, and the Contractor shall in particular be and remain solely liable and responsible for all acts, omissions, negligence or breaches of contract on the part of the assignee or any of his employees, and for all acts, omissions or negligence of any Sub-Contractor or any of his employees.

PART C3: SCOPE OF WORK

C3.4: CONSTRUCTION

FOR VIEWING PURPOSES ONLY

PART C3.4: Construction

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C3.4.1 Works Specifications

All existing standards are being re-designated as South African National Standards (SANS). This will eventually result in some numbering changes to the existing standards.

The work specifications comprise some portions of the SANS 1200 Standardized Specifications for civil engineering together with project specific specifications. The Contractor must obtain his own copy of the SANS 1200 Standardised Specifications. The project specific specifications are bound in this document.

The specifications are included in Section C3.6

C3.4.2 Site Establishment

Services and facilities provided by the Employer

C3.4.2.1 **Area for Contractor's site establishment**

A specific area in close proximity to or on the Site of the Works will be made available by the Employer to the Contractor for the Contractor's site establishment. The specific area for the Contractor's site establishment will be identified to the Contractor by the Employer's Agent and the Contractor shall have sole use of such area, free of charge, for the duration of the Contract. The Contractor shall use this area only for the purposes of erecting his site offices, workshops, stores and other facilities required for the execution of the Contract. The Contractor shall not use the area nor allow it to be used for any purposes not directly associated with the execution of the Contract.

The Contractor shall be responsible for arranging, at his own cost, for the provision of all services he may require in the area, as well as elsewhere on the Site.

Should the Contractor deem the area made available by the Employer to be inadequate or unsuitable for the Contractor's particular needs, then the Contractor shall be at liberty to make his own arrangements with the owners of other sites which he considers are better suited to his needs; provided always that the use by the Contractor of any area other than that made available to him by the Employer shall be subject to the prior written approval of the Employer's Agent, which approval shall not be unreasonably withheld; and provided further that the Contractor shall have no claim against the Employer in respect of any costs incurred by him, either directly or indirectly in consequence of utilising any area other than that made available to him by the Employer, and which costs exceed those costs allowed for by the Contractor in his Tender.

3.4.2.2 **Spoil Site**

A designated area within the construction site boundary has been allowed for the Spoil Site, for disposal of spoil material from bulk and necessary excavations as indicated in the bill or as shown on the drawings.

C3.4.3 Site Establishment

C3.4.3.1 **Facilities to be provided by the Contractor**

Facilities for the Employer's Agent

No separate office for the Employer's Agent Representative is required but the contractor must provide a table, a chair and a plan cupboard in one of his offices for the exclusive use by the Employer's Agent Representative. The Employer's Agent Representative shall also be allowed the free use of the contractor's facilities.

The Employer's Agent Representative shall also be allowed the free use of the necessary survey equipment and survey assistants to enable him to carry out control work as and when required.

A triplicate book to be used for site instructions must be provided by the contractor and shall at all times be kept on the site.

(iii) Site meeting venue

The Contractor shall provide within his own site establishment facilities, a suitably furnished office or other venue capable of comfortably accommodating a minimum of fifteen (15) persons at site meetings. This is to include a large boardroom table with chairs, capable of seating these persons at site meetings. The table is to be large enough to accommodate these persons and also to display A1 sized drawings. In addition, one tea set comprising fifteen cups and saucers, fifteen teaspoons, two teapots, one sugar bowl and one milk jug shall be provided for use at these site meetings. The Employer's Agent shall be allowed free use of such venue for conducting any other meetings concerning the Contract at all reasonable times.

(iv) Contract nameboards

The Contractor shall provide, erect and maintain two (2) contract nameboards at such positions and locations directed by the Engineer, which nameboards shall, unless otherwise specified elsewhere in the Contract, comply with the recommendations for the standard board of the

Consulting Engineers South Africa of, with regard to size, painting, decorating and detail, and the requirements described hereunder. A typical detail drawing will be provided.

Each nameboard shall be made of tempered hardboard with a thickness of at least 12 mm, so braced on the reverse side as to prevent warping and shall be mounted on two or more, as necessary, firmly planted poles. The painting of the boards shall comply with the relevant requirements of CKS 193 and the colours of the paints shall be an acceptable match to the applicable colours given in SANS 109.

The Contractor shall before ordering or manufacturing any such contract nameboards, obtain the Employer's Agent written approval in respect of all names and wording to appear on the contract nameboards.

The Contractor shall keep the contract nameboards in good state of repair for the duration of the Contract and shall remove them on completion of the Contract.

(x) Water

The Contractor shall, at his own expense, be responsible for obtaining and distributing all water as may be required for the purposes of executing the Contract, including water for both construction purposes and domestic use, as well as for making all arrangements in connection therewith. The Contractor shall further, at his own expense, be responsible for providing all necessities for procuring, storing, transporting and applying water required for the execution of the Contract, including but not limited to all piping, valves, tanks, pumps, meters and other plant and equipment, as well as for all work and superintendence associated therewith.

The sources of all water utilised for the purposes of the Contract shall be subject to the prior approval of the Employer's Agent, which approval shall not be unreasonably withheld.

The Contractor shall comply with all prevailing legislation in respect of drawing water from natural and other sources and shall, when required by the Employer's Agent, produce proof of such compliance. The distribution of water shall be carried out by the Contractor strictly in accordance with the applicable laws and regulations.

All water provided by the Contractor for construction purposes shall be clean, free from undesirable concentrations of deleterious salts and other materials and shall comply with any further relevant specifications of the Contract. The Contractor shall, whenever reasonably required by the Employer's Agent, produce test results demonstrating such compliance. Water provided by the Contractor for human consumption shall be healthy and potable to the satisfaction of the health authorities in the area of the Site.

No separate payment will be made to the Contractor for the obtainment, distribution and consumption of water, the costs of which will be deemed to be included in the Contractor's tendered rates.

All water usage must be metered and reported at site meetings. The water supply is not guaranteed and no claims regarding insufficient supply of water will be considered. The contractor shall be held liable for any wastage of water due to negligence. Water usage will be charged for at the standard applicable tariff.

(xi) Electricity

The Contractor shall, at his own expense, be responsible for obtaining and distributing all electricity as he may require for the purposes of executing the Contract, including electricity for both construction purposes and domestic use, as well as for making all arrangements in connection therewith.

The distribution of electricity shall be carried out by the Contractor strictly in accordance with the applicable laws and regulations.

No separate payment will be made to the Contractor for the obtainment, distribution and consumption of electricity, the costs of which will be deemed to be in the Contractor's tendered rates and prices.

(xii) Provision of Services, Metering and Reporting of Consumption

No separate payment will be made for the distribution and consumption of water and electricity, the cost of which will be deemed to be included in the tendered rates.

The Contractor must promptly provide the required services for the Employer's Agent not later than 21 days after the commencement date of the contract. In failing to do so, the Employer's Agent may arrange for these services directly. The cost of arranging, maintaining and providing of such facilities arranged by the Employer's Agent due to failure by the Contractor will be deducted from payments due to the Contractor.

The contractor shall pay a spot fine of R750 per service per occasion for failing to meter electricity and water consumption. The spot fine will be enforced by the Employer's Agent and will be deducted from payments due to the contractor. The fine is payable whether the contractor is obliged to pay for services or not.

(xiii) Excrement disposal

The Contractor shall, at his own expense, be responsible for safely and hygienically dealing with and disposing of all human excrement and similar matter generated on the Site during the course of the Contract, to the satisfaction of the Engineer and the responsible health authorities in the area of the Site.

The Contractor shall further comply with any other requirements in this regard as may be stated in the Contract.

No separate payment will be made to the Contractor in respect of discharging his obligations in terms of this subclause and the costs thereof shall be deemed to be included within the Contractor's tendered Preliminary and General Items.

C3.4.4 Permits and Wayleaves

The Contractor shall be responsible for obtaining and renewing all of the necessary wayleaves, permissions or permits applicable to working near any existing services or other infrastructure on Site and shall abide by the safety conditions imposed by such wayleaves, permissions or permits.

The Contractor shall ensure that all wayleaves, permissions and permits are kept on site and are available for inspection by the relevant service authorities on demand.

The Contractor shall also ensure that any wayleaves in respect of electricity services are renewed timeously every three months.

C3.4.5 Site Maintenance

During the progress of the work and upon its completion, the site of the works shall be kept and left in a clean and orderly condition. The contractor shall at all times store materials and equipment for which he is responsible in an orderly manner and shall keep the site free from debris and obstruction.

Public roads affected by construction activities, shall be cleaned on a daily basis by means of suitable and appropriate techniques and equipment. Due care and preventative measures must be taken by the Contractor to prevent material falling or accumulating on roads and any ingress of materials into the storm water system. No additional payment will be made for maintaining the roads and storm water system in a clean and acceptable condition. The Contractor shall be held liable for any costs incurred resulting from the Contractor not complying with this requirement and such costs shall be deducted from payments due to the Contractor.

C3.4.6 Contractor to Engage Services of an Independent Laboratory

Notwithstanding the requirements of the Specifications pertaining to testing and quality control, the Contractor shall engage the services of an approved independent laboratory to undertake all testing of materials, the results of which tests are specified in, or reasonably to be inferred from the Contract, as to be taken into consideration by the Employer's Agent in deciding on whether the quality of materials utilised and workmanship achieved by the Contractor complies with the requirements of the specifications. The foregoing shall apply irrespective of whether the said testing is indicated in the specifications as to be carried out by the Employer's Agent or by the Contractor.

The Contractor shall be responsible for arranging with the independent testing laboratory for the timeous carrying out of all such testing specified in the Contract, at not less than the frequencies and in the manner specified and arranging the test results in an orderly manner and indicating on a drawing the various test positions. The Contractor shall promptly provide the Employer's Agent with copies of the results of all such testing carried out by the independent laboratory.

For the purposes of this clause, an "independent laboratory" shall mean an "approved laboratory" (as defined in Sub-clause PSA 7.2) which is not under the management or control of the Contractor and in which the Contractor has no financial interest, nor which has any control or financial interest in the Contractor.

C3.4.7 Additional testing required by the Employer's Agent

In addition to the provisions of Sub-clause C3.4.6, the Employer's Agent shall be entitled at times during the Contract, to require that the Contractor arrange with the independent laboratory, to carry out any such tests, additional to those described in Sub-clause C3.4.6, at such times and at such locations in the Works as the Employer's Agent shall prescribe. The Contractor shall promptly and without delay, arrange with the independent laboratory for the carrying out of all such additional testing as required by the Employer's Agent and copies of the test results shall be promptly provided to the Employer's Agent in an acceptable format and the test positions shall be indicated by the Contractor on a drawing.

C3.4.8 Cost of Testing and record keeping

The Contractor shall record all test results in tabular form in Excel which shall include a unique reference number, description of test, requirements/specified minimum, actual test result, date of test, position of test and Fail/Pass. Should a test indicate a failure the table shall include a reference to a further test of the rework indicating an acceptable test result (Pass).

The Contractor shall in addition on a continuous basis update a separate set of as built drawing(s) with all the test results. An updated table and drawing must be submitted the Employer's Agent on a monthly basis for

approval. All actual test results shall also be submitted to the Employer's Agent (apart from the copy forwarded on receipt from the laboratory) with the unique reference number marked on the top right corner.

(a) Tests in Terms of Sub-clause C3.4.6

The costs of all testing carried out by the independent laboratory in accordance with the requirements of Sub-clause C3.4.6 above shall be born by the Contractor and shall be deemed to be included in the tendered rates and prices for the respective items of work as listed in the Schedule of Quantities and which require testing in terms of the specifications. No separate payments will be made by the Employer to the Contractor in respect of any testing carried out in terms of Sub-clause C3.4.6.

Where, as a result of the consistency of the materials varying or as a result of failure to meet the required specifications for the work, it becomes necessary to carry out additional tests (e.g. re-tests on rectified work and/or replacement materials), the costs of such additional testing shall be for the Contractor's account.

Should the Contractor fail to timeously arrange or undertake the required test or fail to timeously present the test results and drawing with test positions, the Employer's Agent may proceed with arranging the testing and all costs related to the arrangement of the tests, the cost of testing and any other associated costs will be deducted from payments due to the Contractor.

(b) Additional Tests required by the Employer's Agent

The costs of any additional tests required by the Employer's Agent in terms of Sub-clause C3.4.7 shall be reimbursed to the Contractor against substitution of the Provisional Sum allowed therefore in the Schedule of Quantities; provided always that the costs of any such additional tests ordered by the Employer's Agent, the results of which indicate that the quality of the materials utilised and/or the standard of workmanship achieved is not in accordance with the specifications, shall not be reimbursable to the Contractor.

C3.4.9

Subcontractors

All matters pertaining to subcontractors (including Nominated Subcontractors) and the work executed by them shall be dealt with directly between the Employer's Agent and the Contractor in the context of all subcontract work being an integral part of the Works for which the Contractor is responsible.

The Employer's Agent will not liaise directly with any subcontractors nor will he issue instructions concerning the subcontract works directly to any subcontractor.

All matters arising out of the subcontract agreements shall be dealt with directly between the Contractor and the subcontractors and the Employer's Agent will not become involved.

C3.4.10

Existing Services

Before the Contractor commences operations, he must discuss with and have the approval of the Employer, authority or owner concerned regarding the method he proposes to use for relocating or safe-guarding any services and existing works he may encounter during construction.

The positions of existing services shown on the Drawings are given in good faith and no guarantee can be given that:

- (a) these services actually are in the approximate positions indicated.
- (b) that these are the only services in the vicinity, and
- (c) that the nature and description of these services are correct.

The Contractor shall be responsible to locate and safeguard any existing service or works he may encounter during construction and shall obtain clearance from the Employer, authority and the Employer's Agent before commencing work in the proximity of existing services or works.

The Contractor shall be responsible for any damage to such existing services and works in the execution of this contract and shall reimburse the Employer, authority or the owner concerned for any repairs required and for damages.

The Contractor shall be responsible for immediately notifying the Employer's Agent and the authorities concerned regarding any damage caused to public services and existing works.

Any alteration to public services shall be carried out by the Authority concerned unless the Contractor is instructed otherwise.

The Contractor shall provide the necessary assistance during any operations necessary in connection with the removal, alteration or safe-guarding of any public service.

C3.4.11 Access to And Construction in Restricted Areas

Working space and access to working areas are sometimes restricted. The construction method used in these restricted areas and accessing these areas largely depends on the Contractor's Equipment. Notwithstanding, measurement and payment will be strictly according to the specified cross-sections and dimensions irrespective of the method used, and the rates and prices tendered will be deemed to include full compensation for any difficulties encountered by the Contractor while accessing and working in restricted areas. No extra payment nor any claim for payment due to these difficulties will be considered.

C3.4.12 Drawings

The reduced drawings that form part of the tender documents shall be used for tender purposes only.

The Contractor will be supplied with 3 sets of paper prints to scale of each of the drawings required for construction purposes. These copies are issued free of charge and the Contractor shall make any additional copies he may require at his own cost.

C3.4.12.1 *Figured dimensions to be used*

The Contractor shall use only the dimensions stated in figures on the drawings in setting out the Works and dimensions shall not be scaled from the Drawings, unless required by the Employer's Agent. The Employer's Agent will, on the request of the Contractor in accordance with the provisions of clause 5.9 of the Conditions of Contract, provide such dimensions as may have been omitted from the Drawings.

C3.4.12.2 *Drawings and As-Built / Record Drawings*

The Contractor shall ensure that accurate as-built records and drawings are kept of all infrastructure installed, crossed, discovered 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. Levels of all services shall also be given. In addition the levels, coordinates, direction, size and type of existing services crossed or exposed must be recorded by the Contractor and be indicated on the as-built drawings. A marked-up set of drawings shall also be kept and updated by the Contractor on at least a weekly basis. This information shall be supplied to the Employer's Agent Representative on a regular basis in accordance with the Employer's Agent's requirements. Electrical services shall be indicated in red, water pipes in blue, sewers in green, storm water services in brown, Telkom services in orange, etc.

Any information in the possession of the Contractor, which the Employer's Agent requires to complete the record drawings shall be supplied to the Employer's Agent Representative before a Certificate of Practical Completion will be issued.

Should the Contractor fail to provide the information timeously, the Employer's Agent may arrange for additional surveys, exploratory holes, marking up of drawings, etc. to obtain and record the necessary information. All costs to obtain and record the information will be deducted from payments due to the Contractor.

C3.4.13 Information Supplied by The Employer

Certain information contained in these contract documents, or provided separately, is being offered in good faith. However, in the circumstances pertaining to the type of information supplied, no guarantee can be given that all the information is necessarily correct or representative. More specifically this applies to all material surveys and reports and similar information, the accuracy of which is necessarily subject to the limitation of testing, sampling, the natural variation of material or formations being investigated and the measure of confidence with which conclusions can be drawn from any investigations carried out. It also applies to the positions of existing services as indicated on the drawings.

The employer accepts no liability for the correctness or otherwise of the information supplied or for any resulting damages, whether direct or consequential, should it prove during the course of the contract that the information supplied is either incorrect or not representative. Any reliance placed by the tenderer on this information shall be at his own risk.

C3.4.14 Spoil Material

No indiscriminate spoiling of material will be allowed. All surplus material shall be spoiled at a site provided by the contractor, unless specifically scheduled otherwise in the schedule of quantities.

C3.4.15 Non-Working Days

The contractor shall not work on Sundays or on the following statutory Public Holidays : New Year's Day, Human Rights Day, Good Friday, Family Day, Freedom Day, Workers' Day, Youth Day, National Women's Day, Heritage Day, Day of Reconciliation, Christmas Day and Day of Goodwill.

C3.4.16 Samples

The contractor shall at his own cost, supply all samples that may be required. Material or work not conforming to the approved samples shall be rejected. The Employer's Agent reserves to himself the right to submit samples to any tests to ensure that the material represented by the sample conforms to the requirements of the specifications.

C3.4.17 Manufacturer's Instructions

The recommendations of the manufacturers of patented materials must be strictly adhered to regarding the use, mixing, application, fastening, etc. thereof except when otherwise instructed in writing by the Employer's Agent.

C3.4.18 Proprietary Materials

Where proprietary materials are specified it is to indicate the quality or type of materials or articles required, and where the terms "or other approved" or "or approved equivalent" are used in connection with proprietary materials or articles, it is to be understood that the approval shall be at the sole discretion of the Employer's Agent.

C3.4.19 Notices, Signs, Barricades and Advertisements

The contractor shall erect the necessary signs, notices and barricades for the duration of the contract in order to safeguard both the works and the public.

Notices, signs and barricades as well as advertisements may be used only upon approval by the Employer's Agent, and the contractor shall be responsible for their supply, erection, maintenance and ultimate removal and shall make provision for this in his tendered rates.

The Employer's Agent shall have the right to have any sign, notice or advertisement moved to another position or to have it removed from the site of the works, should it in any way prove to be unsatisfactory, inconvenient or dangerous to the general public.

Such notices, signs and barricades shall be provided and erected at the contractor's own expense.

The standard name board of the South African Association of Consulting Engineers is specified, the cost of which shall be included in the rates tendered for items PSA 8.3.1 and 8.3.2 under section 1200 A of the schedule of quantities.

C3.4.20 Setting Out of Work

Reference and level beacons will be shown to the Contractor by the Employer's Agent at the commencement of the Contract and the Contractor will be responsible for transferring the datum to the Site of Works.

The Contractor shall check the condition and accuracy of all reference and level beacons and satisfy himself that they have not been disturbed and are true with regard to position and level. A beacon that has been disturbed shall not be used until its true position and level have been re-established and the new values have been certified by the Employer's Agent. The Contractor shall thereafter be held entirely responsible for the protection of all reference and level beacons.

The Contractor shall employ a capable surveyor to set out the Works to the required lines and levels. The Employer's Agent shall be informed immediately should any discrepancy be discovered between the levels or dimensions obtained by the Contractor and those shown on the drawings.

Where a beacon is likely to be disturbed during construction operations, the Contractor shall establish suitable reference beacons at locations where they will not be disturbed during construction. No beacons shall be covered over, disturbed or destroyed before accurate reference beacons have been established and details of the positions and levels of such beacons have been submitted to the Employer's Agent. The Contractor's reference beacons shall be of at least the same accuracy and sturdiness of construction as the existing beacons.

The Contractor shall submit the method of setting out he proposes to employ to the Employer's Agent. Accurate control off-line and level shall be provided by the Contractor at all stages of construction.

Work set out by the Contractor may be checked by the Employer's Agent and any errors found shall be rectified by the Contractor at his own expense. The Contractor shall supply any instrument, equipment, material and labour required by the Employer's Agent for this survey work. Any assistance, including checking given to the Contractor by the Employer's Agent or any setting out done by the Employer's Agent for Contractor shall not be held as relieving the Contractor of his responsibility for the accurate construction of the Works.

The Contractor's survey instruments and survey equipment shall be suitable for the accurate setting out of the Works and shall be subject to the approval of the Employer's Agent. They shall furthermore be checked and correctly adjusted by the authorized agents before the commencement of the contract and subsequently when required by the Employer's Agent and when otherwise necessary.

When required the Contractor shall, at his own expense, provide one labourer to assist the Employer's Agent. The Employer's Agent shall have the sole right of approving of such a labourer.

Survey work shall not be measured and paid for directly and compensation for the work involved in setting out shall be deemed to be covered by the rates tendered and paid for the various items of work included under the contract.

The contractor must verify with the Employer's Agent prior to construction whether the coordinates shown on the drawings have reference to the Clarke 1880 or WGS 84 system.

C3.4.21 Control of Noise and Dust

All noise and dust to be kept to the lowest level possible.

C3.4.22 Source of Construction Material

The location and procurement of all imported material will be the responsibility of the Contractor. Rates tendered for all imported material shall include haulage. All manufactured materials shall carry the SABS mark.

C3.4.23 Freehaul

All tendered rates shall allow for all transport costs. The free haul distance for the purpose of this Contract will be unlimited unless otherwise indicated in the schedule of quantities.

C3.4.24 Drainage of Excavations and Trenches and Planning of Such Activities

The Contractor is responsible for the drainage of excavations and trenches and shall therefore provide, work and maintain the pumps and other plant required for this purpose. Drainage of trenches and excavations will not be measured and paid for separately and the cost thereof will be deemed to be covered by the prices tendered and paid for the various items of work included under this contract.

During the wet winter months, the extent of open trenches shall be limited to reduce the risk of any delays. The Contractor shall be responsible for planning the work accordingly.

The Contractor shall amend his preferred working method by for example opening up and immediately closing up of trenches once the short section of pipe is laid to prevent any material from becoming unsuitable or saturated.

Indiscriminate working methods, lack of proper planning and protection of the works during the winter months resulting in a delay shall not be considered a circumstance, event or act on which a claim may be based and such claim shall not be payable by the Employer.

No additional payment will be made for altering the working method.

C3.4.25 Safety of Trenches

The strutting and shoring of excavated faces, if necessary, will be the responsibility of the Contractor and will not be measured and paid for separately. The Contractor, however, will be responsible to maintain and to keep all excavated faces in a safe condition to protect the Works and workers and to prevent delays caused by slope failures.

No trenches may be left open during the Contractor's holiday during December and January. All trenches which have been excavated but which have not been finally backfilled and compacted at the commencement of the said holiday period shall be temporarily fully backfilled and compacted to a standard which will :

- (a) prevent damage occurring to the trenches or any other part of the Works;
- (b) prevent damage to or physical loss of the property of any person;
- (c) eliminate the risk of injury to any person;

during the said period.

All costs involved in the temporary backfilling and compaction of such trenches and the subsequent re-opening of the trenches after the holiday period shall be for the Contractor's account.

C3.4.26 Transport of Material

All costs of transporting material, including overhaul, shall be included in the applicable tendered rates. All references in the specifications to transport, overhaul and haul distances shall be deleted irrespective of whether or not the deletion is included in these project specifications.

C3.4.27 Security Control

The Contractor will be responsible for the safety and security of his personnel and the site in general all times. All laws, rules and regulations shall be strictly followed in this regard and all the necessary precautions and measures shall be taken to ensure the safety of personnel, the public and equipment. The safeguarding of excavations in particular shall be a priority.

The Contractor shall provide security watchmen for this contract, as he deems fit at no extra cost for the Employer.

C3.4.28 Testing of Water Pipes or Sewers

The Contractor shall carry out all control testing of materials and workmanship. The Employer's Agent must be notified well in advance of all final tests to be undertaken. No portion of pipe may be finally covered before the proper prescribed tests have been done and approved in writing by the Employer's Agent.

All test results must be tabulated and test sections described properly by the Contractor and must be submitted timeously by the Contractor. All tests positions and pipe sections tested shall be indicated on a drawing provided by the Contractor.

C3.4.29 Materials Off Site

Should the Contractor claim payment of a portion of the value of some or all of the pipes, valves or any other material held in off-site stores the items concerned must be clearly marked as the property of the Employer. A certificate to this effect and confirmation that the relevant items have been paid for shall accompany his claim detailing the items and serial numbers as well as the street address of the store where the plant and equipment have been insured in terms of the general Conditions of Contract. The Contractor shall in writing provide documentary proof from the insurance company that these items are fully covered by the insurance policy concerned while the plant and equipment are stored away from the Site (street address of store to be stated).

C3.4.30 Photographs

The Employer, Employer's Agent and any of their agents shall at all times be allowed to photograph or film (video) any activities on site and the use of such shall be unlimited.

C3.4.31 Opening up and closing down of designated borrow pits

Measurement and payment for opening up and closing down designated borrow pits, including removing and stockpiling overburden and restoring the Site, shall be made under item 8.3.4(b) of SANS 1200 D. This item applies to all borrow material required under this Contract.

The requirements of subclause 5.2.2.2 of SANS 1200 D regarding the opening up, maintenance and closing down of borrow pits shall be adhered to.

C3.4.32 Workmanship and quality control

The onus to produce work that conforms in quality and accuracy of detail to the requirements of the Specifications and Drawings rests with the Contractor, and the Contractor shall, at his own expense, institute a quality control system and provide suitably qualified and experienced engineers, foremen, surveyors, materials technicians, other technicians and technical staff, together with all transport, instruments and equipment to ensure adequate supervision and positive control of the Works at all times.

The cost of supervision and process control, including testing carried out by the Contractor, will be deemed to be included in the rates tendered for the related items of work.

The Contractor's attention is drawn to the provisions of the various Standardized Specifications regarding the

minimum frequency of testing required. The Contractor shall, at his own discretion, increase this frequency where necessary to ensure adequate control.

On completion and submission of every part of the work to the Employer's Agent for examination and measurement, the Contractor shall furnish the Employer's Agent with the results of the relevant tests, measurements and levels to demonstrate the achievement of compliance with the Specifications.

C3.4.33 Plant and Materials

C3.4.33.1 *Plant and materials supplied by the Employer*

The Employer shall not supply any plant or materials.

C3.4.33.2 *Materials, samples and shop drawings*

(a) Samples

Materials or work which does not conform to the approved samples submitted in terms of Subclause 7.4.1 of the Conditions of Contract will be rejected. The Employer's Agent reserves the right to submit samples to tests to ensure that the material represented by the sample meets the specification requirements.

The costs of any such tests conducted by or on behalf of the Employer's Agent, the results of which indicate that the samples provided by the Contractor do not conform to the requirements of the Contract, shall, in accordance with the provisions of Subclause 7.4.4 of the Conditions of Contract, be for the Contractor's account.

C3.4.34 Construction Equipment

C3.4.34.1 *Requirements for equipment*

The Contractor shall supply all the plant and equipment required and all plant and equipment shall comply with the requirements as stipulated in the Environmental and Occupational Health and Safety Act and the Construction Regulation Act (2003).

C3.4.34.2 *Equipment provided by the Employer*

The Employer shall supply no plant, material or equipment.

C3.4.35 Site Usage and Demarcated Working Areas

Access to demarcated working areas shall be limited to the Contractor and his personnel. The Contractor shall be responsible to control unauthorized entry to these areas and shall inform the Employer's Agent of any breach of such rules. The site shall be managed and used for its intended purpose.

C3.4.36 Other Contractors

As discussed in Part C3.1 (Description of Works), Clause C3.1.8, other contractors (mechanical, electrical and electronic) will be engaged by the Employer and will be present on site during the period of the contract.

The Contractor shall arrange or adjust as necessary, the sequence of its work so as not to delay the programmes of the other contractors. The programmes of the other contractors will be made available at the offices of the Employer's Agent for perusal within two weeks upon commencement of the contracts.

The Contractor shall make provision in his programme for the completion of the civil work and provision of access to mechanical and electrical contractors for the all structures that will have the installation of mechanical and electrical works installation.

C3.4.37 Construction Restrictions, Demolition and Diversion Works

As part of the civil construction process, the Contract will be subject to construction restrictions. The aforementioned will need to be considered for programming and planning requirements as stipulated.

The following restrictions will impact the construction process and the Contractor's proposed programme:

C3.4.38 Access to Properties

The Contractor shall organize the work in such a manner as to cause the least possible inconvenience to the public and to the property owners adjacent to or affected by the work included in this contract.

The Contractor shall provide access to the public and to the property owners and maintain the necessary access for the duration of the contract.

If, as a result of restricted road reserve widths and the nature of the works, the construction of bypasses is not feasible, construction shall be carried out under traffic conditions in order to provide access to the erven and properties.

The Contractor may, with the approval of the Employer's Agent, make arrangements with the occupiers of the affected erven and properties to close off a portion of a street, road, footpath or entrance temporarily, provided the contractor duly notifies the occupiers of the intended closure and its probable duration and shall, as punctually as possible, re-open the route at the prescribed time. Where possible, the road shall be made safe and re-opened to traffic overnight. Any such closure shall be made by arrangement between the Contractor and the occupiers and shall not absolve the Contractor from his obligations under the contract to provide access at all times. The Employer's Agent shall be informed of such arrangements prior to implementation and it shall be subject to the approval by the Employer's Agent. Barricades, traffic signs and drums shall be provided by the Contractor to suit the specific conditions.

Note : No payment items have been scheduled separately for any work required to ensure compliance with the above-mentioned. The Contractor must note that the rates and prices tendered shall be deemed to include full compensation for any additional work required to construct the works as specified and to maintain access, and that no extra payment will be made, nor will any claim for payment for these difficulties be considered.

The arrangements made between the affected parties and the Contractor shall be confirmed in writing by the Contractor and submitted to the Employer's Agent for written approval by the Employer's Agent.

C3.4.39 Contractor's Vehicles

All equipment and vehicles used by the contractor shall be roadworthy at all times and all drivers and operators shall be in possession of valid drivers' licenses.

C3.4.40 Employment of Local Labour

It is the intention that the project, of which this contract is a part, should make the maximum possible use of the local labour force which is at present under employed.

To this end the contractor is expected to limit non-local employees to key personnel only and to employ local labour on this contract.

The contractor shall fill in Schedule T2.2.11 : Schedule of Estimated Local Labour to be Employed on the Contract and state how many non-local key personnel he intends to employ in the various categories. The tenderer must also state on this form the number of local labourers he intends employing for this contract.

The numbers stated in the above-mentioned data sheet will be strictly controlled during the contract period and any increase in numbers shall be subject to the approval of the employer.

The workforce utilized on the contract is to comprise only of local workers within the area of the jurisdiction of the client i.e. within municipal boundaries. The Employer's Agent may, at his discretion, upon receipt of a written and fully motivated application from the contractor and where he deems the circumstances so warrant, authorize in writing that non-local temporary workers, not being his Key Personnel, be included in the workforce.

The contractor shall pay to all temporary workers engaged in terms of this clause, not less than the minimum rate of remuneration as specified in the Appendix to Tender.

The contractor must provide records of all labour employed including name, surname and ID number, differentiating between male, female, local or non-local key personnel, youth and handicapped on a monthly basis. This record must also indicate the total number of man-hours and total remuneration of labour. Monthly payment certificates will only be processed if they are accompanied by the completed reports.

All costs, relating to identification, acquisition, allocation, training, relieving labour of their duties, problem-solving and attending to any other matters in order that the employment of local labour proceeds smoothly, shall be included in the relevant rates.

C3.4.41

Community Liaison and Community Relations

In all dealings with the community and works employed from within the community, the contractor shall take due cognizance of the character, culture and circumstances of the community involved and shall at all time use his best endeavours to avoid the development of disputes and to foster a spirit of cooperation and harmony towards the project.

The contractor shall at all times, keep the Employer's Agent fully informed on all matters affecting the contractor and the community, and shall attend all community meetings relating to the project as may be reasonably required by the Employer's Agent. All matters concerning the community shall be discussed and where possible, resolved at such meetings.

Where any resolution of a community meeting shall be contrary to the terms and provisions of the Contract, the contractor shall not give effect there-to without a prior written instruction from the Employer's Agent. Where the contractor is of the opinion that any instruction of the Employer's Agent issued in terms of this clause will result in the incurring of additional costs which were not provided for in his tendered rate and/or that a delay in the progress of the works will result, he shall be entitled to submit a claim in terms of Clause 10.1 of the Conditions of Contract, provided always that the period of twenty-eight (28) days referred to in Clause 10.1.1.1 shall be reduced to five (5) normal working days in respect of all claims submitted in terms of this clause.

FOR VIEWING PURPOSES ONLY

FOR VIEWING PURPOSES ONLY

PART C3: SCOPE OF WORK

C3.5: Management

PART C3.5: Management**CONTENTS**

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C3.5.1 Construction Programme and Planning

C3.5.1.1 *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 monthly 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.

C3.5.1.2 *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,

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- (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.

C3.5.1.3 *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.

C3.5.2 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.

C3.5.3 Unauthorized Persons

The Contractor shall keep unauthorized persons from the Works at all times.

C3.5.4 Management Meetings

C3.5.4.1 *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.

C3.5.4.2 *Site Meetings*

Site meetings shall be held monthly.

C3.5.4.3 *Health and Safety Meetings*

Health and Safety Meetings shall be held monthly.

C3.5.5 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.

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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.

C3.5.6 Key Personnel

The Contractor shall provide a schedule of key personnel, with contact particulars and experience.

C3.5.7 Health and Safety

C3.5.7.1 *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

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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.

C3.5.7.2 *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.

C3.5.7.3 *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.

C3.5.7.4 *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.

C3.5.7.4 *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%),

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- 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

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- 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.

C3.5.7.5 *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).

C3.5.7.6 *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.

C3.5.8 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.

C3.5.9 Forms for Contract Administration

The Contractor shall submit with each monthly statement for payment the following updated returns:

- Project Labour Report
- HDI Contract Participation Expenditure Report
- Targeted Labour Contract Participation Expenditure Report

The Project Labour Report must include details of all labour (including that of sub-contractors) employed on this contract in the month in question.

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PART C3: SCOPE OF WORK

C3.4.1: STANDARD SPECIFICATIONS

FOR VIEWING PURPOSES ONLY

STANDARD SPECIFICATIONSAPPLICABLE STANDARDIZED SPECIFICATIONS

For the purposes of this contract, the following SANS 1200 Standardized Specifications for civil engineering construction shall apply:

<i>SABS 1200</i>	<i>A</i>	<i>:</i>	<i>General (1986)</i>
<i>SABS 1200</i>	<i>AA</i>	<i>:</i>	<i>General (Small Works)</i>
<i>SABS 1200</i>	<i>AB</i>	<i>:</i>	<i>Engineer's office</i>
<i>SABS 1200</i>	<i>AD</i>	<i>:</i>	<i>General (Small Dams)</i>
<i>SABS 1200</i>	<i>AH</i>	<i>:</i>	<i>General (Structural)</i>
<i>SABS 1200</i>	<i>C</i>	<i>:</i>	<i>Site clearance (1980) (As amended 1980)</i>
<i>SABS 1200</i>	<i>D</i>	<i>:</i>	<i>Earthworks (1988) (As amended 1990)</i>
<i>SABS 1200</i>	<i>DA</i>	<i>:</i>	<i>Earthworks (Small Works)</i>
<i>SABS 1200</i>	<i>DB</i>	<i>:</i>	<i>Earthworks (Pipe Trenches) (1989)</i>
<i>SABS 1200</i>	<i>DK</i>	<i>:</i>	<i>Gabions and pitching</i>
<i>SABS 1200</i>	<i>DM</i>	<i>:</i>	<i>Earthworks (Roads, Subgrade)</i>
<i>SABS 1200</i>	<i>L</i>	<i>:</i>	<i>Medium-pressure pipelines (1983)</i>
<i>SABS 1200</i>	<i>LB</i>	<i>:</i>	<i>Bedding (pipes) (1983)</i>

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C3.6.2

**VARIATIONS AND ADDITIONS TO THE SANS STANDARDIZED
SPECIFICATIONS**

**C3.6.2: VARIATIONS AND ADDITIONS TO THE SANS STANDARDIZED SPECIFICATIONS**

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.

STATUS

In the event of any discrepancy between the project specifications and a part or parts of the SANS 1200 Standardized Specifications, the schedule of quantities or the drawings, the project specifications shall take precedence.

The following variations and additions to the following SANS 1200 standardized specifications listed in C3.6.1 are given as follows:

SABS 1200	A	:	General (1986)
SABS 1200	AA	:	General (Small Works)
SABS 1200	AB	:	Engineer's office
SABS 1200	AD	:	General (Small Dams)
SABS 1200	AH	:	General (Structural)
SABS 1200	C	:	Site clearance (1980) (As amended 1980)
SABS 1200	D	:	Earthworks (1988) (As amended 1990)
SABS 1200	DA	:	Earthworks (Small Works)
SABS 1200	DB	:	Earthworks (Pipe Trenches) (1989)
SABS 1200	DK	:	Gabions and pitching
SABS 1200	DM	:	Earthworks (Roads, Subgrade)
SABS 1200	L	:	Medium-pressure pipelines (1983)
SABS 1200	LB	:	Bedding (pipes) (1983)

**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:

"Employer's Agent: All references in the SANS specifications referring to the Engineer shall also be deemed to refer to the Employer's Agent in terms of the General Conditions of Contract.

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 3.4 Materials Supplied By The Employer (Optional)

All materials designated in the contract documents to be supplied by the employer shall not be obtained by the contractor from any other sources except from the employer. All requisitions for materials, which are to be supplied by the employer, shall be submitted in writing and shall be signed by the contractor or his authorized representative and the Employer's Agent. The contractor or his authorized representative shall sign a receipt upon delivery of all such materials which, have once been accepted by the contractor, will be deemed to be in sound and satisfactory condition and will be his sole responsibility thenceforth.

The onus shall be entirely on the contractor to ensure that he accepts only sound materials from the employer, and the Employer's Agent shall be authorized to reject as unsuitable any material on the site of the works, which, in his opinion is unsound or defective in any way. The contractor shall immediately remove such rejected materials from the site of the works and shall replace them at his own expense with new and sound materials to the satisfaction of 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 :

- (f) 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 :

- (f) 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
- (g) 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 minimise 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):

- (g) 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



- (h) 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
- (i) 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
- (j) 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
- (k) 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."

Add the following :

"PSA 5.10

Work on, Over, Under or Adjacent to a Railway Line

All work carried out on, over, under or adjacent to a railway line shall be carried out strictly in accordance with the latest edition of Transnet Specification E7, part 2. The contractor shall obtain a copy of the latest edition, which shall be kept on the site, before any work of this nature is commenced.

Attention is drawn especially to the requirements contained in the E7 Specification regarding approval that must be obtained from Transnet for a work permit or the occupation of property of the Transport Services and the approval of false work and form work plans."

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.
- Cost of all wayleaves.
- 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 facilities for the Employer's Agent and his staff as specified in Part C3.4: Construction Site Establishment.
- Providing and erecting two new contract name boards as shown on the drawings.
- Providing all the required documentation described in Part C3.
- 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 be 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
- Year-end break(s) not exceeding 15 working days in duration; 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 year-end break 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 Annual holiday period during December and January **Unit : Sum**

The tendered sum will be payable for the annual holiday not exceeding 15 working days in duration which falls within the construction period. Should an extension of time be granted which extends the contract period beyond the annual holiday, 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 Year-end break(s) not exceeding 15 working days in duration..... **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 8.5 **Sums Stated Provisionally by The Employer's Agent**

Replace the contents of Subclause 8.5 with the following :



"PSA 8.5.1

Works Executed by the Contractor

The Contractor will be reimbursed in substitution of the Provisional Sums (if any) allowed in the Schedule of Quantities for work to be executed by the Contractor, in the amounts determined in accordance with the provisions of Clause 6.6 of the Conditions of Contract.

PSA 8.5.2

Works Executed by Nominated Subcontractors(a) Work to be executed by a Nominated Subcontractor Unit : Prov Sum(b) Overheads, charges and profit on item (a) above Unit : % or Sum**Sub-items (a) and (b) will be provided in the Schedule of Quantities for each different Nominated Subcontract included in the Contract.**

The Contractor shall be reimbursed under sub-item (a), in substitution of the respective Provisional Sums (if any) allowed in the Schedule of Quantities, the amounts actually paid or payable by the Contractor to the respective Nominated Subcontractors, in accordance with the provisions of Clause 6.10 of the Conditions of Contract.

The Contractor shall be paid under sub-item (b), either :

- (a) where the unit of measurement for sub-item (b) was specified as being a percentage, 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), all in accordance with the provisions of Subclause 6.10.1 of the Conditions of Contract, or
- (b) where the unit of measurement of sub-item (b) was specified as being a Lump Sum, an amount which is in the same proportion to the amount certified for payment under sub-item (a) and the tendered Lump Sum is to the amount of the Provisional Sum stated under sub-item (a),

The percentage or sum (as applicable) paid under sub-item (b) as aforesaid, shall be deemed to include for full and final compensation to the Contractor for all costs as may be incurred and all charges and profits associated with the engagement, supervision, administration and management of the Nominated Subcontractor and in fulfilling its obligations under the contract as the principal Contractor."

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 8.6

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 8.8.1

Main Access Road to Works (construct and maintain) **Unit : Sum**

The tendered rate shall include full compensation for the construction and maintenance of the temporary main access road to the works.

The tendered rate shall include all costs as described in PSA 8.3.2.

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 1,2 m high..... Unit : m

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 1,2 m high fence Unit : m

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 there-of 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.

PSA 8.8.11 Supply, erect and maintain temporary precast concrete- or plastic water filled barriers (minimum 1m high) Unit : m

The tendered rate shall include full compensation for the supply and erecting of "New Jersey" type or Delta Bloc type or equivalent temporary precast concrete- or plastic water filled barriers in the road way, after the necessary temporary road signage has been erected. The barriers may only be erected over weekends to cause limited disruption to traffic. The tendered rate shall further include full compensation for the fixing of the individual barriers, maintaining the barriers, replacement of damaged barriers and the dismantling and removal of the barriers on completion of the work. The tendered rate for the supply and erecting the barriers must include the cost of traffic accommodation in these areas.

PSA 8.8.12 Relocate, erect and maintain precast concrete- or plastic water filled barriers (minimum 1m high)..... Unit : m

The tendered rate shall include full compensation for the relocation of the barriers within the site which shall include the dismantling, loading, transporting of loading the barriers and the re-erection in accordance with payment item PSA 8.8.11 above. The relocation and re-erection may only be done over weekends."

Add the following :

"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 the Particular Specifications..... 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. Refer to the Particular Specifications and Part C3.5.

It shall further include full compensation for the registration of the project with the Authorities (Department of Labour) and any delay in awaiting for approvals by the Authorities.

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 :

- (g) 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.
- (h) 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 8.14 Continuous water supply..... Unit : Sum

The rate tendered shall include full remuneration for maintaining the existing water supply system and providing a continuous supply of water during the contract period and the change over to the newly constructed system.

Payment for this item will be included in the penultimate payment certificate.

PSA 8.15 Operation and maintenance of the new water supply system..... Unit : Sum

The tendered rate shall include full compensation for full time operation and maintenance of the system for six weeks from the date on which the completion certificate is issued.

A site visit every two months until the Final Completion Certificate is issued must be undertaken by the Contractor and the Employer's Agent in order to verify that the water supply system functions to the specifications provided in this document and specifications of manufacturers and suppliers.



One chemical- and bacteriological analysis of the raw water and one of the treated water will be taken and analyzed by the contractor (at the contractors' expense) and the approved laboratory once every two weeks for the first six weeks and once every two months for the remainder of the defects liability period.

The contractor shall take all such steps to ensure that the water supply system operates to the satisfaction of the Employer's Agent.

Payment for this item shall be included in the penultimate payment certificate.

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."

ADD THE FOLLOWING:

(OPTIONAL - PENALTIES FOR DAMAGING INDIGENOUS VEGETATION)

"The following applies to clearing widths:

- (a) The width to be cleared for the road shall not exceed 6,0 m.
- (b) The area to be cleared for parking zones shall not exceed the specified dimensions by a margin of 0,5 m measured from the perimeter.

The areas to be cleared are categorised as follows:

- Area A : The well established fynbos areas.
- Area B : The grass covered areas.
- Area C : The areas covered with pincushion and fynbos.
- Area D : The Port Jackson infested areas with little or no undergrowth.

Penalties: Money will be deducted according to the following rates should the contractor clear, drive on or damage areas in excess of the widths specified (Refer to (a) & (b) above)

- Area A : R35.00/m²
- Area B : R 5.00/m²
- Area C : R10.00/m²
- Area D : None"

PSC 5.3 Clearing

ADD THE FOLLOWING:

(Select one of the following options. In the first instance amend the thickness as applicable, especially for contracts with vast areas to be filled)

"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 8.2.8 Demolish and remove structures / buildings..... Unit : Sum

The contractor shall ascertain the works necessary to remove the structures complete as given in the schedule of quantities and noted on the drawings.

"The rate shall cover the cost of excavating around the structure, demolishing the structure, disposal of excavated material and rubble, and backfilling of the hole with sand in layers of 300 mm including compaction to 100% of MOD AASHTO. There will be distinguished between different structures."

Add the following payment clauses :

"PSC 8.2.11 Remove topsoil to spoil site furnished by contractor Unit : m³

The tendered rate shall include full compensation for removing topsoil to a depth of 150 mm and for loading and transporting the material to spoil sites furnished by the contractor.

The Contractor shall confirm during the clear and grub and topsoil removal operation, in writing with the Employer's Agent any areas where the topsoil exceeds 150mm depth or where the roots of plant material requires deeper ripping for complete removal. The method and scope of additional work will then be confirmed by the Employer's Agent.

Add the following items to Subclause 8.2 :

PSC 8.2.12 Remove and re-erect, discard or deliver to store existing, exposed aggregate bollards Unit : No

Various items shall be scheduled. The tendered rate shall include full compensation for excavating around the bollards, removal of bollards and temporarily storing the bollards and re-erecting the bollard elsewhere or delivering the bollard to the store. The rate shall also cover the cost of re-instating the road layerworks, namely 25 mm Asphalt on 150 mm G4 base course, compacted to 98% Mod Aashto on 200 mm clean sand compacted to 100% Mod Aashto.



- "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.*
- The rate shall also cover the cost of using new tying wire but not the cost of any other new material that may have to be used on the written instructions of the Employer's Agent.*
- PSC 8.2.14 Demolish existing wall and replace with precast concrete panel wall Unit : m
- The rate shall cover the cost of dismantling a section of wall and replacing it with a 2,1 m high precast concrete panel wall.*
- Payment for this item will be measured per metre length of fence erected.*
- PSC 8.2.15 Remove and dispose of kerbing..... Unit : m
- The rate shall cover the cost of the removal, transport and disposal of existing kerbs to a spoil site furnished by the Contractor, including all necessary excavation and backfill compacted to 100% modified AASHTO density.*
- PSC 8.2.16 Take down existing fences and deliver to municipal store..... 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 delivering to the municipal store and off-loading such material.*
- PSC 8.2.17 Rip and clear tarred and paved areas..... Unit : m²
- Various items shall be scheduled. The rates shall collectively include full compensation to rip, clear and spoil at a spoil site provided by the contractor of asphalt or block paving.*
- PSC 8.2.18 Remove kerbs, stockpile, store, maintain and reinstate..... Unit : m
- The tendered rate shall include full compensation for careful excavation around the kerbs, careful removal, loading, transport of kerbs, off loading, clearing, stacking, storing and maintaining of the kerbs and the reinstatement of kerbs. The rate shall also include full compensation for setting out, kerb mix, planning and finishing of the reinstated kerbs.*
- Various items shall be measured for various types of kerbs.*

**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 or 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 use of explosives is prohibited on this project."

**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 Compaction

PSD 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 EarthworksPSD 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".

PSD 8.3.6 Overhaul

Add the following :

"No overhaul shall apply to material from commercial sources or to material disposed of to sites provided by the contractor or by other means employed by the contractor."

PSD 8.3.8 Existing services (see 5.1.2.2)

PSD 8.3.8.1 Location

REPLACE ITEM 8.3.8.1 WITH THE FOLLOWING :"8.3.8.1 *Hand Excavation for Locating and Exposing Existing Services* :(a) In roadways Unit : m³(b) In all other areas Unit : m³

The unit of measurement shall be the cubic metre of material excavated, measured in place according to the authorised or actual dimensions of the excavation, whichever is the lesser.

The tendered rates shall cover the cost of excavating in all materials by means of hand tools within authorised dimensions and at locations approved by the Employer's Agent in accordance with the requirements of Subclause PSA 5.4.1, 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 90% of the modified AASHTO density.

The tendered rate for hand excavation in roadways shall include compensation for compacting excavated or selected backfill material to 93% of modified AASHTO density. Reinstating layerworks and surfacing shall be measured and paid for in terms of SABS 1200DB.

The tendered rates shall also include for keeping excavations safe, for dealing with surface and subsurface water, for removing surplus excavated material from the Site, for transporting all material within the free-haul distance, and for supplying adequate supervision during both excavation and backfilling operations. Overhaul, if applicable, will be measured and paid for in terms of SABS 1200DB."

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 8.3.11.4 *Straw Stabilization* Unit : m²

The tendered rate shall include all costs to supply, spread and rotivate or harrow the straw 100 mm deep into the sand. One straw bale will be used for every 25m².

ADD THE FOLLOWING ITEMS IN SUBCLAUSE 8.3:

"PSD 8.3.14 Extra over items 8.3.2.1 and PSD 8.3.3 for temporary stockpiling Unit : m³

The unit of measurement shall be the cubic metre of material from necessary excavations, temporarily stockpiled by the Contractor on the instructions of the Employer's Agent, before being used in embankments or backfill.



Measurements shall be taken in place in compacted embankment or backfill as the case may be.

The tendered rate shall include for the costs, additional to those provided for in PSD 8.3.2.1 and PSD 8.3.3 of off-loading, forming and maintaining the stockpile for as long as is required, reloading and transporting within the applicable freehaul distance from the stockpile.

Payments to the Contractor under this item will only be made in respect of that material stockpiled on the instructions of the Employer's Agent (which instruction shall state specifically that payments for such stockpiling will be paid for under this item) and no payments will be made to the Contractor under this item in respect of materials stockpiled by the Contractor on its own volition, nor for materials necessarily stockpiled by the Contractor in consequence of the sequence of operations adopted by it in the course of executing the Works, whether such stockpiling was avoidable or otherwise."

PSD 8.3.16 Extra over items 8.3.2 and 8.3.3 for disposing of spoil material on a site provided by the contractor **Unit : m³**

The tendered rate shall include full compensation for the additional cost of providing a spoil site or other means of disposing of surplus spoil material, for transporting the material, regardless of the distance involved, for any charges for taking such material and for all other incidentals necessary to dispose of the spoil material. No overhaul shall apply.

PSD 8.3.17 Variations in compactive effort : (use in conjunction with PSD 8.3.2.1(b))

- | | |
|-----------------------------|----------------------------------|
| (a) Vibrator roller | Unit : m²-pass |
| (b) Heavy grid roller | Unit : m²-pass |
| (c) Tamping roller | Unit : m²-pass |
| (d) Flat wheel roller | Unit : m²-pass |
| (e) Pneumatic roller | Unit : m²-pass |

The unit of measurement shall be the square-metre-pass and shall be computed by multiplying the number of square metres to which the changed pass efforts apply by the increased or decreased number of roller passes, computed on the basis of a 200 mm layer thickness.

Where a change in the compaction effort is requested, the contractor will be compensated at the tendered rates for the above items in respect of the increased number of square-metre roller passes of each type of roller required over and above that specified in the relevant standard effort. His compensation will be decreased simultaneously, at the applicable rates, by the number of square-metre roller passes of each type of roller which is either decreased or completely left out.

The tendered rate for each additional square-metre-pass ordered by the Employer's Agent over and above the specified number of passes, shall include full compensation for all supervision, labour, plant, equipment, fuel, materials and incidentals necessary for completing the work. The same rates shall be accepted by the contractor during computation of a decrease in his compensation where the number of roller passes for each specific type or roller is decreased.

PSD 8.3.18 Selection, transportation and placement of boulders for rip rap **Unit : m²**

Various positions and slopes for construction of the rip rap shall be scheduled.

The tendered rate shall include full compensation for the selection of boulders between 200 mm dia and 300 mm dia from stockpiles, loading, transporting and offloading of the boulders and careful placement of boulders by hand to construct the rip rap.

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."

PSD 8.3.20 Supply and install Geosynthetic Clay Liners (Bentonite) **Unit : m²**

The tendered rate shall include full compensation for the supply and lay of a needle punched reinforced composite and heat treated Geosynthetic Clay Liner comprising of two geotextile outer layers with a uniform core of natural sodium bentonite clay to form a hydraulic barrier.

The tendered rate shall include for all costs including all materials, labour, plant and supervision and for the supply and installation of Kaytech's Envirofix ® Thermal Lock TM GCL.

**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 Agent; 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 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 (10) and (11) 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 8.3.3.3 Compaction in road reserves

Replace the heading of this subitem with the following :

"PSDB 8.3.3.3 Compaction in road crossings"

And replace the sentence "The volume will be measured as specified in 8.2.2, 8.2.3 and 8.3.3.1" with the following :

"In the case of gravel roads, determining the volume, the depth will be measured from the underside of the gravel wearing course to the top of the fill blanket, and in the case of bitumen roads, from the underside of the subbase to the top of the fill blanket, unless a selected layer is specified then it will be measured from the bottom of the selected layer. The length of the trench used for compacting the quantity for payment will be the actual length under the road."

The rest of the trench shall be backfilled as specified in Clauses 5.9.3, 5.9.4 and 5.9.5, as applicable, and payment will be made under item 8.3.6.1."

PSDB 8.3.3.4 Overhaul

Delete this item.

No overhaul will be paid on material for the purposes of this contract and all the costs for transporting material shall be included in the applicable tendered rates and amounts.

PSDB 8.3.4 Particular ItemsPSDB 8.3.4(a) Shore trench opposite structure or service

Replace the heading of this subitem with the following :

"PSDB 8.3.4(a) Shore trench opposite structure or service or in restricted work space

Add 'of the approved design, presentation of method statement' after 'if necessary', in the second sentence.

"Add the following after the last sentence :

The Contractor shall be responsible for the design of all lateral support and shoring. Designs certified by a Registered Professional Engineer including all design assumptions, calculations, drawings and method statements must be submitted to the Employer's Agent for acceptance prior to ordering material and prior to any excavation work commences.

Add the following after the last sentence :

"Separate items will be measured for depths of trenches in increments of 1,0m. The rate for each stated category shall cover the cost of shoring from ground level up to the full depth of the stated category, both sides of the trench. Payment for this item will only be made if written instructions were issued by the Employer's Agent."

PSDB 8.3.5 Existing services that intersect or adjoin a pipe trenchPSDB 8.3.5(b) Services that adjoin a trench

Replace the last phrase "measuring for shoring" with the words "protected by shoring". The rate for this item shall cover the cost of any necessary shoring.

Add the following :

"(v) This rate shall also cover the additional cost of detection, exposure, hand excavation, protection, alteration and backfill material (the last if outside trench dimensions).

(vi) An existing service which has been abandoned at the time it is crossed, will not be measured.

PSDB 8.3.6 FinishingPSDB 8.3.6.1 Reinstatement road surfaces complete with all courses Unit : m²

Add the following :

(a) Paved Roads

The courses shall consist of 80 mm concrete interlocking paver on 20mm sand, on 150 mm thick G3 base to 98% Mod AASHTO, on 150 mm thick G5 subbase to 97% Mod AASHTO on 300 mm sand to 100% Mod AASHTO.



(b) Asphalt Roads

The courses shall consist of 35 mm Asphalt on MC-30 bitumen on 150 mm thick G4 base to 98% Mod AASHTO, on 150 mm thick G5 subbase to 97% Mod AASHTO on 300mm sand to 100% Mod AASHTO.

The tendered rate shall also include the application of a joint sealer, Viaseal or equivalent for all joints in the asphalt.

Where hot premix can not be obtained, road crossings shall be reinstated in accordance with the following.

Tosas Pothole Patch water resistant hot mixed cold bagged premix; or similar proven and approved

Product to satisfy :

- Grading as per COLTO Table 4202/7 for medium continuously graded asphalt
- With a typical active filter content of 1%, and
- base bitumen as per Clause 4202 (a) (1).
- Binder content between 4,8 and 5,8% by mass and specifically formulated binder additive 0,008 to 0,009% by mass (the lower value for hot conditions and higher value for cold conditions)
- Voids in mix 3,0 to 5,0
- Marshall properties :
 - Stability (kN) 8,0 to 16,0;
 - Flow (mm) 2 to 14;
 - Immersion Index (%) 75(min)
- All weather application possible in case of emergency, but ambient temperature should be 20 degrees centigrade and rising.

(c) Gravel roads

The course shall consist of 150 mm G5 subbase compacted to 97% Mod AASHTO on 300 mm sand to 100% Mod Aashto.

(d) Paved driveways

The courses shall consist of 60mm thick new brick paving of similar colour (no broken bricks) to the existing paving, on 20mm clean sand, on 150mm G5 subbase to 97% Mod AASHTO on 300mm of clean sand to compacted 100% Mod AASHTO. The tendered rate shall also include for all cutting of pavers.

(e) "Crazy Pave"

The courses shall consist of half bricks placed in a similar pattern to the existing paving with a sand cement (ratio 1 to 3) for the infill between bricks on 150mm G5 subbase compacted to 97% Mod AASHTO on 300mm of clean sand compacted to 100% Mod AASHTO.

(f) Concrete drive way

The courses shall consist of a 125mm Class 25MPa/19mm concrete on 150mm G5 subbase compacted to 97% Mod AASHTO on 300mm of clean sand compacted to 100% Mod AASHTO.

(g) Premix sidewalks

The courses shall consist of 30m premix on 125mm G5 subbase compacted to 98% Mod AAHTO, on 200mm clean sand compacted to 100% Mod AASTO.

"PSDB 8.3.7

Accommodation of traffic..... **Unit : sum**

The tendered rate for the accommodation of traffic shall include full compensation for all items of cost necessary for the accommodation of traffic and the construction and maintenance of bypasses, including existing roads used as bypasses, during the construction period. It shall also include full compensation for traffic control, the provision of traffic signs and, where necessary, communications equipment required for traffic control, the provision of traffic signs and, where necessary, communications equipment required to regulate traffic, for the construction of temporary drainage works, and for the maintenance of all drainage works, arranging for the moving of services, attending to traffic problems, complying with the requirements of the Road Traffic Ordinance and of the relevant local authorities.

Payment shall be made in equal monthly instalments."



"PSDB 8.3.8

Removal of existing pipes :

- (a) Excavate in all materials to 300mm above the pipelines **Unit : m³**

The unit of measurement shall be the cubic metre of material excavated for the removal of pipelines in accordance with PSDB 5.11, measured in place according to the authorised dimensions. Depth shall be measured from the ground surface on the centreline of the pipeline to 300 mm above the pipe barrel.

The tendered rate shall include for excavating by any method in all materials and placing the excavated material alongside the trench.

- (b) Hand excavation for removal by hand to expose pipes **Unit : m**

The unit of measurement shall be the linear metre of pipeline finally exposed by hand excavation methods, measured in plan view along the centreline of the pipeline, irrespective of the class of pipe. Separate items will be scheduled for each different diameter of pipe. The pipe volume as well as the volume of all associated structures such as junction boxes, manholes, valve chambers and the like shall be excluded from the volume of excavation measured.

The tendered rates shall be in full and final compensation for excavating by hand methods from a depth of 300 mm above the pipe barrel in accordance with PSDB 5.11.2 to expose the pipe to its bottom, irrespective of the type class of pipe, as well as for excavating by hand around junction boxes, manholes, valve chambers and the like.

- (c) Remove pipes from trench and stack for inspection **Unit : m**

The unit of measurement shall be the linear metre of each type and diameter of pipe removed from the trench in accordance with Sub-clause 5.11, measured in plan view along the centreline of the pipeline, without deduction for specials, junction boxes, manholes, valve chambers and the like as may be encountered. Separate items shall be scheduled for each different class and diameter of pipe.

The tendered rates shall be fully inclusive for uncoupling the individual pipes and specials, all additional excavation as may be necessary to facilitate the insertion of lifting slings or the utilisation of other lifting equipment, the provision and utilisation of all such lifting equipment as may be necessary (e.g. cranes, if required), for lifting the pipes and specials out of the trench, cleaning and stacking them along the side of the trench for inspection, attending during the Employer's Agent's inspection and recording the Employer's Agent's decisions on each pipe/special. The tendered rate shall further include for the demolition and removal from the trench of all associated pipeline structures as may be encountered, such as junction boxes, inlet and outlet structures, valve chambers, anchor blocks and the like, and the loading and removal of the debris to spoil.

- (d) Deliver pipes and specials declared re-usable

- (i) Pipes **Unit : m**

The unit of measurement shall be the linear metre of pipe declared re-usable by the Employer's Agent and delivered to the address specified in Sub-clause PSDB 5.11. Separate items will be scheduled for each different type and class of pipe.

The tendered rates shall be fully inclusive for loading the pipes at the side of the trench, transporting to and off-loading at the location specified in PSDB 5.11, and carefully stacking separately according to the type, class and diameter of the pipes.

- (ii) Specials **Unit No.**

The unit of measurement shall be the number of specials declared re-usable by the Employer's Agent in accordance with Sub-clause PSDB 5.11 above, irrespective of the type or diameter of the special, delivered to the address specified in Sub-clause PSDB 5.11.

The tendered rate shall be fully inclusive for loading the specials at the side of the trench, transporting to and off-loading at the location specified in PSDB 5.11, and carefully stacking separately according to the type, class and diameter of the specials.

- (e) Dispose of pipes and specials unsuitable for re-use

- (i) Pipes **Unit : m**

The unit of measurement shall be the linear metre of pipe declared by the Employer's Agent to be unsuitable for re-use and disposed of by the Contractor in accordance with the requirements of PSDB 5.11.5. Separate items will be scheduled for different types and diameters of pipe.



The tendered rates shall be fully inclusive for loading the pipes at the side of the trench, transporting to and off-loading at the spoil site and dealing with as specified in PSDB 5.11.5.

(ii) Specials **Unit : No.**

The unit of measurement shall be the number of specials declared by the Employer's Agent to be unsuitable for re-use and disposed of by the Contractor in accordance with the requirements of PSDB 5.11.5. Separate items will be scheduled for different type of special.

The tendered rate shall include for loading the special at the side of the trench transporting to and off-loading at the spoil site and dealing with as specified in PSDB 5.11.5.

11. Backfill and compact trench **Unit : m³**

The unit of measurement shall be the cubic metre of compacted fill, measured tight according to the authorised dimensions of the trench.

The tendered rate shall be fully inclusive for placing excavated material in the trench and compacting in accordance with Subclauses 5.6 and 5.7.

12. Make up deficiency in backfill material **Unit : m³**

The unit of measurement shall be the cubic metre of backfill obtained from sources other than the trench excavated for the purposes of removing the pipeline, in order to make up any deficiencies in backfill material resulting from the volume previously occupied by the pipeline.

Except that the volume shall be determined as the external volume of the pipes removed together with the external volume of all ancillary structures removed along the pipeline, measurement and payment shall be in accordance with 8.3.3.1 of SABS 1200DB.

PSDB 8.3.9 Provision of temporary bridges for maintaining access to properties:

(a) Temporary pedestrian bridges **Unit : No.**

(b) Temporary vehicular bridges **Unit : No.**

The unit of measurement shall be the number of temporary pedestrian and vehicular bridges actually provided in accordance with the Specifications.

The tendered rates shall include full compensation for the supply, first installation, maintenance and final dismantling and removal of the temporary access bridges when no longer required, as specified in Subclause PSDB 5.1.3.

PSDB 8.3.10 Moving of temporary bridges to and their re-erection in new positions:

(a) Temporary pedestrian bridges **Unit : No.**

(b) Temporary vehicular bridges **Unit : No.**

The unit of measurement shall be the number of times each temporary bridge is moved to and re-erected in an entirely new position, excluding its first erection in the position where it was originally installed. No payment shall be made without the Employer's Agent's prior approval for the moving and re-erection of a temporary bridge.

The tendered rates shall include full compensation for taking down, transporting, handling, re-erecting and maintaining of the temporary bridges in the new positions."

Add the following payment clauses:

"PSDB 8.3.12 Excavate in all materials to expose danger tape on 11 kV cable and backfill trench to invert **Unit : m**

The rate shall cover the cost of complying with the requirements of 5.1, (except where particular items are scheduled to cover particular costs (see 5.1.2.2)), excavation (including hand excavation) to above the danger tape, backfilling the trench once Cape Town City Council have removed the cable, compacting and disposing of surplus material as specified in 5.6.3 and 5.6.4.

The rate shall also cover the cost of liaison with and accommodation of Local Council.

The volume measured for payment shall be taken as 0,42 m³/m from ground surface to above danger tape and 0,54 m³/m from ground surface to invert.



- PSDB 8.3.13 Excavate in all materials and backfill later from above danger tape **Unit : m**
- The rate shall cover the cost of complying with the requirements of 5.1 (except where particular items are scheduled to cover particular costs (see 5.1.2.2)), excavation to invert, backfilling at a later stage from above danger tape, compacting, and disposing of surplus material as specified in 5.6.3 and 5.6.4.
- The rate shall also cover the cost of liaison with and accommodation of Local Council.
- The volume measured for payment shall be taken as 0,42 m³/m from ground surface to above danger tape and 0,54 m³/m from ground surface to invert.
- PSDB 8.3.14 Removal and Reinstatement of the following :
- Various items shall be scheduled. The rates shall include full compensation for the careful removal, transport, stockpiling, maintenance and reinstatement, to at least the original condition, of various items. No additional payment shall be made for the crossing of these items under clause PSDB 8.3.5.
- PSDB 8.3.15 Supply and install danger/warning tape **Unit : m**
- The tendered rate shall include full compensation for the supply and installation of 300mm wide orange warning tape within new trenches, 300mm from the final ground layer where directed by the Employer's Agent or as indicated on the drawings.
- 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.

**PSDK GABIONS AND PITCHING (1984)****PSDK 3 MATERIALS****PSDK 3.2 Pitching****PSDK 3.2.1 Stone**

Delete the first value in column 2 of Table 2 of "300" and replace with "600". (The thickness of Extra heavy pitching shall therefore be 600 mm).

PSDK 5 CONSTRUCTION**PSDK 5.3 Pitching****PSDK 5.3.3 Grouted Pitching**

Replace the words "(Table 4)" in the first sentence of the third paragraph with "Table 2)".

PSDK 8 MEASUREMENT AND PAYMENT**PSDK 8.2 Scheduled Items**

Add the following subclauses:

"PSDK 8.2.8 Lining of river with Armorflex or similar approved **Unit : m²**

The tendered rate shall include full compensation for the supply of all material, all labour, plant and all other costs and the construction of the armorflex channel lining. The rate shall include full compensation for placing the blocks in stretcher bond pattern and binding the blocks with a 3mm dia PVC coated and galvanized mild steel wire.

PSDK 8.2.9 Cutting and adjusting mattress to fit around stormwater pipe **Unit : No**

The rate shall cover the cost of cutting the cages, adjusting the wires and securing all around the stormwater pipe."

PSDK 8.2.10 Concrete Cut-offs..... **Unit : m³**

The tendered rate shall include full compensation for the construction of the cut-off concrete beams as shown on the drawings. Various dimensions and concrete strengths will be scheduled.

The tendered rate shall include the cost of excavation and any formwork required.

**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 $\pm 2\%$.

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."

Add the following:

PSL 3.4.3 Pipes of nominal bore over 150mm

Add the following after the last sentence:

Grade C steel pipe shall be used, and the wall thickness must comply with column 3 of table 2 of SANS 719."

Add the following:

PSL 3.4.5 Stainless steel pipes

"Stainless steel pipes shall be Grade 304, shall comply with ANSI B36.19 and the wall thickness shall comply with schedule 10S."

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 stainless steel 304 flanged tees as billed. All Ductile iron and steel fittings must be wrapped."

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 in the schedule of quantities and 20 to 40mm dia HDPE pipes shall be PN16 or as specified in the schedule of quantities. All fittings shall be class 16. All bends and tees will be moulded and 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 stainless steel 304 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.

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 mild steel pipework shall be hot dip galvanized to SANS 121 and SANS 32 and shall be grade 8.8 to SANS 1700 and ISO 898 or stainless steel 316, as shown on the drawings or as billed.. 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 Chesterton 725 or equivalent."

Only stainless steel bolts, washers and nuts shall be used on all fittings such as saddles, flanges, short collar couplings, etc.



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.

PSL 3.9.6**Corrosive soil**

Steel pipes in contact with soil shall be wrapped with Densopol 80 HT or an equivalent approved product, strictly in accordance with the manufacturer's instructions and as described on the drawings.

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**CONSTRUCTION****PSL 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 ensure that the welds are kept dust free. 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 by the Contractor and shall be tested by an independent laboratory and once approved by the Employer's Agent before the 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.
- f) testing of the municipal water from the pipeline after the sterilized water was flushed out."

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:

"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 newly installed potable water reticulation system and the disposal of the sterilising solution as approved by the Employer's Agent."

The tendered rate shall also include full compensation for testing the water from the newly installed and sterilized pipeline by an independent laboratory to confirm it conforms to SANS 241:2015 for E.coli, Total Dissolved Solids, Turbidity and pH.



PS L 8.2.3	Extra-over 8.2.1 For The Supplying, Fixing And Bedding Of Valves Unit : No
	Add the following to L 8.2.3: Valves are measured and paid for per item, complete with the inclusion of the cutting of pipes, couplings, extra excavation and all extra material and labour that is required, including tees, fittings, isolating valves (e.g. under air valves), complete as shown on the drawings. Flanged distance pieces shall be included in the rate for fire hydrants.
PS L 8.2.10	Temporary Valves, Etc. Unit : Sum or No
	Substitute L 8.2.10 with the following: Temporary valves, end caps or blank flanges testing shall be included in the rate for the laying of pipes except where separate items are included in the schedule of quantities.
PSL 8.2.11	<u>Anchor/Thrust blocks and pedestals</u>
	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."
PS L 8.2.13	<u>Valve And Hydrant Chambers, Etc</u> Unit : No
	Add the following to L 8.2.13: The rate for scour-valve chambers must also cover the cost of the supply and installation of the scour outlet as described in PS L 3.10.4 and indicated on the drawings.
PSL 8.2.15	<u>Special wrapping in corrosive soil</u> 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 8.2.16	<u>Standpipes complete</u> Unit : No
	The tendered rate shall include full compensation for all excavations for the pipe (from the saddle), for the drain and for the base of the concrete pedestal, for the supply and installation of all pipework, for the supply and installation of the tap, for backfilling the drain with stone and the trench with approved backfill material, for all formwork and concrete and for all equipment labour and diverse material required to complete the standpipe as specified on the drawings.
PSL 8.2.17	<u>Marker blocks / pipeline route markers</u>
	Measurement and payment shall be as per Scheduled item 8.2.9 (SABS 1200 LD).
PSL 8.2.18	<u>Connection to existing watermain</u> 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.
PSL 8.2.19	<u>Lowering of Valve and Hydrant Chambers</u> Unit : No
	The rate shall cover all costs for lowering the cover of the chamber to tie in with the new road/verge levels. This item does not include for the lowering of the water pipe.



PSL 8.2.20

Temporary bypasses:

Measurement of the temporary bypass to keep the irrigation system operational will be subdivided into three items as follows:

- (a) The provision of the temporary bypass will be paid by the sum.

The sum tendered shall cover the cost of supplying and maintaining all the pipes and ancillary equipment required to construct a temporary bypass of 100 m in length, including one take-off point and temporary valves where necessary.

- (b) The provision of additional piping will be measured by the number of 12 m lengths of piping used

The rate tendered shall cover the cost of supplying and maintaining the additional 12 m lengths of piping required to construct bypasses in excess of 100 m in length.

- (c) The bypasses will be measured by the number constructed.

The rate tendered shall cover the cost of all labour, materials and equipment (not covered by (a) and (b) above) required to break into the existing main, isolate the relevant sections, construct the bypass including connections, temporary thrust blocks and the like, and the removal of the equipment when no longer required.

Where the Employer's Agent authorises the use of new materials other than those damaged through the Contractor's fault or negligence, they shall be measured on dayworks or at rates to be agreed by the Employer's Agent, unless a suitable item has been scheduled."

PSL 8.2.21

Provide chamber complete with all fittings as per detail **Unit : No**

Various chambers with fittings shall be scheduled. Puddle pipes (if applicable) shall be included in the tendered rate including all pipe items and chamber items (such as covers and frames) shall be included in the tendered rate. The rate shall include the supply and cost of all materials, labour, construction equipment excavation, backfilling, compaction, overheads and the cost of all temporary works such as dewatering, shoring and shuttering where required.

The tendered rate shall include full compensation for the supply and construction of all the pipe fittings and the structure complete.

PSL 8.2.22

Fire Hose Reels (FHR) **Unit : No**

Fire hose reels shall comply with the requirements of SABS 543, as amended and shall bear the SABS mark. The FHR, with 30 m reinforced rubber hose, shall be installed and erected according to the requirements of SABS 0252-1 : 1994, as amended.

The tendered rate shall include full compensation for installing the FHR at positions shown on the drawings and shall include compensation for at least 15 m connecting pipe work and fittings required.

PSL 8.2.24

Supply, lay, joint, fix and test pipeline and install in sleeve **Unit : m**

The tendered rate shall include full compensation for the supply, lay, joint, fix and test of the pipelines and installing the pipe within a sleeve. Various diameter pipes and sleeves shall be scheduled. The tendered rate shall also include full compensation for all temporary works required to install the pipe in the sleeve.

The method used to install the pipe inside the sleeve must take into account the allowable push or pull loads on the pipe, whether the pipe must be floated into position, the required stabilization of the pipe, or whether a rail system or "anti floatation" blocks will be used to ensure the pipe is installed at the correct grade and alignment. The Contractor must ensure that axial loads are well distributed across the pipe wall section.

PSL 8.2.25

Grouting between concrete sleeve and pipe installed within sleeve **Unit : m**

The tendered rate shall include full compensation for grouting the pipe placed inside the sleeve to the correct position and level and shall include all costs, labour, plant material, temporary works, etc required to perform the work. Various sleeve- and pipe diameters and type of grouting will be scheduled and unit of measurement shall be the length of sleeve in which the pipe is grouted.

Grouting in multiple lifts may be required pending the pipe size and must be included in the tendered rate.

The Contractor must monitor the hydrostatic pressure on the pipe when grouting the annular space and must ensure that the pipe is not deformed, deflected or placed under undue stress. Weights inside the pipe or bracing must be provided to prevent floatation, but point loading must be prevented.

Bulkheads must be provided on both sides of the sleeve prior to grouting, to contain the grouting. The bulkheads



must be equipped with injection- and vent-ports to control and monitor the grouting process. The Contractor may add super plasticizers to the grout if required at no additional cost, but the admixture must be confirmed and approved by the Employer's Agent prior to construction.

If a cementitious grout is used, the cost shall include the provision of adequate air circulation to dissipate the heat created by hydration of the cement grout

PSL 8.2.26

Trenchless service ducts for waterpipes

- (a) Establishment on site for the installation of trenchless ducts **Unit : Sum**

The tendered lump sum shall include full compensation for the establishment on site and the subsequent removal of all special plant for the installation of the trenchless ducts, the cost of which does not vary with the actual amount of work to be done.

- (b) Moving to and setting up the equipment for trenchless duct installation **Unit : No**

The unit of measurement shall be the number of positions to which the installation equipment has to be moved and set up in position. The quantity measured shall be the number of trenchless ducts installed after the first duct has been installed.

The tendered rate shall include full compensation for all cost involved in moving all equipment necessary to perform the trenchless duct installation and the setting up of such again.

- (c) Installation of service ducts by trenchless methods **Unit : m**

Various diameters shall be measured.

The measurement shall be the metre of service duct installed. The tendered rate shall include full compensation for all material and equipment, the delivery of the material, the butt welding of the service duct and the installation of the service duct by trenchless methods.

- (d) Supply and installation of new pipe within new trenchless duct for road crossing **Unit : m**

Various diameters shall be measured.

The tendered rate shall include full compensation for the supply of all materials, the delivery and installation of the pipe within the service duct.

Only butt welded HDPE PE 100 PN12,5 pipes to SABS ISO 4427 of 1996 shall be installed in the sleeve pipes and the rate shall also make full compensation for the butt welding of the pipe before installation into the service duct.

PSL 8.2.29

Temporary water supply **Unit : Various**

The tendered rate shall include full compensation for the supply of each house with a temporary water connection prior to work being undertaken for the replacement of the existing water pipe in the specific street all in accordance to PSLF 8.2.9. The temporary pipe shall be a 50mm dia HDPE pipe, sterilized and flushed prior to each connection to the existing reticulation and shall be connected to the existing reticulation by means of two 40mm dia saddles and 40mm dia HDPE pipes with isolating valves. Each house connection shall be temporarily connected to the temporary pipe with a brass compression fitting and stop cock. Each house connection shall then be dismantled and connected on to the new pipe once the new pipe is operational.

**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 8.2.1 Provision of Bedding from Trench Excavation

Replace the paragraph "The rate shall" with the following :

"The rates shall cover the cost of acquiring, from within site boundaries, bedding that complies with the relevant requirements of the specification, of delivering it to points alongside the trench spaced to suit the Contractor's methods of working, and of disposing of displaced material outside the site boundaries."

Add the following after the note:

"Bedding material excavated as part of the trench excavation, placed adjacent to the trench and used at the same point as bedding material will therefore not be measured separately, but will be deemed to be included in the rates for trench excavation and the supply, lay and bed of pipelines."

PSLB 8.2.2 Supply only of bedding by Importation

PSLB 8.2.2.2 *From borrow pits*

Delete the words in brackets in the first four lines.

Add the following:

"Payment for opening up borrow pits and for removal of overburden shall be made under subclause 8.3.4 of SABS 1200 D."

PSLB 8.2.5 Overhaul of Material for Bedding Cradle and Selected Fill Blanket

Delete the contents of this Subclause.

"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."

ADD THE FOLLOWING:

"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."

PSLB8.2.8 Wrap damp proof course around selected fill blanket.

The tendered rate shall include full compensation for construction of the damp proof course around the fill blanket as shown on the drawings.

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PART C4 – SITE INFORMATION

FOR VIEWING PURPOSES ONLY

C4: SITE INFORMATION AND GEOTECHNICAL REPORT

C4.1 Scope

The documentation included in this section describes the site as at the time of tender to enable the tenderer to price his tender and to decide upon his method of working and programming.

Only actual information about physical conditions on the site and its surroundings have been included in this section and interpretation is a matter for the tenderers.

C4.2 Subsoil Investigations

A full geotechnical investigation was not performed. Tenderer to familize himself with the site conditions.

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C5-1

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PART C5 - HEALTH & SAFETY SPECIFICATION

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TITLE

The Hazard Identification and Risk Assessment of Occupational Health and Safety parameters on the premises of: SUTHERLAND EMERGENCY BULK WATER PHASE 2 – CIVIL ENGINEERING

EXECUTIVE SUMMARY

All construction activities can subject workers to levels of environmental stressors and safety factors, e.g. noise, fumes, revolving machinery, tools, moving vehicles etc., which permanently harm the health and physical wellbeing of persons at work and greatly reduce productivity. The Occupational Health and Safety Act of 1993, and its relevant regulations, require employers to conduct surveys of the actual situation at every site. Measurements must be taken, and the identified problems addressed by the employer. Improved conditions ensure better worker morale, loyalty and greater productivity.

This assessment and observations were made based on the scope of work provided by the client. Detailed conclusions are given in the relevant sections of this report.

SCOPE OF WORK

This project consists of the following elements:

The Works to be carried out by the Contractor include but is not limited to the following main activities: (Full detailed scope of work will be provided)

- Site Establishment.
- Installation new HDPE pipelines 90mm diameter to 160mm diameter, +- 3500 m class 12
- Construction of valves and chambers
- Installation of new gate valve and butterfly valves
- Connection to existing pipelines

**LOCATION OF SITE, ELEMENTS AND REQUIREMENTS SPECIFIC TO THE LOCATION AND ACTIVITIES.
(EXISTING ACTIVITIES, WEATHER FACTORS, GEOGRAPHICAL FACTORS)**

The Construction activities will mainly be in and around Sutherland town. (Exact locations and GPS co-ordinates will be provided by the engineer)

The associated risks include injury to public inter alia:

- Collision with plant, equipment and vehicles
- Collision with pedestrians
- Injury, damage and/or endangerment of public, employees and structures concerning contact with material or plant
- Noise & Dust

The Contractor shall ensure that applicable control measures (Traffic accommodation plan, Temporary road signage, spotters/flag persons, access control for plant etc.) are implemented during construction period addressing specific factors inter alia,

- Site and surroundings
- Movement of Plant
- Excavation and construction
- Loading and unloading
- Pedestrians
- Signage and Safety
- Traffic Management if applicable

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with the overall objectives to:

- Provide a safe and convenient environment for pedestrians
 - Maintain safe and convenient access and circulation of traffic.
 - Minimize effect on pedestrian movements and amenity
 - Maintain safety of workers
 - Maintain safe adequate and practical access
-
- The Contractor shall ensure that no damage whatsoever is caused as a result of his operations or otherwise by his workmen in the areas adjacent to the site. The movement of workmen shall be restricted to the construction areas and essential access routes. The Contractor's workmen will not be permitted in any area which may be designated by the Employer as "Restricted" and all security and access requirements must be strictly adhered to. All employees of the contractor must be clearly identified by means of company name or logo. Special attention and consideration to internal premises regulations and rules should be strictly adhered to and all procedures and access control requirements should be implemented.
 - Contractor should consider the specific working environment concerning public activities and follow strict protocols and procedures to prevent as far as reasonably practicable any form of interference with existing public. Safe means of vehicular and pedestrian flow must be maintained at all times.
 - Contractor should consider the specific working environment with regards to excavation and trenching. Sufficient means of signage, visibility, hoarding and barricading of the construction areas and all open excavations and trenches must be strictly implemented and monitored. Existing services and approximate positions are shown on drawings but, although they are based on the best information available, their accuracy cannot be guaranteed. It is likely that other services that are not shown on drawings exists. (Underground and Overhead services)
 - Sufficient means of signage, visibility, hoarding and barricading of the entire site or work zones must be strictly implemented and monitored to prevent unauthorised access to the construction activities.
 - The contractor must in regard to all manual handling and demolition activities implement suitable and sufficient control methods to ensure that the public and employees are not exposed or effected by any hazards pertaining to the activities. (Structural integrity of existing buildings)
 - The contractor must in regard to Asbestos containing material implement sufficient control measures and follow necessary requirements as stipulated in the Asbestos regulation 2001 to ensure no person is exposed to the hazards pertaining to the potential release of asbestos cement fibres.
 - The contractor must in regards with working at heights implement suitable and sufficient controls measures to mitigate and reduce the risk rating of all activity related hazards (Please refer to 2.4.5 of the Health and Safety Specification below) The contractor must make use of SANS 10085 standard scaffold components when working at heights.

HAZARD IDENTIFICATION AND RISK ASSESSMENT

1.1 OBJECTIVE OF SURVEY

A HIRA (Hazard Identification and Risk Assessment) was conducted based on the scope of work provided by the client: KAROO HOOGLAND MUNICIPALITY - SUTHERLAND EMERGENCY BUK WATER SUPPLY-PHASE 2 CIVIL ENGINEERING. The objective of this HIRA was to comply with statutory requirements, inform the client of the occupational health and safety risk factors to which persons will be exposed when performing Construction activities.

It must be noted that perceptions were used during the HIRA and is not a quantifying survey and should only be used as an indicator for risk areas.

1.2 STATUTORY REQUIREMENTS

Section 9(1) of the OCCUPATIONAL HEALTH and SAFETY ACT 1993 (Act no. 85 of 1993), requires inter alia that the employer shall establish as far as is reasonably practicable, what the hazards to the health and safety of persons are attached to any work which is performed, further establish what precautionary measures should be taken with respect to such work and he shall provide the necessary means to apply such precautionary measures. The construction regulations further requires that a baseline risk assessment for an intended construction work project be compiled and a suitable, sufficiently documented and coherent site specific health and safety specification for the intended construction work based on the baseline risk assessment to be prepared.

1.3 HIRA METHOD

During the survey and assessment of the scope of work the presence of occupational health stresses and safety factors (i.e. chemical, physical and ergonomically) were considered, the severity of the risk factor, the frequency of exposure to the risk factor and possibility of occupational disease or injury was assessed and weights allocated on a scale of 1 – 5. Each of these weights carries a certain point's value as follows.

CATEGORY	SEVERITY	FREQUENCY	POSSIBILITY
1	40	10	10
2	15	6	6
3	7	3	3
4	3	2	1
5	1	1	0,5

A risk profile of the hazard is obtained by the multiplication of weights awarded

(i.e. Noise hazard: $\text{sev } 7 \times \text{freq } 6 \times \text{poss } 3 = 126$ substantial risk) and the classification is as follows:

More than 400	High risk	Consider mitigating action
200 – 400	Medium risk	Immediate action required
70 – 200	Low risk	Action required
20 – 70	Possible risk	Must be considered
Below 20	Possibility of risk	Risk possible, but acceptable

1.4 RESULTS AND DISCUSSION

The HIRA was conducted for construction conditions based on the scope of works provided by the client.

Activities are evaluated on the exposure to the following risk factors: Chemical and Biological Hazards, Physical Hazards, Ergonomic Hazards and Behavioral Hazards

The following risks classification was identified.

1.4.1 High Risk (Physical, Chemical, Biological Hazards) (400 +)

1. Open trenches and excavations. (Lack of demarcation)
2. Working in close proximity to existing pedestrian traffic & possible road reserve . (Work zones in close proximity to Vehicular & Pedestrian traffic) Managing of pedestrians (site entrance, lack of site parameter fencing, unprotected excavations, and trenches)
3. Movement of mobile plant in confined work zones
4. Demolition work – contact with ejected particles and generating of dust, Impalement, entrapment, collapse, collisions with structures, material and equipment.
5. Working at heights
6. Working with Asbestos containing material.

1.4.2. Medium Risk (200 – 400 points) Physical, Chemical, Biological Hazards

1. Working in close proximity to existing public activities (Construction Risk to public and public disturbance)
2. Improper use of tools/equipment; equipment not calibrated/serviced/ inspected
3. Lifting operation – Loading and offloading of heavy Machinery/ Tools/ Equipment/ Materials. (Mobile plant – unstable/uneven terrains)
4. Electrical Installations – Electrocutation/Shock through existing services or use of electricity inter alia, electrical tools
5. Company Safety Culture and worker perception of risk (behavioral/horseplay)
6. Housekeeping (Improper waste management, stacking and storage of material)
7. Unintentional Contact (Sharp objects)
8. Transport of Labourers, work tools and equipment to and from site.
9. Improper stacking of equipment/material;
10. Contact with:
 - Chemicals
 - Erosive substances
 - Fumes
 - Bacteria,
 - Viruses,
 - Fungi

1.4.3 Low Risk (70 – 200 points) Chemical, Biological, Physical and Ergonomic Hazards

1. Inclement weather conditions

1.4.4 Possible Risk (20 – 70 points) Chemical, Biological, Physical and Ergonomic Hazards

1. Working in different environments and communities.
2. Working in close proximity of water
3. Contact with:
 - Living things, or substances produced by living things,
 - Parasites

1.5 CONCLUSION

From the HIRA investigation, it was concluded that the following:

- Open trenches and excavations. (Lack of demarcation)
- Working in close proximity to existing pedestrian traffic & possible road reserve . (Work zones in close proximity to Vehicular & Pedestrian traffic) Managing of pedestrians (site entrance, lack of site parameter fencing, unprotected excavations, and trenches)
- Movement of mobile plant in confined work zones
- Demolition work – contact with ejected particles and generating of dust, Impalement, entrapment, collapse, collisions with structures, material and equipment.

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- Working at heights
- Working with Asbestos containing material

are deemed as High-Risk activities. Contractor should consider additional attention to the pre-work risk assessments and detailed method statements for these activities based on actual conditions, scope and possibilities.

Competency of key personnel inclusive of induction and training of general workers derived from safe work procedures for Risks identified is of high importance. All prescribed regulation and industry standard practices must be implemented.

All Hazards identified must be controlled with relevant hierarchy of controls with the overall objective to reduce risk rating and maintain safety of workers, service providers and plant personnel on site.

The Contractor must ensure that all areas which are affected by the works are kept in a safe condition and demarcation of hazardous work, storage and waste areas should be implemented and maintained continuously.

Special consideration and attention should be devoted to the location and elements specific findings concerning the working environment and all other internal procedures of the premises must be implemented.

FOR VIEWING PURPOSES ONLY

1.6. BASELINE RISK ASSESSMENT TABLE:

BASELINE RISK ASSESSMENT FOR HEALTH AND SAFETY SPECIFICATION SUTHERLAND EMERGENCY BULK WATER SUPPLY- PHASE 2 CIVIL ENGINEERING				
Activity	Risk Rating	Hazard	Control Measure	Responsible Person
Site Establishment Offloading of material and equipment (Including carrying of material)	M	Possible load falling. Public Safety-potential injuries to workers and members of the public. Possible Contact with fellow employees and result into possible injuries. Possible Falling material and possible foot and body injuries Possible Ergonomics /Possible back injuries	- All work areas to be adequately demarcated-All Activities to done under supervision. - Ensure a spotter is available if and when needed. - Once site has been secured it must be maintained to avoid unauthorized persons from entering. - Site security to be available. - Relevant construction signage to be displayed. - Contractors to be aware of live services e.g. electrical cables. - Employees to take caution when walking on site - Employees to keep material as close to themselves or structure as possible to avoid possible contact with persons - Ensure your vision is not obstructed. - Watch your blind spots and get assistance when carrying heavy and large objects - Employees to ensure that they use correct bending techniques. Please get assistance when lifting heavy objects.	CR 8.1
Use of mobile plant during site establishment	H	Possible Collision/contact with property or stationary vehicles, workers and members of the public	- Driver to be in possession of a valid driver's license. - All notices and signs to be obeyed. Driver to adhere to the speed limits. Employer and Driver to ensure that he is not intoxicated and must be of sober habits.	CR 8.1
Off-loading of containers by means of Cranes	H	Possible Uncontrolled release of Container and material	- All work areas to be adequately demarcated with relevant signage displayed. - Competent flagman and riggers to be present - Only competent person to execute lifting operations - All operators to have relevant documentation as per CR 23 and DMR 18.	CR 8.1

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Activity	Risk Rating	Hazard	Control Measure	Responsible Person
Off-loading of containers by means of Cranes	H	Possible Uncontrolled release of Container and material	- Task Specific Risk Assessments and Method Statement must be readily available and communicated to all relevant persons with proof placed on file. - Load test certificates for all lifting equipment and lifting Machinery. - All Contractors to be informed of live services e.g. electrical cables. - Only certified and load tested Lifting Equipment and Machinery shall be used. Lifting equipment shall be of good standard with correct latches etc.	CR 8.1
	H	Possible Collision with property or stationary vehicles, workers and members of the public	- All work areas to be adequately demarcated with relevant signage displayed. - Competent flagman and riggers to be present - Only competent person to execute lifting operations. - All deliveries shall take place in the designated areas	CR 8.1
Excavations with Plant and Manually	H	Possible Electrocution due to unknown electrical cables	- Only Competent Persons to conduct Activities. Task Specific Risk Assessments to be provided. All operators to comply with CR 13 and CR 23. - Way leaves or drawings to be obtained from the Client. Where way-leaves are not available adequate control measures must be implemented e.g. using a Cable Detector to determine the presence of possible services especially electrical cables. - All work to be conducted under supervision	CR 8.1
	H	Damage to existing services	- Way leaves or drawings to be obtained from the Client. Where way-leaves are not available adequate control measures must be implemented e.g. using a Cable Detector to determine the presence of possible services especially electrical cables. - Only competent persons to excavate. Compliance with CR 13. - All work to be conducted under supervision	CR 8.1

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Activity	Risk Rating	Hazard	Control Measure	Responsible Person
	H	Possible Excavation collapse	- Competent person appointed in writing to supervise excavations. - Daily inspections to be conducted - Adequate bracing and shoring required as and when needed. Plant to stay at least 1m clear of Embankment - Excavation inspected regularly (as per legal requirements) to ensure stability (register completed). - Access provided at least every 6 meters. - Shoring and bracing whenever necessary in opinion of competent person.	CR 8.1
			- Appropriate personal protective equipment issued. - Undertaking to wear signed and wearing enforced. - Relevant Signage to be provided and displayed	CR 8.1
	M	Possible falling of Persons into excavation	- Task Specific FPP by competent person. - Physical barrier of at least 1-meter-high must be provided with relevant signage displayed - Backfilling to be done as soon as practicable.	CR 8.1
Operating of Mobile plant	H	Colliding with employees, public, possibly fatal. Damage to property	- Only Competent Persons to conduct Activities. Task Specific Risk Assessments to be provided. All operators to comply with CR 13 and CR 23. - Competent person who is medically fit must operate mobile plant. - This is also required from hiring companies. - Always be aware of other plant in your area and if the plant comes too close or in your working area rather stop operating and be safe.	CR 8.1
			- Never reverse without checking behind you to ensure that it is safe to do so. Operator must be on the lookout for fellow employees and members of the Public coming onto site unnoticed. - All plant shall a fully functional reverse buzzer.	

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Activity	Risk Rating	Hazard	Control Measure	Responsible Person
	M	Vibration of plant can lead to falling objects from bucket Possible Risks when plant is stationary - People driving into plant.	- Do not operate loader if there is anyone in the working area. Don't overload loading bucket and ensure that material is adequately secured. - Mobile plant must have appropriate lighting or reflectors in order to identify the location of the plant. Park in designated areas with boom lowered or raised	CR 8.1
		Damage to structure or plant. Loss of Machine	Machine must be locked, and keys taken with operator or given to supervisor to prevent unauthorized person operating machine.	
Working with Cement (Bagging/Plastering, Mortar etc.)	M	Cement dust, Respiratory problems.	- Only Competent Persons to conduct Activities. Task Specific Risk Assessments to be provided. - Dust masks to be used when spending even short periods of time in high dust areas and when using concrete saws/ cutters or cement mixers.	CR 8.1
	M	Possible Contact with cement dermatitis, skin burns, skin irritation	- Avoid contact with the skin as far as reasonably practicable. Remove clothing that has been contaminated by wet concrete. - Wear suitable PPE e.g. Gum boots. Wash hands thoroughly after contact and use a barrier cream.	CR 8.1
	M	Possible Eye injuries	Follow Safety instructions (MSDS) when using concrete additives.	CR 8.1
	M	Faulty hand tools and the excessive inhalation of cement dust.	Hand tools to be in good condition. Persons mixing mortar should wear dust masks when required.	CR 8.1
Working with Hazardous Substances	M	Possible Respiratory problems.	Respirators to be used when spending even short periods of time. Adequate ventilation required. Ensure that all containers are clearly identified when decanting	CR 8.1
	L	Dermatitis, Skin burns, Skin sensitization	Avoid contact with the skin as far as reasonably practicable. Use barrier cream if possible.	CR 8.1
	M	Possible Eye injuries	Remove clothing that has been contaminated by wet hazardous substances.	CR 8.1

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Activity	Risk Rating	Hazard	Control Measure	Responsible Person
Storage of Hazardous Substances	M	Possible Explosion/fires Possible	Comply with CR 25 & CR 29. Store all Hazardous Substances in the correct categories. Store all flammable material separately. Ensure relevant signage is clearly displayed.	CR 8.1
			Adequate fire extinguishers to be readily available. Fire Risk Assessment to be conducted by a competent person. Hazardous bins to be provided	
Work at Heights	H	Fall of persons, Possible Death	- Task Specific Fall Protection Plan, Risk Assessments and Method Statements required - PC shall comply with CR 9 and CR 10. - All employees shall be in possession of Working at Heights Training issued by an Accredited Service Provider. - All work to be done under supervision. - Compliance with Fall Protection Plan. - Rescue kit to be available on site. - PPE to be worn at all times. - Life lines to be installed as and when needed and must be secured to a fixed structure - How the roof work was planned/ Method Statements. - That the roof workers are competent (trained, experienced, knowledgeable) - Life lines (Proof of Certification) and anchor points (Load Tested) are provided and installed by a competent person and with proof placed on file - That no Roof work is carried during inclement weather or where conditions are hazardous to workers. - That fragile material/areas are demarcated, and signs posted. - That suitable platforms are provided where fragile materials exist. - That there are suitable and sufficient guardrails or barriers and toe boards or other similar means of protection to prevent the fall of any person, material or equipment. Rescue Plan.	CR 8.1

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Activity	Risk Rating	Hazard	Control Measure	Responsible Person
			- All employees exposed to heights must be declared medically fit by an Occupational Health Practitioner. (Annexure 3) - Note: The Principal Contractor and their contractors shall ensure that all lifelines are load tested and all Safety Harnesses shall be inspected on a Daily basis by a competent person with proof of inspections placed on file.	
Scaffold erecting & dismantling	H	Possible Falling of persons, Collapse of Scaffold structures and damage property and employees.	- Work on scaffolds to be coordinated by appointed scaffold supervisor. - Lanyard to be used when erecting & dismantling scaffolding. (Scaffold erectors) Compliance with SANS 10085-1:2004, CR 12 and CR 16. - All scaffolding to be inspected daily and after inclement weather and findings recorded in a register. - Fully boarded platforms must be provided at all times - Only those employees who are authorised may be on the scaffold. - Where safe platforms cannot be erected, safety harnesses are compulsory. - Guard rails and toe boards compulsory. - PPE required for persons working on scaffolding: safe shoes; hardhats. - Area below to be cordoned off. - Platforms to be cleaned on a daily basis. - Only competent erectors to change structure of scaffold. - No overloading of scaffold. PPE used: Safety boots, helmets, overalls.	CR 8.1
Working with Power Tools	M	Possible Contact with moving parts.	- Task Specific Method statements and Risk Assessments required as per CR 9. Only competent personnel should operate these tools. - Machines to be checked before use, guards are correctly fitted and work properly.	CR 8.1
	M	Noise above 85DbA	Employees to be issued with relevant PPE including hearing protection.	CR 8.1

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Activity	Risk Rating	Hazard	– Control Measure	Responsible Person
	H	Possible Malfunction of Blade	– Blades should be regularly inspected to ensure they are sharp/good condition	CR 8.1
		Possible Back Injuries	– Employees to be trained on proper lifting and bending techniques.	
Working with Hand Tools	M	Possible Eye injury Possible Injury to hands, feet and body	– Visual checks must be completed by operatives on tools prior to their use. – Eye protection is to be provided and used whenever work is done using cold chisels or other tools where there is risk of flying particles or other pieces of the tool breaking off. – Tools are required to be suitable for the purpose for which they to be used. – Open bladed knives, screwdrivers, and other sharp tools are to be carried and used so as not to cause injury to the user or others.	CR 8.1
	M	Possible Tripping over tools	– Tools should not be left lying around, they constitute a severe tripping hazard and they are liable to get damaged.	CR 8.1
Lifting Operations	H	Uncontrolled release of material	– Task Specific Method Statements and Risk Assessments required with proof – of communication. – Rescue Plan and task specific Fall Protection Plan required, to be compiled by competent person. – Competent Banksman/Rigger to be readily available	CR 8.1
Working in Confined Space	H	Possible Body Injuries, Property Damage, Possible	– The Principal Contractor to prepare a confined space procedure in line with General Safety Regulation (5) OHS Act including Task Specific Risk Assessments, Method Statements and Emergency Procedures. Ensure that all work areas are adequately demarcated – Ensure that all ducts are adequately secured and that it can take the relevant loads	CR 8.1
	H	Respiratory complication due to Lack of Ventilation Hazardous Material being used e.g. Sealants etc.	– Safe Access Required at all times. Adequate Ventilation and supervision required at all times – All hazardous substances to be assessed and ensure that MSDS are provided, all employees to be informed and First Aider has copies.	CR 8.1

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Activity	Risk Rating	Hazard	Control Measure	Responsible Person
Working with Asbestos Containing Material	H	Relevant Occupational diseases (ASBESTOSIS) due to Excessive exposure over a period of time.	- The Principal Contractor shall ensure that the Asbestos Regulations R.155 10 February 2002 are complied with in respect of roof sheeting and other asbestos containing materials that are required to be demolished and or removed. - All the required approvals and permits to be obtained from the prescribed authorities. - An approved Asbestos contractor to be used for the demolition process. - The Contractor must ensure that the following steps are followed during the asbestos removal process, as required by the Asbestos Regulations, 2001, stipulated in the Occupational Health and Safety Act no 85 of 1993. - Site visit and compilation of asbestos risk assessment and inventory. - Request from AIA (Approved Inspection Authority) to provide the necessary information for compilation of asbestos work plan - Compilation of asbestos plan of work - Signing of work plan by relevant parties - Submission of work plan to the Department of Labour - Compulsory waiting period of two weeks (14 days) before asbestos work may commence. - Confirmation of starting date by AIA and asbestos contractor. Please note that no asbestos work may commence if the AIA is not present. - AIA site briefing of Asbestos Contractor on above confirmed starting date before work commences. - AIA inspection of the Asbestos Contractor's site preparations, equipment and personnel. AIA approval for work to commence (Please note that items 8,9 and 10 will be conducted on the same day before asbestos work starts).	

Note: All Activities to be re-assessed by the Principal Contractor and their contractors prior to start of work and must be communicated with all relevant employees with proof placed on file.

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3 Annexure B

Appointment of Contractor

1. INTRODUCTION AND BACKGROUND

1.1 Background to the Pre-construction Health and Safety Specification

The Construction Regulations February 2014 place the onus on the client to prepare a pre- construction Health & Safety Specification, highlighting all risks not successfully eliminated during design.

1.2 Purpose of the Pre-construction Health and Safety Specification

The purpose of the pre-construction H&S specification is to assist with the achievement of compliance with the OHS Act, and in particular with the Construction Regulations, so as to reduce incidents and injuries on the project. The pre-construction specification enables Tenderers to make adequate financial provisions in their tenders to cover the H&S requirements of the project and thereafter, for the Contractor and its sub-contractors to use as the basis for the preparation of the construction phase H&S plan.

The pre-construction specification sets out the basic requirements to be met by the Contractor and all sub-contractors so that the H&S of all persons potentially at risk may receive a priority at least equal to the other facets of the project such as the standard of workmanship, costs, programme, environment, etc.

1.3 Implementation of the Pre-construction Health and Safety Specification

This specification forms an integral part of the contract, and the Contractor is required to use it at pre-tender phase when drawing up its project-specific construction phase health & safety plan, to be **approved by the Client** or his appointed representative before commencement of construction work. The Principal contractor shall forward a copy of this specification to all Contractors at their bidding stage so that they can in turn prepare health & safety plans relating to their operations.

Note: It is still and will be the responsibility of every Professional consultant, contractor, sub- contractor and services provider to make themselves conversant with the various Acts pertaining to their profession at all times.

This document does not purport to be an exhaustive canvassing of all issues and duties imposed by the Occupational Health and Safety Act, Act 85 of 1993 of Regulations governing the duties and obligations of a contractor performing duties into. an agreement with the client (Sect 37(2)). The various duties imposed on a contractor are more fully described in the OHS Act, Act 85 of 1993 and its regulations and the contractor should acquaint her/himself therewith before commencing with any work.

The Principal Contractor and Contractors shall provide and demonstrate to the Client competencies to carry out the work and a suitable and sufficiently documented Health & Safety Plan based on the Health & Safety specifications (a Proforma copy of the health and safety plan summarizing the items below (H&S Plan) and indicating the appointed risks assessors experience and qualifications, to be handed in with the tender documentation). The Client and or his appointed representative will discuss and negotiate the H&S Plan with the PC before giving final approval for implementation. The H&S Plan and file should include but is not limited to the following:

Guide for the preparations of a typical H&S PLAN

(Please provide a Health and Safety Plan specific to the construction activities)

The Principal Contractor/s and their contractors shall, in terms of CR 7(1), maintain the H&S file on site always. The H & S File is a file with permanent records containing information on aspects of the construction project - which will be necessary to ensure the health and safety of any persons who may be affected by the construction work.

The OHS File must include all documentation required in terms of the Act and Regulations and must also include a list of all Contractors on site that are accountable to the Principal Contractors and the agreements between the parties and details of work being done.

The Principal Contractors shall appoint a suitably qualified person to prepare the HSF and to keep it up to date for the duration of the contract

The consolidated H & S File shall be handed over to the Client on completion of the contract. It must contain all the documentation as set out above, or as instructed, as well as any handed to the Principal Contractor by any subcontractors together with a record of all drawings, designs, materials used and other similar information concerning the completed project.

• The H&S Plan/File shall include but not limited to the following:

- ☐ Project specific hazards identified,
- ☐ Safe work procedures and control measures,
- ☐ Letter of good standing from COID or FEM.
- ☐ Description of project,
- ☐ Client appointment letter,
- ☐ SEC (37.2) Mandatary Agreement between the client and contractor
- ☐ Reporting of construction work to Department of labour,
- ☐ A general statement of health and safety principals and objectives,
- ☐ Management structure and objectives (organogram),
- ☐ H&S Plan,
- ☐ Traffic Management Plan
- ☐ Selection procedures and control of all sub-contractors with methods of communication and co-operation,
- ☐ Appointment of Construction Manager, subordinates and construction supervisor/s,
- ☐ Site specific risk assessments and review procedures and;
- ☐ Competency of risk assessor and appointment letter,
- ☐ Information & training arrangements,
- ☐ a list of all equipment and materials,
- ☐ Storage and distribution of materials on site,
- ☐ Control and disposal of waste,
- ☐ Provision of all facilities for staff and visitors,
- ☐ Provision and use of utilities, e.g. Electricity and water,
- ☐ List of tasks to be performed, equipment and PPE to be used during construction process.
- ☐ H&S Specifications to be supplied to sub-contractors (List of sub-contractors appointed),
- ☐ Site traffic control and rules (signage, flag person training, PPE etc.) access control to and from construction site, (pedestrian and vehicle traffic control)
- ☐ First aid and Emergency (disaster recovery and contingency) plan,
- ☐ Environmental Control Programme.
- ☐ List of relevant prescribed appointments,
- ☐ List of inspection registers to be used.
- ☐ List of toolbox talks.

1.3.2 Audits by Employer

- ☐ The Contractor shall permit the Employer to regularly audit, at an agreed interval, the implementation and maintenance of the approved health and safety plan and shall co-operate and provide all the required documentation, as may be required, in this regard.

1.3.3 Variations

- ☐ Should any variations be ordered, or design amendments issued by the Engineer. The Contractor must identify the associated potential hazards and ensure that the health and safety aspects of the work ordered are taken into account.

1.3.4 Provision for Health & Safety Cost

The Principal Contractor and their contractors shall make adequate provision for the cost of Health & Safety Measures during the construction process as required by the Construction Regulation 5(1)(g). and must allow for (but not limited to) adequate funds for at least one Full-Time Safety Officer until all activities have been completed including Night Work if applicable, Equipment, Signage, Training for all relevant personnel, PPE, Edge Protection, Safe Access, Emergency/Rescue and Equipment, on site monitoring, adequate supervision, safe removal of rubble especially from elevated areas (e.g. Chutes, loading platforms etc.), adequate welfare facilities, Medicals.

2. PRE-CONSTRUCTION HEALTH AND SAFETY SPECIFICATION

2.1 Scope

This health and safety (H&S) specification is the Client's H&S specification prepared in accordance with Clause 5(1)(b) of the Construction Regulations. It covers the requirements for eliminating and mitigating incidents and injuries during the construction phase of the project.

The specification addresses legal compliance, hazard identification and risk assessment, risk control, and promoting a health and safety culture amongst those working on the project. The specification also makes provision for the protection of those persons other than employees of the Principal Contractor and Contractors

2.2 Interpretations

2.2.1 Application

This specification is a compliance document drawn up in terms of South African legislation and is therefore binding. It must be read in conjunction with the relevant legislation as noted **at point 2.8.**

The Client reserves the right to add or make changes to any Health and Safety Plan of a contractor as it sees fit.

This specification is not intended to over-ride, or in any way to amend, the statutory/regulatory documents and, in the event of there being any conflict, the legislation will take precedence.

Definitions

The definitions as listed in the Occupational Health & Safety Act 85/1993 and Construction Regulations (February 2014) shall apply to this H&S specification. More specifically, where used in this H&S specification, "Principal Contractor" means the Contractor, "Contractor" means sub- contractors to the Principal Contractor, and "Client" means the Employer or his/her duly appointed Agent

2.2.2 Specific items pertaining to this contract.

Tenderers attention is drawn to the information provided within the specification and the priced document regarding, but not limited to, the design and type of construction; the material specified; and the construction period in so far as they to be provided for in the contractors Health and Safety Plan.

2.3 Minimum Administrative Requirements

2.3.1 Notification of Intention to Commence Construction Work

On receipt of the Client's notification of award of the contract and, in any event before any construction work commences, the Principal Contractor shall notify the Provincial Director of the Department of Labour in writing of the intention to undertake construction work. Annexure A to the Construction Regulations must be used for that purpose. A copy of the completed notification must be forwarded to the Client and to the Engineer and a copy shall be attached to the H&S plan. The addresses of the nine Provincial Directors of the Department of Labour are given in Clause 1 of the General Administrative Regulations to the OHS Act

The appointed CHSA shall inform the Provincial Director of the Department of Labour in writing as per the Annexure 1 in terms of CR 3.

A copy of the issued Construction Work Permit must be clearly displayed on the site notice board and at the site entrance.

2.3.2 Assignment of the CEOs' Responsibility for Health and Safety on Site

In terms of Section 16 of the Act, the CEO's of the Client, the Engineer, the Principal Contractor and all other Contractors shall

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make the requisite assignments of their responsibilities in writing prior to commencement of work on site. It is noted that, in a large organisation, the CEO may decide to assign his responsibilities to a line manager who may in turn assign his responsibilities to another line manager and so on.

2.3.3 Assignment of Contractor's Responsible Persons to Supervise Health and Safety on Site

The Principal Contractor's CEO (or his duly assigned employee) shall appoint (in writing) 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. The construction manager to be registered with South African Council for the Project and Construction Management Professions (SACPCMP). A construction manager must (in writing) appoint construction supervisors responsible for construction activities and ensuring occupation health and safety compliance on the construction site. The Principal Contractor's and the Contractors' competent persons for the various roles shall fulfil the criteria as defined the Construction Regulations. Copies of these appointments, together with proof of competence of the individuals concerned, shall be attached to the H&S plan. Proof of competencies shall take cognisance of the definition of a "competent person" as set out in the Construction Regulations and may comprise CV's and written motivations/ recommendations by the persons' direct report.

2.3.4 Competency for Contractor's Appointed Competent Persons

Contractor's competent persons for the various risk management portfolios shall fulfill the criteria as stipulated under the definition of Competent in accordance with the Construction Regulations (February 2014). Proof of competence for the various appointments must be included in the health and safety plan.

Definition of "competent person" (expressed by Construction Regulations, 2014:) means a person who-

- (a) 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;

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 (**SACPCMP**) and has necessary competencies and resources to assist the contractor

2.3.5 Compensation of Occupational Injuries and Diseases Act 130 of 1993 (COIDA/ FEM)

The Principal Contractor shall submit a letter of good standing with its Compensation Insurer, to the client or his appointed representative, as proof of registration. Contractors shall submit proof of registration to the Principal Contractor before they commence work on site. (See 1.3.1)

2.3.6 Occupational Health and Safety Policy

The Principal Contractor and all other Contractors shall submit to the Client and to the Engineer, a copy of their organisation's H&S Policy signed by their Chief Executive Officer. Each policy must include a description of the organisation and state the H&S objectives and how they will be achieved and implemented by the organisation. Copies of these policies shall be attached to the H&S plan

2.3.7 Health and Safety Organogram

The Principal Contractor and all Contractors shall submit an organogram, outlining the Health and Safety Site management Structure including the relevant appointments/competent persons and shareholders. In cases where appointments have not been made, the organogram shall reflect the intended positions. The organogram shall be updated when there are any changes in the Site Management Structure. A copy shall be attached to the H&S plan.

2.3.8 Preliminary Hazard Identifications and Risk Assessment and Progress Hazard Identification and Risk Assessment.

The contractor shall cause a hazard identification to be performed by **a competent person** before commencement of construction work, and the assessed risks shall form part of the construction phase health and safety plan submitted for approval by the Client. The risk assessment must include;

- a) A list of hazards identified as well as potentially hazardous tasks;
- b) A documented site specific risk assessment based on a recognised risk assessment methodology and the list of tasks and associated hazards;
- c) Method statements and a set of safe working procedures to eliminate, reduce and/or control the risks assessed;
- d) Residual risk rating score after implementation of control measures.
- e) A monitoring and review procedure of the risks assessment as the risks change

The Principal Contractor shall ensure that all employees and or Contractors are competent to perform the work and informed, instructed and trained by a competent person regarding any hazards, risks and related safe work procedures before any work commences and thereafter at regular intervals as the risks change and as new risks develop. Proof of this shall be kept on the H&S file. Note, the Principal Contractor shall ensure that a competent Risk Assessor is appointed in writing and shall be Full Time on site for the duration of the project.

The Principal Contractor shall be responsible for ensuring that all persons who could be negatively affected by its operations are informed and trained according to the hazards and risks and are conversant with the safe work procedures, control measures and other related rules (tool box talk strategy/daily safe task instruction/ planned task observations are conducted prior to any activity to be implemented). Posting appropriate signage regarding the dangers attached to the work and hazards identified must be posted at strategic places for everyone to see and be included in the method statement to be provided in the health and safety plan.

2.3.9 Health and safety Officer and Representative(s) (applicable when 20 or more persons are employed)

The Principal Contractor shall appoint at least a Full-Time Senior Safety Officer on site until all activities has been completed including Night Work if applicable with proof of competency to be attached to each appointment.

Note: The Safety Officers shall be registered with the South African Council for the Project and Construction Management Professions (SACPCMP) with proof provided, alternatively proof of the SACPCMP letter must be provided.

Furthermore, The Principal Contract shall ensure that all appointed Sub-contractors have a competent safety officer who shall visit the site as often as needed but at least once a month

The following health & safety officer related duties will be required to be carried out: Health & safety audits and

inspections including administrative and physical audits of all

Contractors' health & safety plans, files and activities, and record findings in the form of audit reports to be kept in the health & safety file;

- a) Weekly inspection reports – site hazard survey findings recorded, and actions taken recorded;
- b) Assess, and finally approving sub-contractor H&S plans;
- c) Maintain and co-ordinate the Principal Contractor's health & safety management plan and file;
- d) Investigate near misses, incidents and injuries;
- e) Co-ordinate the function of reviewing the hazard identifications and risk assessments;
- f) Assisting with method statements and safe work procedures and checking whether the responsible persons follow these safe work procedures;
- g) Enforcing discipline on the site and checking on compliance with safety procedures, standards and rules;
- h) Co-ordinating health & safety induction training and weekly safety awareness sessions;
- i) Implement and enforce the site hot work permit system;
- j) Ensure that public protection protocols are adequate and well maintained;
- k) Conduct planned job observations to check whether workers are carrying out activities in accordance with the safe work procedures;
- l) Fire risk assessments and enforcement;

Note: "No contractor may appoint a construction health and safety officer to assist in the control of health and safety

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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", however an exemption was issued and all Safety Officers/Practitioners must now provide confirmation of application for registration of the construction health and safety discipline with the SACPCMP should he/she not be registered as yet.

Health and Safety Representative:

The Principal Contractor and all Contractors shall ensure that Health and Safety Representative(s) are appointed under consultation and trained to carry out their functions. The appointment must be in writing. The Health and Safety Representative shall carry out regular inspections, keep records and report all findings to the Responsible Person forthwith and at health & safety meetings. The Client may request the appointment of a Health and Safety Representative if there are less than 20 employees on the construction site.

Note: The Principal Contractor and their contractors shall ensure that all certificates provided are issued by an accredited service provider as required by the National Qualification Framework Act 67/2000.

The number of representatives for each contractor shall be as per Section 17 of the OHS Act 85/1993, but as a minimum, The Principal Contractor shall appoint at least one competent Health and Safety Representative on the project

2.3.10 Health and Safety committees (applicable when 50 or more persons are employed)

The Principal Contractor shall ensure that project health and safety meetings are held monthly and minutes are kept on record meetings must be organized and chaired by The Principal Contractor's Responsible Person. All Contractors Responsible Persons and Health & Safety Representatives shall attend the monthly health & safety committees in accordance with the OHS Act 85/1993 and minutes of their meetings shall be forwarded to the Principal Contractor on a monthly basis.

2.3.11 Health and Safety Training/Induction

2.3.11.1 Induction

Both the Client and the Principal Contractor have a duty in terms of the OHS Act 85/1993 to do all that is reasonably practicable to prevent members of the public and site visitors from being affected by the construction activities. The Principal Contractor shall ensure that all site personnel undergo a risk-specific health & safety induction training session before starting work. A record of attendance shall be kept in the health & safety file. All visitors to the site shall also receive risk-specific health & safety induction training and a record of such shall be kept. All employees to be informed, instructed and trained by a competent person regarding the hazards and work procedures as prescribed.

2.3.11.2 Awareness

The Principal Contractor shall ensure that, on site, periodic toolbox talk take place at least once per week. These talks should deal with risks relevant to the construction work at hand. A record of attendance shall be kept in the health & safety file. All Contractors have to comply with this minimum requirement. The contractor shall inform all residence and or members of the public, who may be affected by the activities and who will most likely be exposed to the hazards identified of all precautionary measures to be taken.

2.3.11.3 Competency

All competent persons shall have the knowledge, experience, training, and qualifications specific to the work they have been appointed to supervise, control, carry out. This will have to be assessed on regular basis e.g. periodic audits by the Client, progress meetings, etc. The Principal Contractor is responsible to ensure that competent Contractors are appointed to carry out construction work.

Note: The Principal Contractor and their contractors shall ensure that all certificates provided are issued by an accredited service provider as required by the National Qualification Framework Act 67/2000 and the South African Qualifications Authority (SAQA)

2.3.11.4 Medical certificate of fitness

The Principal 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 of the Construction Regulations 2014.

2.3.11.5 Public and Site Visitor Health & Safety

Both the Client and the Principal Contractor have a duty in terms of the OHS Act to do all that is reasonably practicable to prevent members of the public and site visitors from being adversely affected by the construction activities.

The Principal Contractor shall ensure that every person working on or visiting the site, as well as the public in general, shall be made aware of the dangers likely to arise from site activities, including the precautions to be taken to avoid or minimise those dangers. A record of these inductions/briefings shall be kept in the Project H&S File in accordance with the Construction Regulations. Appropriate H&S notices and signs shall be posted up, but this shall not be the only measure taken. **The construction site shall be suitably and sufficiently fenced off/ barricaded and or provided with controlled access points to prevent the entry of unauthorized persons.**

2.3.12 General Record Keeping

The Principal Contractor and all Contractors shall keep and maintain Health and Safety (THE FILE) records to demonstrate compliance with this Specification, with the OHS Act 85/1993, Construction Regulations (February 2014) and any other legislation applicable on site. The Principal Contractor shall ensure that all records of incidents/accidents, training, inspections, audits, etc., are kept in a health & safety file held in the site office. The principal Contractor must ensure that every Contractor opens its own health & safety file, maintains the file and makes it available on request. The Principal Contractor shall maintain an up to date register of each Contractor engaged in construction work on site giving the Contractors' name and the Responsible Persons' contact details and the number of employees on site. As these details, may be subject to frequent change, the register must be updated at least weekly. The register is to be available for inspection.

2.3.13 Health & Safety Audits, Monitoring and Reporting

The client will conduct at least, a once monthly Health & Safety audit of the work operations including a full audit of physical site activities as well as an audit of the administration of health & safety. The Principal Contractor is obligated to conduct similar audits, or all contractors appointed by it.

Detailed reports of the audit findings and results shall be reported on at all levels of project management meetings/forums. Copies of the Client audit reports shall be kept in the Primary Project Health & Safety File while the Principal Contractor audit reports shall be kept in their File, a copy being forwarded to the Client. Contractors have to audit their sub-contractors and keep records of these audits in their health & safety files, available on request. These audits must be conducted by a competent person.

2.3.14 Permits

Construction Work Permit (Cr 3)

The construction work permit is only required if the project corresponds with the specification as indicated in the exemption from the Department of Labour of 26 July 2018. This document must be kept on site in the Health and Safety File.

Permits may be required for certain activities and these are not limited to but may include the following:

- Use of Explosives and Blasting
- Work for which a fall prevention plan is required
- Removal of asbestos materials.
- Disposal of (old type) fire detectors with radioactive elements.
- Decanting/handling of Ammonia.

If and where applicable, the Employer will issue to the Principal Contractor, permits and log books (which log books shall thereafter be kept up to date by the Principal Contractor), for the following installations:

- Boilers
- MV switchgear and chambers/rooms
- MV switchgear outdoor yards
- Lifts

All of the above are to be documented in the H&S plan

2.3.15 Lockout Systems – Electrical

A system of control shall be established in order that no unauthorized person can energize a circuit, open a valve, or activate a machine on which people are working or doing maintenance, even if equipment, plant or machinery is out of commission for any

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period, thus eliminating injuries and damage to people and equipment as far as is reasonably practicable.

Physical/mechanical lock-out systems shall be part of the safety system and included in training. Lockouts shall be tagged and the system tested before commencing with any work or repairs.

2.3.16 Emergency Procedures

The Principal Contractor shall prepare a detailed emergency procedure prior to commencement of work on site and it shall be included in, and form part of, the H&S plan. The procedure shall be updated whenever changes occur and it shall detail the emergency response plans. The emergency procedures shall not be limited to, but shall include, the following key elements:

- List of key competent personnel on site;
- Details of the nearest emergency services, including their physical addresses and phone numbers;
- Actions or steps to be taken in the event of each specific type of emergency;
- Information on hazardous materials/situations that may be encountered on site.

Emergency procedures shall include, but shall not be limited to, fire, spills, accidents to employees, use of hazardous substances, bomb threats, and major incidents/accidents. A contact list of all service providers (Fire Department, Ambulance, Police, Medical and Hospital, etc) must be maintained and be readily available to site personnel at all times that there are persons on site i.e. it must not be located in an area which may be inaccessible outside of normal working hours.

The Principal Contractor shall advise the Client and the Engineer in writing forthwith, and thereafter at the project and H&S meetings, of any emergencies that occurred, together with a record of the action taken. Copies of all reports on emergencies shall be kept in the Project H&S File.

2.3.17 First Aid Boxes and First Aid Equipment

The Principal Contractor and all other Contractors shall appoint First Aider(s) in writing. All Contractors with more than 10 employees shall have a trained, certified First Aider on site at all times. The appointed First Aider(s) are to be sent for accredited first aid training. Copies of the valid First Aid certificates for each First Aider are to be kept in the Project H&S File. The Principal Contractor shall provide an on-site First Aid Station with First Aid facilities, including first aid boxes adequately stocked at all times. All Contractors with more than 5 employees shall supply their own first aid box(es).

2.3.18 Accident / Incident Reporting and Investigation

Injuries are to be categorized into first aid; medical; disabling; and fatal. The Principal Contractor must stipulate in its construction phase health & safety plan how it will handle each of these categories. When reporting injuries to the Client, these categories shall be used. All injuries shall be investigated by the Principal Contractor, with a report being forwarded to the Client forthwith. All Contractors have to report on the 4 categories of injuries to the Principal Contractor at least monthly. The Principal Contractor must report all injuries to the Client in the form of a detailed injury report at least monthly. The Client's agent must be informed forthwith of any recordable incident or accident.

2.3.19 Hazards and Potential Situations

The Principal Contractor shall immediately notify other Contractors as well as the Client's Agent of any hazardous or potentially hazardous situations that may arise during performance of construction activities. Hazards to be taken into account;

- ☐ **Machine Hazards**, (Moving machinery Machine running out of control. Machine coming in contact with operator or employees body parts etc.),
- ☐ **Energy Hazards**, (Live electricity underground overhead, portable generators and hand tools etc.),
- ☐ **Material Handling Hazards** (heavy loads and hot materials),
- ☐ **Work Practices Hazards**, (Working at heights and elevated positions, excavations tripping and falling, Plant and Tools, noise, Insects, Snakes, Ticks, Bees and ergonomics)
- ☐ **Moving Vehicle Hazards**, (Vehicles generating fumes and dust, unguarded machine parts and belts etc.),
- ☐ **Hazardous Chemical Hazards**, (Asbestos dust on ceilings, Asbestos containing materials, Lead dust, dust, Cement, mortar, concrete and other chemicals to be used)
- ☐ **Weather conditions**. (Extreme hot and cold weather conditions)

Personal Protective Equipment (PPE) and Clothing

The Principal Contractor shall ensure that all workers are issued (free of charge) and wear appropriate PPE i.e. hard hats, safe Footwear, gloves, ear/ eye protection and overalls etc. Keep a record of the PPE issued, which must be signed by employees. The Principal Contractor and all Contractors shall make provision and keep adequate quantities of SABS approved

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PPE on site at all times. The Principal Contractor shall clearly outline procedures to be taken when PPE or Clothing is,

- Lost or Stolen;
- Worn out or damage

The above procedure applies to Contractors and their Sub-contractors, as they are all Employers in their own right.

The following items must be provided as a minimum requirement but shall not be limited to:

- Safety shoes and or gumboots with steel toes
- Overalls
- Eye protection,
- Approved and appropriate type Hearing protection when excessive noise is being generated,
- Approved and appropriate type of dust masks,
- Reflector vest.
- Rain suits (when working in rainy adverse weather)
- Task specific PPE as per risk assessment

2.3.21 Occupational health and Safety Signage

The Contractor shall provide adequate on-site OHS signage. Including but not limited to: Construction Site, no unauthorized entry, report to site office, site office, first aid facility, firefighting equipment, mandatory PPE, Road traffic signage as per SARTM, Manual 13 (where applicable), etc. Signage shall be posted at all entrances to site as well as on site in strategic locations e.g. access routes, entrances to structures and buildings, and other potential risk areas/operations (where and if applicable on the specific site and as directed by Client/ representative).

2.3.22 Contractors and Sub-contractors

The Principal Contractor shall ensure that all Contractors under its control comply with this Specification, the OHS Act of 1993, Construction Regulations (February 2014), and all other relevant legislation that may relate to the activities directly or indirectly. The duties determined in legislation that apply to the principal contractor apply to the sub-contractor as if he or she were the principal contractor.

The Contractor, when appointing other Contractors as 'Sub-contractors', shall mutatis mutandis ensure compliance and a section 37(2) agreement must be put in place.

2.4 Physical Requirements

2.4.1 Stacking of materials

The Principal Contractor and other relevant contractors shall ensure that there is an appointed staking supervisor and all materials, all equipment is stacked and stored safely in a demarcated area.

2.4.2 Speed Restrictions, Signage and Protection

The Principal Contractor shall ensure that all persons in its employ, all Contractors, and all those that are visiting the site are aware and comply with the site speed restriction(s). Separate vehicle and pedestrian access routes shall be provided, maintained, controlled, and enforced. Signage shall be provided and should comply as per OHS Act and the South African Road Traffic legislation with specific reference to Manual 13.

2.4.3 Hazardous Chemical Substances (HCS)

The Principal Contractor and other relevant Contractors shall provide the necessary training and information regarding the use, transport, and storage of HCS. The Principal Contractor shall ensure that the use, transport, and storage of HCS are carried out as prescribed by the HCS Regulations. The Contractor shall ensure that all hazardous chemicals on site have a Material Safety Data Sheet (MSDS) on site and the users are made aware of the hazards and precautions that need to be taken when using the chemicals. The First Aiders must be made aware of the MSDS and how to treat HCS incidents appropriately.

2.4.4 Asbestos

The Principal Contractor shall ensure that the Asbestos Regulations R.155 10 February 2002 are complied with in respect of roof sheeting and other asbestos containing materials that are required to be demolished and or removed. All the required approvals and permits to be obtained from the prescribed authorities. An approved Asbestos contractor to be used for the demolition process.

2.4.5 Fall protection (Working at heights)

The Contractor must ensure that:

A **competent person** is appointed who is responsible for the preparation, implementation and maintenance of the site-specific Fall Protection Plans. The Fall Protection Plan must be job specific, be reviewed at least monthly (Every 30 Days) or as the risk changes or after any incident. Risk assessment must include all work carried out at elevated positions, which will include procedures, and methods used to address the risks identified per location.

Assessment by OHP for employee's physical and psychological fitness working at elevated positions is a must. **A training program for workers working at elevated positions and records thereof must be kept on file.** A procedure outlining the Inspection, Testing and Maintenance of fall protection equipment must be on file.

All working at heights activities must be conducted in accordance with construction regulation 10.

A fall protection plan must be prepared by a competent person who should evaluate, revise and amend the plan at least monthly (30 Days) or after any change in activity. Rescue Plan to be provided including methodology and key personnel to perform such rescue.

The plan must include the following but is not limited to i.e.

- A risk assessment of all work carried out from a fall risk position and the procedures and methods used to address all the risks identified per location;
- All employees shall be in possession of Working at Heights Training issued by a competent person who has at least proof of training as an Assessor/Facilitator (trained, experienced, knowledgeable)
- How the work was planned/Method Statements
- That the Life lines (Proof of Certification) and anchor points (Load Tested) are provided and installed by a competent person and with proof placed on file.
- That no working at heights activities are carried during inclement weather or where conditions are hazardous to workers.
- That fragile material/areas are demarcated, and signs posted;
- That suitable platforms are provided where fragile materials exist;
- That there are suitable and sufficient guardrails or barriers and toe boards or other similar means of protection to prevent the fall of any person, material or equipment.
- Rescue Plan detailing the necessary procedure, personnel and suitable equipment required to affect a rescue of a person in the event of a fall incident to ensure that the rescue procedure is implemented immediately following the incident.
- All employees exposed to heights must be declared medically fit by an Occupational Health Practitioner. (Annexure 3)

The compliance of CR 10 and **List of applicable safety standards below applies.**

SANS NO.	Description
SANS EN 341	PPE against falls from height: Descender devices
SANS EN 353	PPE against falls from height: Guided type fall arrestors and a rigid anchorage line.
SANS EN 353-2	PPE against falls from height: Guided type fall arrestors on a flexible anchorage line.
SANS EN 354	PPE against fall from height: Lanyards.
SANS EN 355	PPE against falls from height: Energy absorbers.
SANS EN 358	PPE against falls from height: Work positioning.
SANS EN 360	PPE against falls from height: Retractable type fall arrestors.

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SANS NO.	Description
SANS EN 361	PPE against falls from height: Full body harness.
SANS EN 362	PPE against falls from height: Connectors.
SANS EN 363	PPE against falls from height: Fall arrest systems.
SANS EN 795	PPE against falls from height: Anchor devices.
SANS EN 813	PPE against falls from height: Sit harness
SANS EN 397	PPE industrial safety helmets.

Note: The Principal Contractor and their contractors shall ensure that all life lines are certified, and all Safety Harnesses shall be inspected on a Daily basis by a competent person with proof of inspections placed on file

Furthermore, The Principal Contractor and their contractors shall ensure that Double Lanyard with Scaffold/Pylon Hooks as a minimum requirement and shall assess the fall risk at all times

2.4.6 Excavation work. (Including civil works)

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. Comply with the rest of these regulations.

The Principal Contractor and any relevant Principal Contractor shall make provision in their tender for shoring, dewatering or drainage of any excavations as per this specification.

The Principal Contractor shall make sure that:

- Excavations/trenches are inspected before every shift, after blasting, after unexpected fall of ground, after substantial damage of supports, and after rain.
- A record of these inspections must be kept;
- The location and nature of all existing services must be established before trenching operation is undertaken.
- Safe work procedures have been communicated to the workers;
- The safe work procedures are enforced and maintained by the Principal Contractor's and Contractors' Responsible Persons always;
- Safe access/egress is provided to all levels;
- No load, material, plant or equipment is placed or moved near the edge of any excavation or trench which may undermine the stability of the same unless adequate steps are taken to prevent the sides from collapsing;
- All excavations and trenches that are adjacent to public access routes must be barricaded and illuminated. The barrier shall be at least orange plastic webbing of 1m height (day and night) with delineators and orange traffic lights for night time;
- All excavations next to existing buildings to be carefully monitored during such an operation.

Should an HV cable be discovered, the Principal Contractor and their contractors shall cease all current works and activities, make the area safe and then immediately contact the Electrical Consultant/Principal Agent to provide a method statement prior to re- commencement. Proof of Communication shall be provided. Furthermore, the Principal Contractor and their contractors shall ensure that the excavated sides are battered and include considering dewatering/creating site run offs during winter.

Principal Contractor to ensure that they comply with Construction regulation 23 and that the following is undertaken during civil work:

- A competent site supervisor to be on site always.
- Plant and equipment inspected daily, and registers kept.
- All operators of plant and vehicles trained, competent and physically and psychologically fit. Certificates to be put in Health & Safety File.
- Workers that are working close to the traffic to be visible and wear reflective vests.
- Adequate safety signage to be posted ahead of any work area in the road. (If Applicable)
- All signage, including delineators to be maintained and kept clean at all times.
- The required PPE must be worn always (Hard hats, safety shoes, overalls, etc.)
- Risk assessments to be conducted on all activities
- Road Cleaning to be maintained daily.

Laying of Pipes / Backfilling

- No employee to stand under any suspended load.
- Loads must not be slewed over personnel, plant, site huts or property.
- All lifting equipment and accessories must be marked with the Safe Working Load.
- Slings must not be placed on sharp edges.
- Workers to wear proper PPE always.
- Work to be stopped when weather conditions prevent safe operations during trenching work or lying of pipes.
- Everyone to stand clear of area being backfilled by mobile plant.

Method statement to be developed for connection to main sewer line and to water mains.

2.4.7 Demolition work.

A contractor must appoint a competent person in writing to supervise and control all demolition work on site.

A contractor must ensure that before any demolition work is carried out, and in order to ascertain the method of demolition to be used, a detailed structural engineering survey of the structure to be demolished is carried out by a competent person and that a method statement on the procedure to be followed in demolishing the structure is developed by that person. Comply with the rest of these regulations.

2.5 Plant and Machinery

2.5.1 Construction Plant and Machinery

"Construction Plant" includes all types of plant including but not limited to, fixtures, fittings, implements, equipment, tools and appliances, and anything which is used for any purpose in connection with such plant cranes, piling rigs, excavators, road vehicles, and all lifting equipment etc.

The Principal Contractor shall ensure that all such plant complies with the requirements of the OHS Act 85/1993, Driven Machinery Regulations and Construction Regulations (February 2014). The Principal Contractor and all relevant contractors shall inspect and keep records of inspections of the construction plant used on site. Only authorized/competent persons are to use machinery under

proper supervision. Appropriate PPE and Clothing must be provided and maintained in good condition at all times.

No unsafe or dangerous machinery, equipment, plant or tools may be brought onto, allowed or used on the construction site. The Client reserves the right to inspect any machinery, equipment, plant or tools at any time and prevents or prohibits its use, without any penalty to the Client and without affecting the contract in any way.

Access Routes and Haul Roads:

On the Site and, if so required, within such distance of the Site as may be stated by the Engineer, the Contractor shall control the movement of all vehicles and construction equipment, including that of his suppliers, so that they remain on designated routes, are distributed so as not to cause an undue concentration of traffic, and that all relevant laws are complied with.

In addition, the movement of such vehicles and construction equipment shall be planned and operated to minimise disruption to regular users of the routes.

As far as possible the Contractor shall use existing access and haul routes. Damage to existing access roads because of construction activities shall be repaired to the satisfaction of the Engineer, using material like that originally used. The cost of the repair shall be borne by the Contractor. New temporary access or haul routes may only be established with the prior approval of the Engineer. The rehabilitation of such routes shall be to the Contractor's own cost and to the approval of the Engineer.

Any directional signage required by the Contractor for the purposes of directing the movement of his own vehicles and construction equipment (or that of his subcontractors or suppliers) must be of a design and in a location approved by the Engineer. Directional signage may not be erected in such a manner that it interferes with sight lines or pedestrian movement.

Deliveries

Delivery of materials and the safe movement of construction vehicles will be controlled by the Contractor always to alleviate any congestion or interference in the main road leading to the construction site.

Principal Contractor shall ensure vehicle management procedures are in place by way of flagmen control during contractor deliveries.

- No contractor vehicles are to be left unattended during deliveries.
- Existing parking bays and sidewalks, other than what has been agreed for the use by the Contractor, are not for the contractor or construction vehicles. (To prevent damage)

2.5.2 Vessels under Pressure (VUP) and Gas Bottles (when applicable)

The Principal Contractor and all relevant Contractors shall comply with the Pressure Equipment Regulations, including:

- Providing competency and awareness training to the operators;
- Providing PPE or clothing
- Inspect equipment regularly and keep records of inspections
- Providing appropriate firefighting equipment (Fire Extinguishers) on hand
- Provided the compressed air lance with a dead man's handle or similar device to ensure that it does not injure any one when it is dropped accidentally when under pressure.

2.5.3 Fire Extinguishers and Fire Fighting Equipment

The Principal Contractor and relevant Contractors must ensure all appropriate measures are taken to avoid the risk of fire shall provide adequate, regularly serviced firefighting equipment located at strategic points on site, specific to the classes of fire likely to occur. The appropriate notices and signs must be posted up as required. The fire equipment contemplated in previous paragraph is inspected by a competent person, who has been appointed in writing for that purpose, in the manner indicated by the manufacturer thereof and a sufficient number of workers are trained in the use of fire-extinguishing equipment; The Principal Contractor to provide an initial Fire Risk Assessment. Note: The Principal Contractor shall ensure that sufficient and suitable storage is provided for all flammable liquids, solids and gases.

2.5.4 Hot Works

A contractor must, in addition to compliance with the Environmental Regulations for Workplaces, 1987 and Construction Regulations 2014, ensure that welding, flame cutting and other hot work are done only after appropriate precautions have been taken to reduce the risk of fire;

2.5.5 Hired Plant and machinery

The Principal Contractor shall ensure that any hired plant and machinery used on site is safe for use. The necessary requirements as stipulated by the OHS Act 85/1993 and Construction Regulations (February 2014) shall apply. The Principal Contractor shall ensure that operators hired with machinery are competent and that certificates are kept on site in the health & safety file. All relevant Contractors must ensure the same.

2.5.6 Lifting Machines and Tackle (where and if required)

The Principal Contractor and all Contractors shall ensure that lifting machinery and tackle is inspected before use and thereafter in accordance with the Driven Machinery Regulations and the Construction Regulations (section 20). A competent lifting machinery and tackle inspector need to be appointed in writing and must inspect the equipment daily or before use, taking into account that:

- All lifting machinery and tackle has a safe working load clearly indicated;
- Regular inspection and servicing is carried out;
- Records are kept of inspections and of service certificates;
- There is a proper supervision in terms of guiding the loads that includes a trained banksman to direct lifting operations and check lifting tackle;
- The tower crane bases have been approved by an engineer;
- The operators are competent as well as physically and psychologically fit to work and in possession of a medical certificate of fitness to be available on site.

2.5.7 General Machinery

The principal Contractor and relevant Contractors shall ensure compliance 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 who use machinery.

2.5.8 Portable Electrical Tools and Explosive Powered Tools

The Contractor shall ensure that use and storage of all explosive powered tools and portable electrical tools are in compliance with relevant legislation. The Contractor shall ensure that all electrical tools, electrical distribution boards, extension leads, and plugs are kept in safe working order and comply with SANS 100142 and all other relevant codes of good practices. Regular inspections and toolbox talks must be conducted to make workers aware of the dangers and control measures to be implemented e.g. personal protection equipment, guards, etc.

The Contractor shall consider the following:

- A competent person undertakes routine inspections and records are kept;
- Only authorized trained persons use the tools;
- The safe working procedures apply;
- Awareness training is carried out and compliance is enforced at all times;
- PPE and clothing is provided and maintained
- A register indicating the issue and return of all explosive tools;
- Signs to be posted up in the areas where explosive powered tools are being used.

2.5.9 High Voltage Electrical Equipment, underground, Overhead power lines (where and if required) and Electrical installations.

Care shall be taken when working close to, over or under high voltage reticulation power lines or cables. Underground services to be identified beforehand and the layout of such to be include in the contractors Health and Safety Plan. A safe work procedure be drawn up and included into contractors Health and Safety Plan.

2.5.10 Electrical Installations and Works

Electrical installation work (by definition: "installation work" means

- (a) the installation, extension, modification or repair of an electrical installation;
 - (b) the connection of machinery at the supply terminals of such machinery; or
 - (e) the inspection, testing and verification of electrical installations for the purpose of issuing a certificate of compliance;
- shall be carried out by competent persons, and controlled by a competent person (Registered Person) that has been appointed to do so in writing, in accordance with Electrical Installation Regulations and the Electrical Machinery Regulations.

Temporary electrical installations shall be inspected at least once per week by a competent person and a record of the inspections kept in the Occupational Health & Safety File.

The Contractor shall ensure that:

- existing electrical services are located and marked before construction commences and during the progress thereof. Where this is not possible, workers with jackhammers etc. are to be protected against electric shock by the use of suitable protective equipment like insulated handles, rubber mats etc.
- electrical installations and -machinery are sufficiently robust to withstand working conditions on site.
- all electrical machinery used on site is inspected before start-up on a daily basis by a competent person and that a record of the inspection is kept in the Occupational Health & Safety File.

A system of control shall be established in order that no unauthorized person can energize a circuit, open a valve, or activate a machine on which people are working or doing maintenance, even if equipment, plant or machinery is out of commission for any period, thus eliminating injuries and damage to people and equipment as far as is reasonably practicable.

Physical/mechanical lock-out systems shall be part of the safety system and included in training. Lockouts shall be tagged and the system tested before commencing with any work or repairs. This lock-out procedure shall be adhered to by all Contractors on site.

The guidelines and conditions provided in internal **Municipal Operating Regulations for low, medium and high voltage systems** form an integral constituent of the Health and Safety Specifications. **(ALL Municipal Operating Regulations for low, medium and high voltage systems apply)** It is therefore a condition of acceptance that no Health and Safety Plan shall be complete unless all relevant elements of this document applicable to the above project have been included in the Health and Safety Plan.

2.5.11 Night Work and Working hours (where and if required)

All work shall be done during normal working hours, unless agreed otherwise in writing.

The Principal Contractor must ensure that adequate lighting is provided to allow for work to be carried out safely. Permission to be obtained from the Client to work at night.

2.5.12 Transport of Workers

The Principal Contractor and other Contractors shall not:

- Transport persons together with goods or tools unless there is an appropriate area of section to store them and all loose tool and plant are tied down and secured;
- Transport persons in a non-enclosed vehicle, e.g. truck; there must be a proper canopy (properly covering the back and top) with suitable sitting area. Workers shall not be permitted to stand or sit at the edge of the transporting vehicle.
- Transport workers in bakkies unless they are closed/ covered and have the correct number of seats for the passengers.

2.5.13 Scaffolding & Temporary Works (Formwork and Support work)

Scaffolding:

A contractor must appoint a competent person in writing who must ensure that all scaffolding work operations are carried out under his or her supervision and that all scaffold erectors, team leaders and inspectors are competent to carry out their work. A contractor using access scaffolding must ensure that such scaffolding, when in use, complies with the safety standards incorporated for this purpose into these Regulations under section 44 of the Act.

Temporary Works:

General

Ensure appropriate Risk Assessments and Method Statements have formally been undertaken by the company undertaking the works and ensure that all personnel are aware of the residual risks.

Daily briefing meetings between appointed Temporary works supervisor and temporary work team to take place to review all aspects of the temporary works. At all stages check that the work is being carried out as designed, taking reference to any sequencing required in the design.

When selecting a temporary works system, it is vital to fully risk assess the assembly, instruction and removal sequences. Understanding how the systems are safely assembled and at which stage of installation they are safe to load, enter or strike (remove) is therefore essential.

Before the Temporary Works structure or elements are allowed to be loaded, it is to be checked by the appointed Temporary Works Supervisor to ensure that the structure or element has been erected in accordance with the working drawings and specification, only after this check can the Temporary Works Supervisor issue permission in writing to load the structure or element.

Ensure that appropriate Statutory Checks, any periodic checks, maintenance and public risk checks as required are carried out and documented out for the Temporary Works. (e.g. scaffolding, temporary work and structure inspections.)

Upon completion of the permanent works, the Temporary Works Supervisor must give permission in writing to the team responsible for dismantling the works before the Temporary Works or element thereof is dismantled.

Ensure the Temporary Works is dismantled to either an approved Method Statement or to the Manufacturers instruction.

Requirements as per Construction Regulation 12

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. The 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 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; 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 appointed Temporary works supervisor.
- 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

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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 appointed Temporary works supervisor.
- 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.

2.6 Occupational Health

2.6.1 Occupational Hygiene and Waste Management

The contractor shall ensure that suitable housekeeping is continuously implemented on each construction site, including provisions for the

- a) proper storage of materials and equipment; and
- b) removal of scrap, waste and debris at appropriate intervals;
- c) loose materials required for use, are not placed or allowed to accumulate on the site so as to obstruct means of access to and egress from workplaces and passageways;
- d) waste and debris are not disposed of from a high place with a chute, unless the chute complies with the requirements set out regulation 12(6); and
- e) 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 unauthorised persons.

Principal Contractor must implement their waste management in line with Environmental Terms and Conditions.

Dust

Principal Contractor to ensure that employees working with grinders, drills, etc. are issued with dust masks and dust exposure to be minimized at all times. Suitable measures to be implemented by the Principal Contractor to ensure that members of the public are not detrimentally affected by such activities. Working Area to be fully clad with a Hundred Percent Shade Cloth or anything similar.

Erosion and sedimentation control

The Contractor shall take all reasonable measures to limit erosion and sedimentation due to the construction activities and shall, in addition, comply with such detailed measures as may be required by the Scope of Work.

Where erosion and/or sedimentation, whether on or off the Site, occurs, rectification shall be carried out in accordance with details specified by the Engineer.

Where erosion and/or sedimentation occur due to the fault of the Contractor, rectification shall be carried out to the reasonable requirements of the Engineer, at the Contractor's cost.

The Contractor shall ensure that the Municipality storm water system is kept free from sediment arising from the Works.

Any runnels or erosion channels developed during the construction period or during the vegetation establishment period shall be backfilled and compacted, and the areas restored to a proper condition. Stabilisation of cleared areas to prevent and control erosion shall be pro-actively managed by the Contractor. The method of stabilisation shall be determined in consultation with the Engineer.

3.6.2 Welfare

A contractor shall, depending on the number of workers and the duration of the work, provide at or within reasonable access of every construction site, the following clean and maintained facilities:

- (a) at least one shower facility for every 15 workers;
- (b) at least one sanitary facility for every 30 workers;
- (c) changing facilities for each sex; and
- (d) sheltered eating areas.

A contractor shall provide reasonable and suitable living accommodation for the workers at construction sites which are remote from their homes and where adequate transportation between the site and their homes, or other suitable living accommodation, is not available.

3.6.3 Noise

Tasks identified where noise exceeds 85 dBA. All reasonable steps to be taken to reduce noise levels at the source. Hearing protection to be used where noise levels cannot be reduced below 85dBA.

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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
- ☐ Monitoring carried out by an AIA and done according to SABS 083
- ☐ Medical surveillance programme established and maintained for the necessary employees.
- ☐ 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.

2.6.4 Alcohol and Other Drugs

An employer or a user, as the case may be, shall not permit any person who is or who appears to be under the influence of intoxicating liquor or drugs, to enter or remain at a workplace.

1. No person at a workplace shall be under the influence of or have in his possession or partake of or offer any other person intoxicating liquor or drugs.
2. An employer or 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 workplace if the side effects of such medicine do not institute a threat to the health or safety of the person concerned or other persons at such workplace.

2.7 Night Work

Where work is required to be done during the night, and approved by the Engineer, the Contractor shall make adequate provision for additional lighting to ensure that the equipment and the areas where work is to be done are lighted. For this purpose, the Contractor will not be allowed just to make use of the lighting on the equipment, but to provide such floodlights on the plant and along the road to ensure 200 lux lighting levels.

The Contractor shall also make sure that this additional lighting is provided such that it does not interfere with the general traffic. Adequate lighting/illumination to be provided where required with backup generators. Security to be provided as and when needed. All emergency procedures to be in place. Adequate PPE to be provided for all employees e.g. Hi-Viz Vests.

2.8 Confined Spaces

Means an enclosed, restricted, or limited space in which, because of its construction, locations or contents, or any work activity carried out 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 confined space competent person must be appointed in writing.

A **confined space entry permit** system and safe work procedure must be provided containing at least the following:

- Identification of confined space
- Testing and evaluation of air quality
- Frequency of air quality testing
- Certification that the confined space is safe and will remain safe for the remainder of the work Shift
- Purging and ventilation requirements
- Isolation and lock out of confined space from all pipes, ducts and other communicating openings
- The provision of breathing apparatus where applicable
- The provision of safety harnesses or similar equipment
- Rescue, Evacuation and First aid and procedures

2.9 Copy of the Act and Regulations

Every employer with five or more persons in his employ shall have a copy of the Act and the relevant regulations readily available at the work place: Provided that, where the total number of employees is less than five, the employer shall, on request of an employee, make a copy of the Act available to that employee.

2.10 Other Acts and Laws that may apply

The contractors attention is directed to the following Acts that may be applicable and must be adhered to at all times. It is the contractor's responsibility to become conversant with the requirements applicable in these laws:

- **Compensation for Occupational Injuries and Diseases ACT 130 of 1993, Mineral Act No. 50 of 1991, Water Act No. 54 of 1956, and Atmospheric Pollution Prevention Act No. 45 of 1965, Occupational Health and Safety Act No. 85 of 1993, Environmental Conservation Act No. 73 of 1989.**

Hazardous Substances Act No.15 of 1973,

National Building Regulations and Building Standards Act No.103 of 1977, National Environmental Management Act No. 107 of 1998,

National Road Traffic Act No. 93 of 1996, National Water Act No. 36 of 1998, Relevant By-laws.

**SANS codes referred to by the Occupational Health and Safety Act and Regulations Contract Documents
Basic Conditions of Employment Act (Act 75 of 1997)**

2.12 ACKNOWLEDGEMENT AND ACCEPTANCE OF CONDITIONS OF THESE SPECIFICATIONS

Acknowledgement of Receipt of the Health and Safety Specifications and amendments:

I, _____ representing the Contractor,

(Name of Company)

Do hereby declare that I have satisfied myself with the content of the construction Health and Safety Specification and shall ensure that the Contractor and its personnel comply with all obligations / requirements in respect thereof.

I acknowledge having read and understood the conditions contained in this legal document and furthermore, we agree and accept to abide by the conditions and requirements of the act.

SIGNATURE OF PRINCIPAL CONTRACTOR

DATE

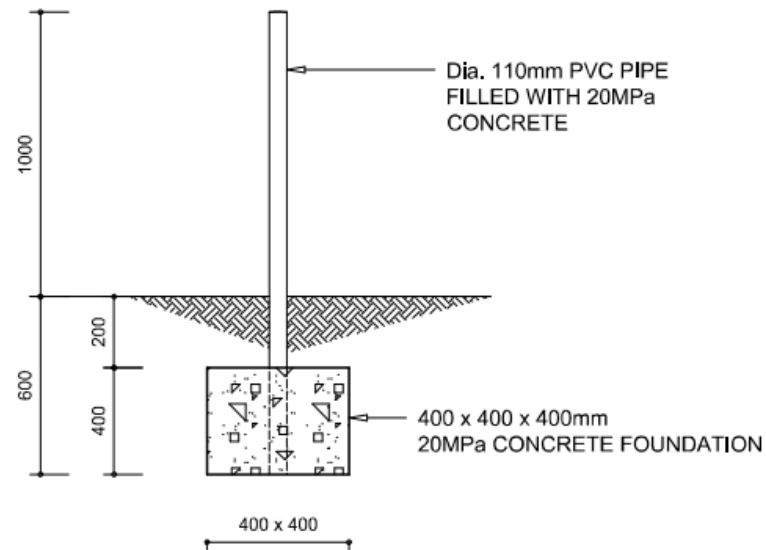
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PART C6 - Drawings

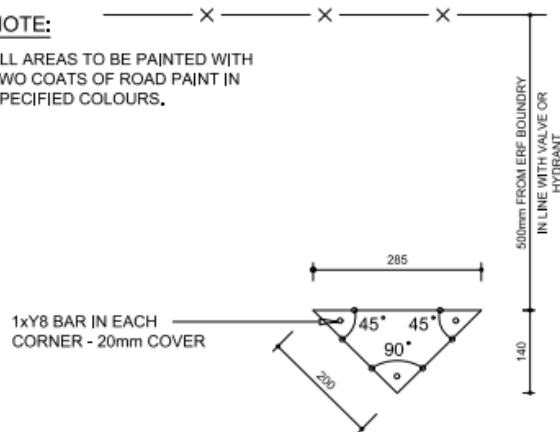
FOR VIEWING PURPOSES ONLY

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KAROO HOOGLAND MUNICIPALITY

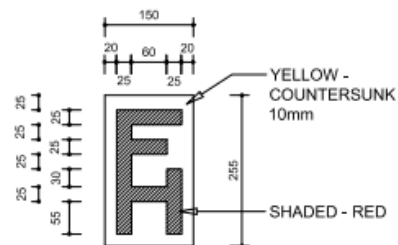
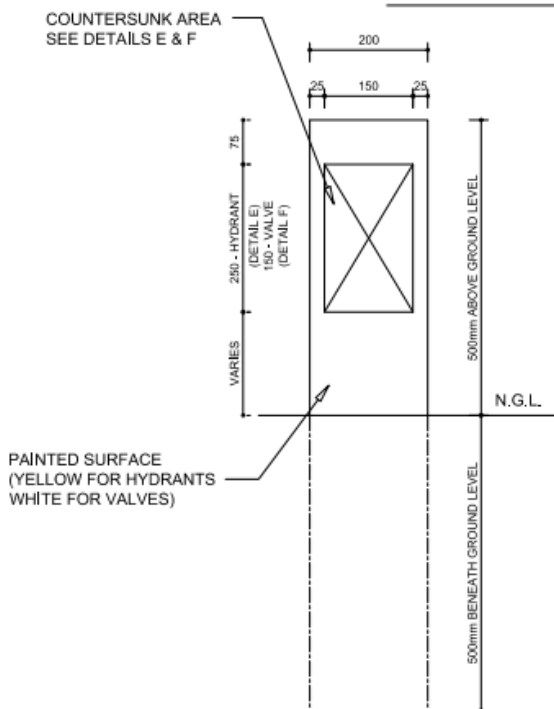


NOTE:

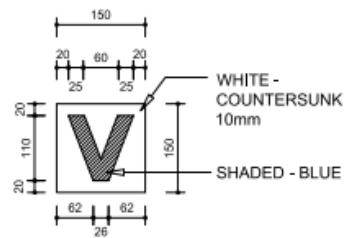
ALL AREAS TO BE PAINTED WITH TWO COATS OF ROAD PAINT IN SPECIFIED COLOURS.



PLAN ON VALVE AND HYDRANT MARKERS



DETAIL E - HYDRANT MARKER



DETAIL F - VALVE MARKER

FRONT ELEVATION MARKERS

TITLE

TYPICAL DETAIL OF VALVE AND HYDRANT MARKERS

SCALE

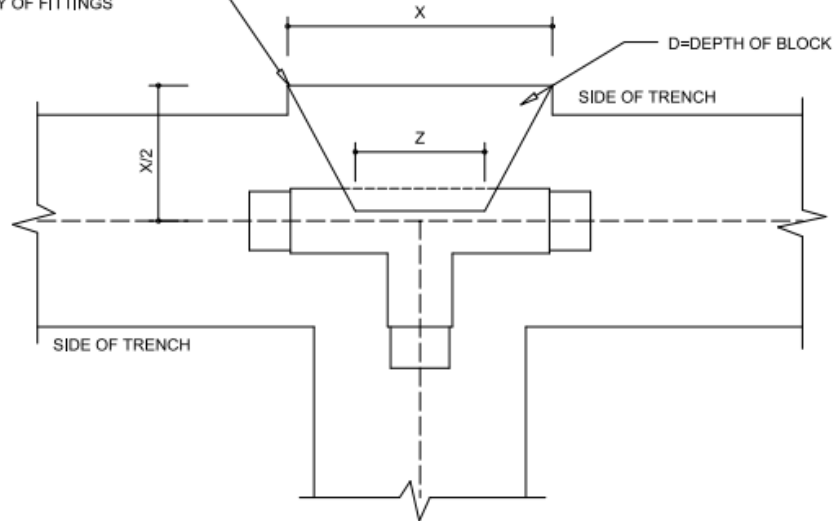
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DRAWING No.

STE/W-37

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KAROO HOOGLAND MUNICIPALITY

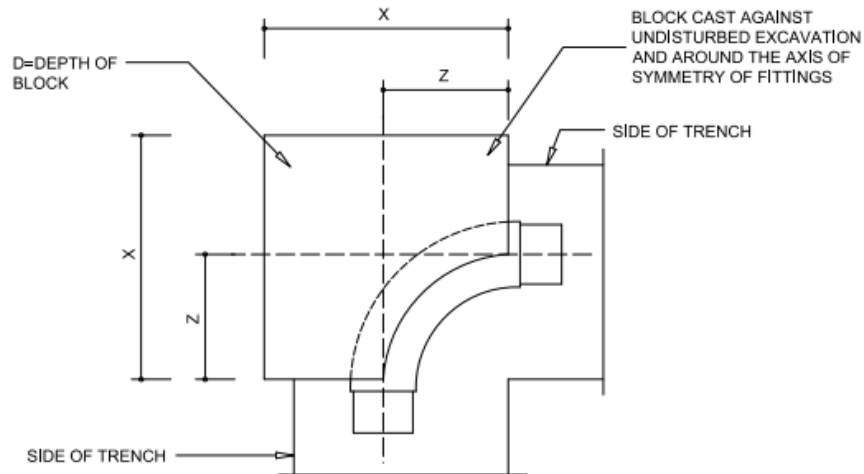
BLOCK CAST AGAINST UNDISTURBED
EXCAVATION AND AROUND THE AXIS
OF SYMMETRY OF FITTINGS



VERY FIRM CLAY AND GRAVEL
SOIL MIXTURE PERMANENTLY
ABOVE GROUND WATER
BEARING CAPACITY 400-500kPa

PIPE DIAM.	T-JUNCTION		
	Xmm	Dmm	Zmm
75	210	150	150
100	300	180	200
150	400	300	280
200	500	410	350
250	650	500	450
300	750	610	550
350	1000	700	550

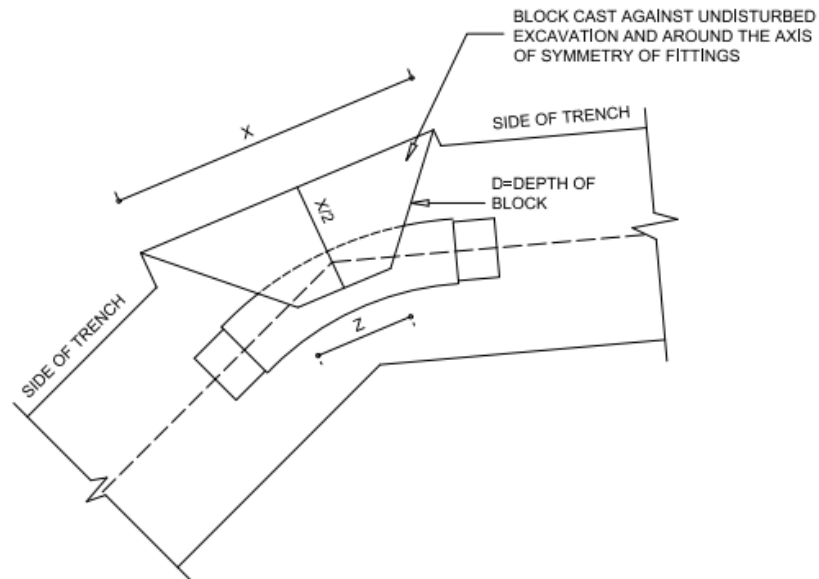
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NOTE: COUPLINGS AND FITTINGS MUST BE LEFT FREE OF CONCRETE

VERY FIRM CLAY AND GRAVEL SOIL MIXTURE PERMANENTLY ABOVE GROUND WATER BEARING CAPACITY 400-500kPa			
PIPE	90° BEND		
DIAM.	Xmm	Dmm	Zmm
75	200	150	100
100	270	300	150
150	400	300	200
200	510	400	250
250	700	450	300
300	850	550	350
350	1180	650	400

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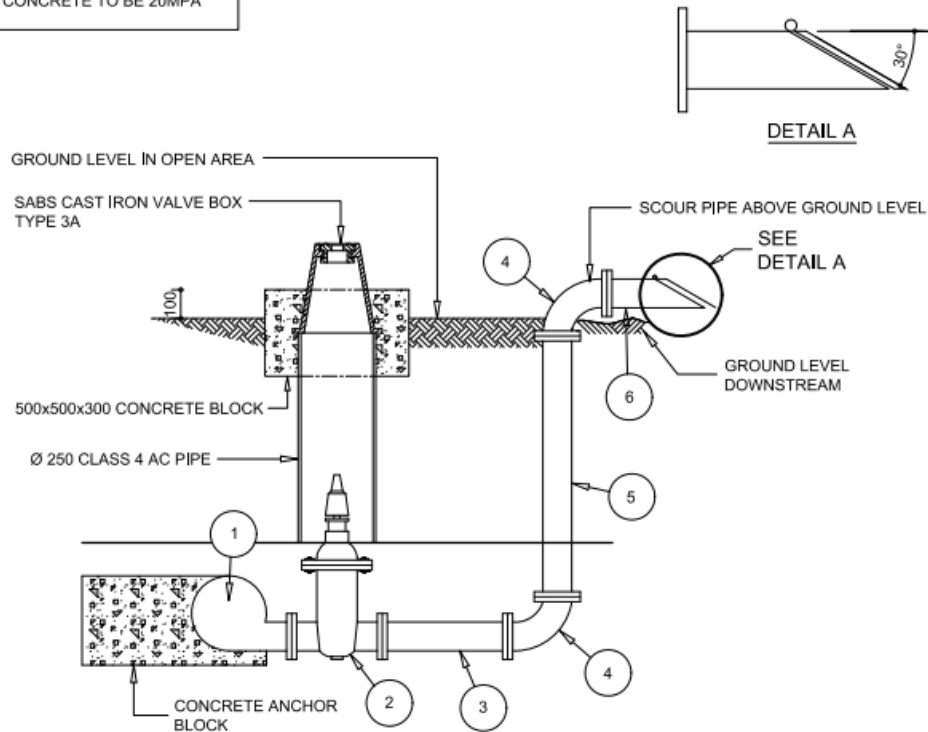


VERY FIRM CLAY/GRAVEL SOIL MIXTURE PERMANENTLY ABOVE GROUND WATER				BEARING CAPACITY 400-500 kPa					
PIPE	11 1/4° BEND			22 1/2° BEND			45° BEND		
DIAM.	Xmm	Dmm	Zmm	Xmm	Dmm	Zmm	Xmm	Dmm	Zmm
75	200	100	100	200	100	100	200	150	100
100	200	100	100	200	150	100	250	200	150
150	250	150	100	250	200	150	350	300	200
200	250	200	150	350	250	200	450	350	250
250	300	250	200	400	300	250	550	450	300
300	350	300	250	500	400	300	700	500	350
350	450	350	300	600	500	350	850	650	400

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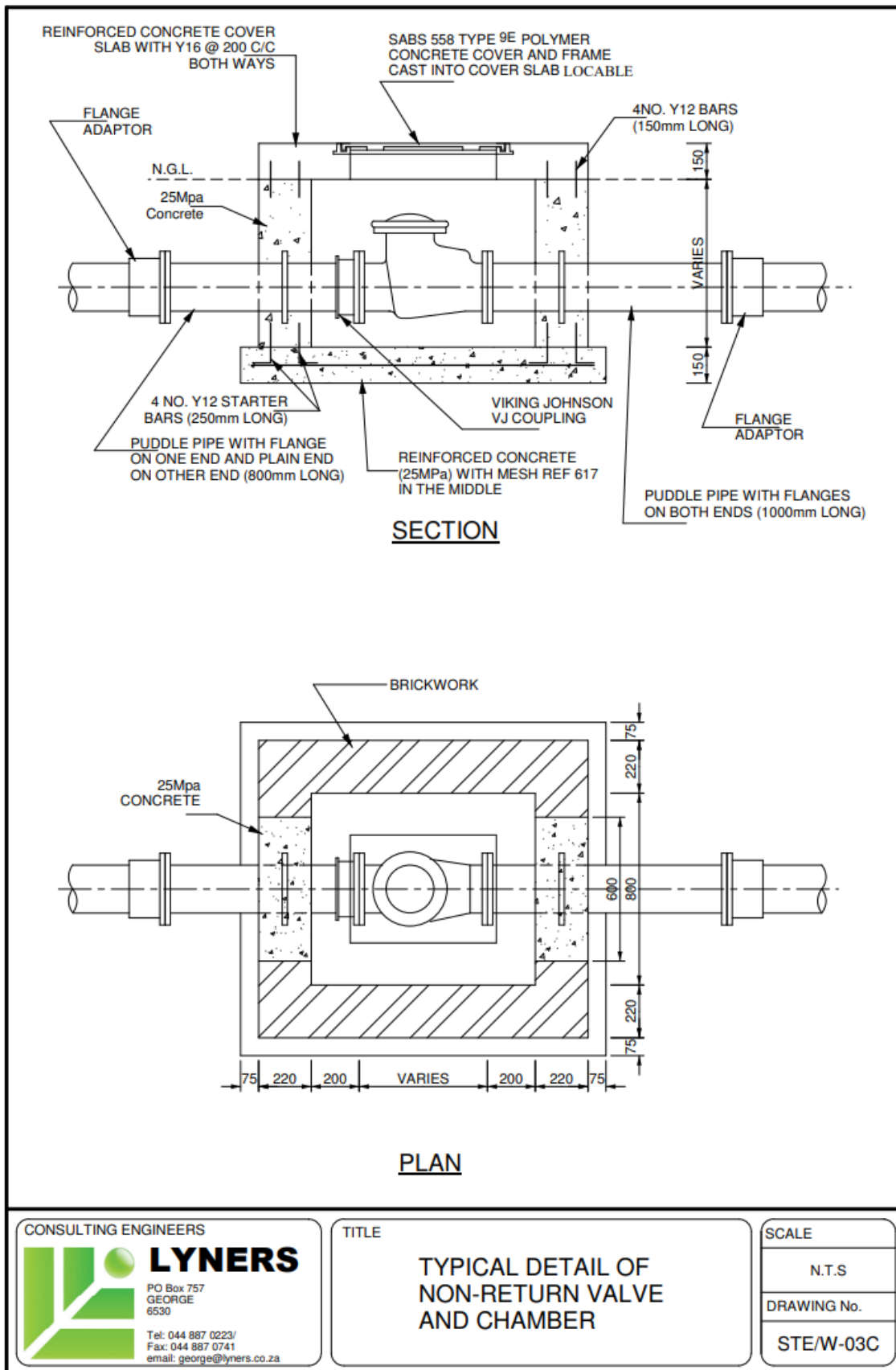
NOTE:

1. ALL STEELWORK TO BE COPON COATED
2. ALL CONCRETE TO BE 20MPA



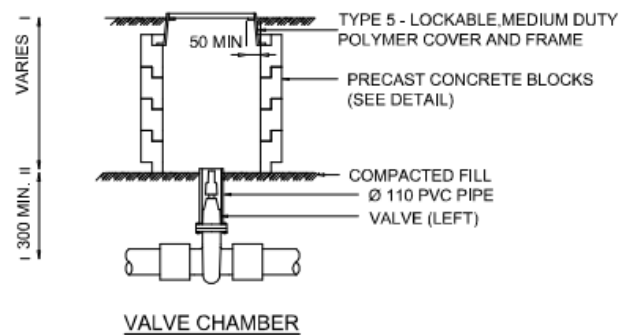
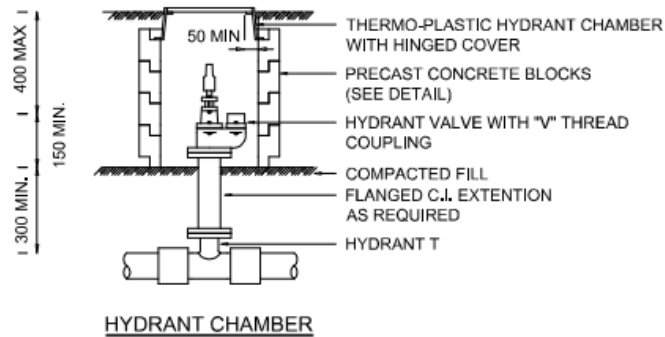
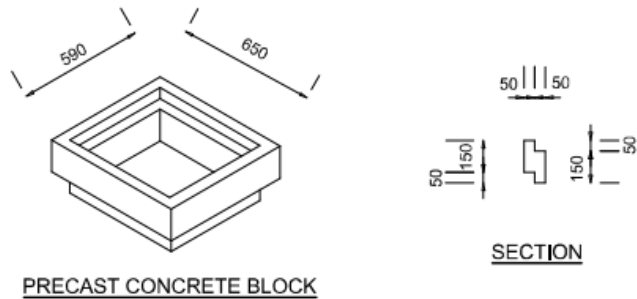
1. CAST IRON SCOUR VALVE T-JUNCTION WITH Ø 100mm OUTLET
2. Ø 100mm FLANGED GATE VALVE
3. Ø 100mm FLANGED STEEL PIPE 500mm LONG
4. Ø 100mm FLANGED 90° BEND
5. Ø 100mm FLANGED STEEL PIPE 1000mm LONG OR AS REQUIRED
6. Ø 100mm OUTLET ONE END FLANGED OTHER END BEVELLED 30° WITH HINGED LID

BID NO KHM T001/011/2024 C
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BID NO KHM T001/011/2024 C
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ALL VALVES TO BE TYPE AVK OR SIMILAR APPROVED,
LH CLOSING LONDON V-THREAD.



CONSULTING ENGINEERS



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TITLE

TYPICAL DETAIL OF
HYDRANT AND VALVE CHAMBER

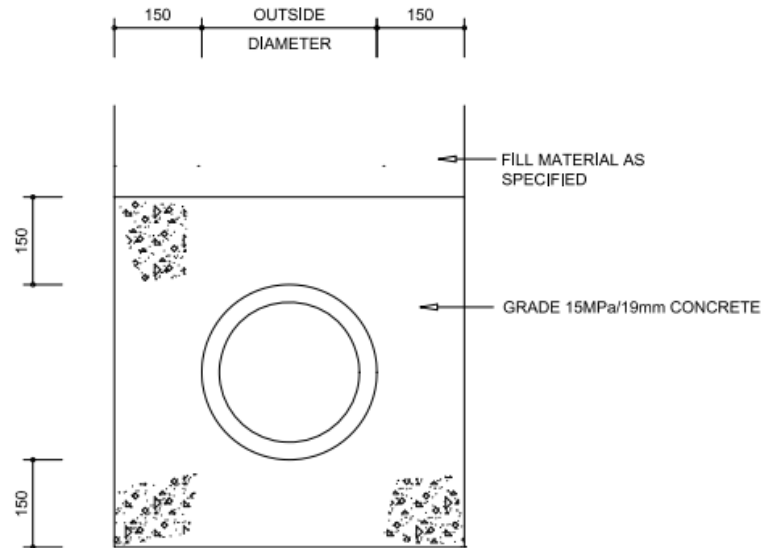
SCALE

N.T.S

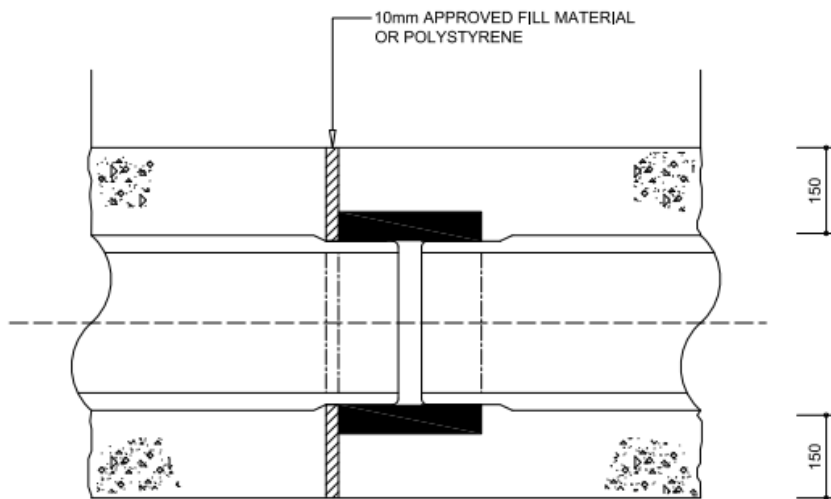
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KAROO HOOGLAND MUNICIPALITY

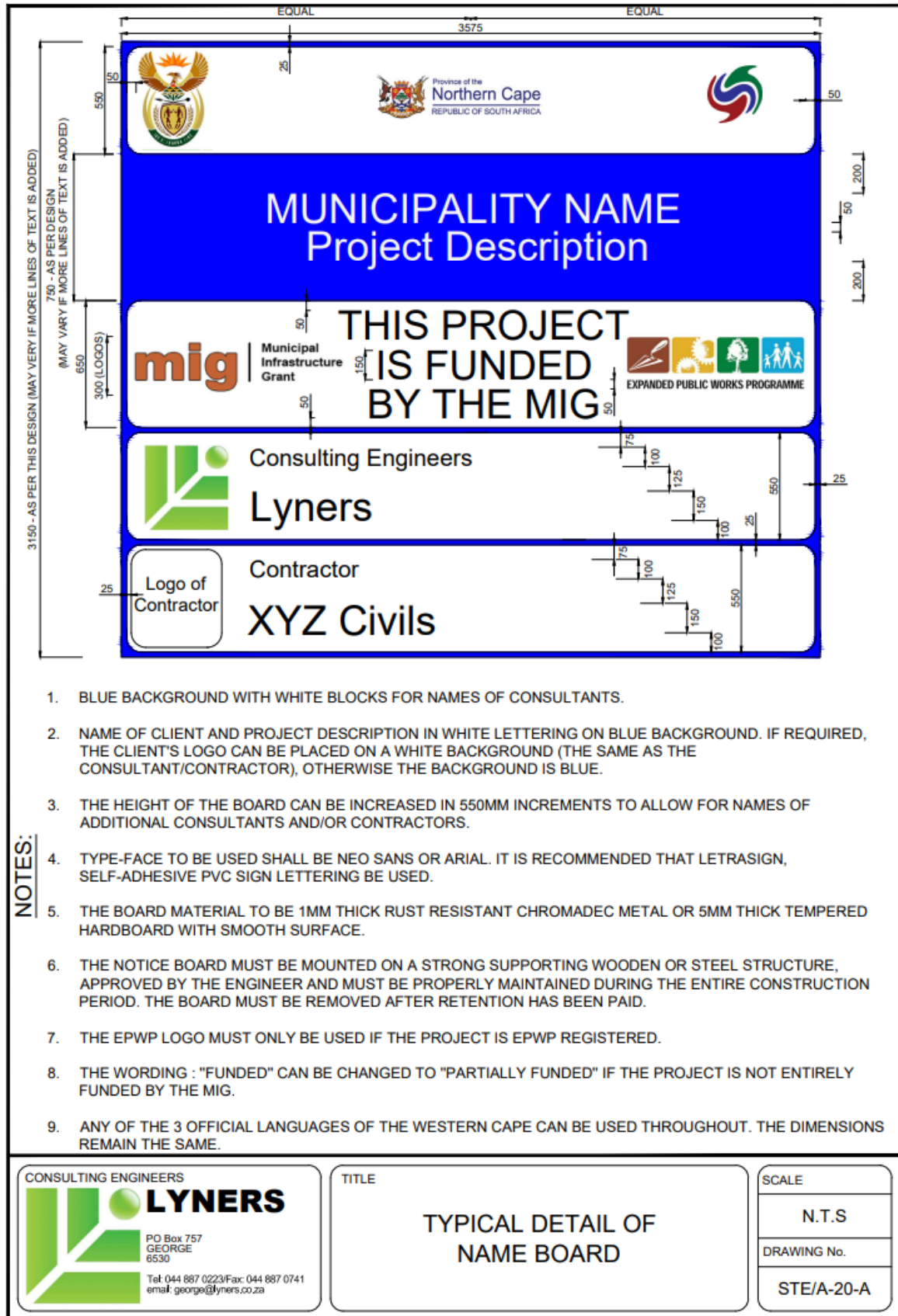


CONCRETE ENCASEMENT

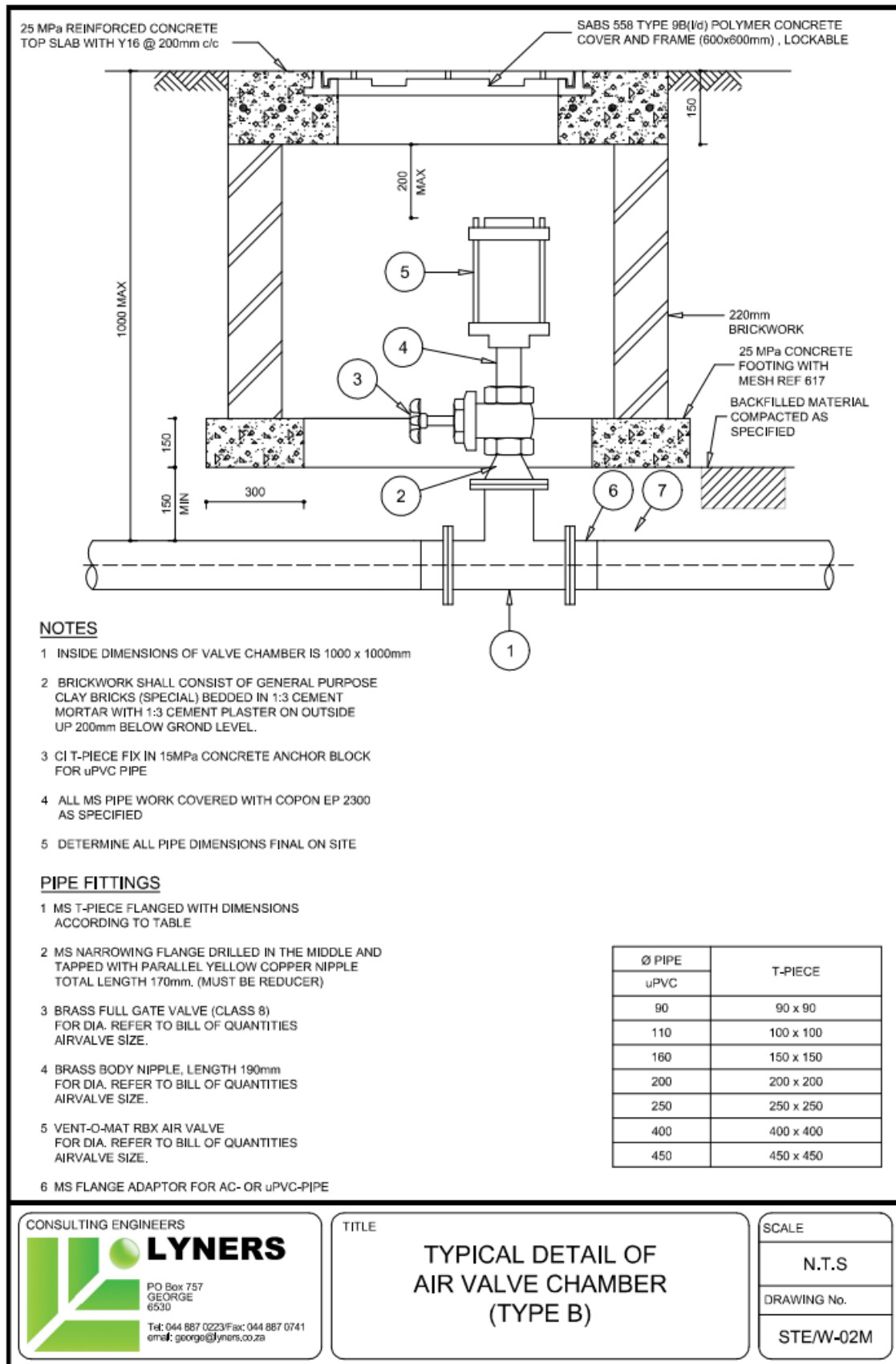


MOVEMENT JOINT IN CONCRETE ENCASEMENT

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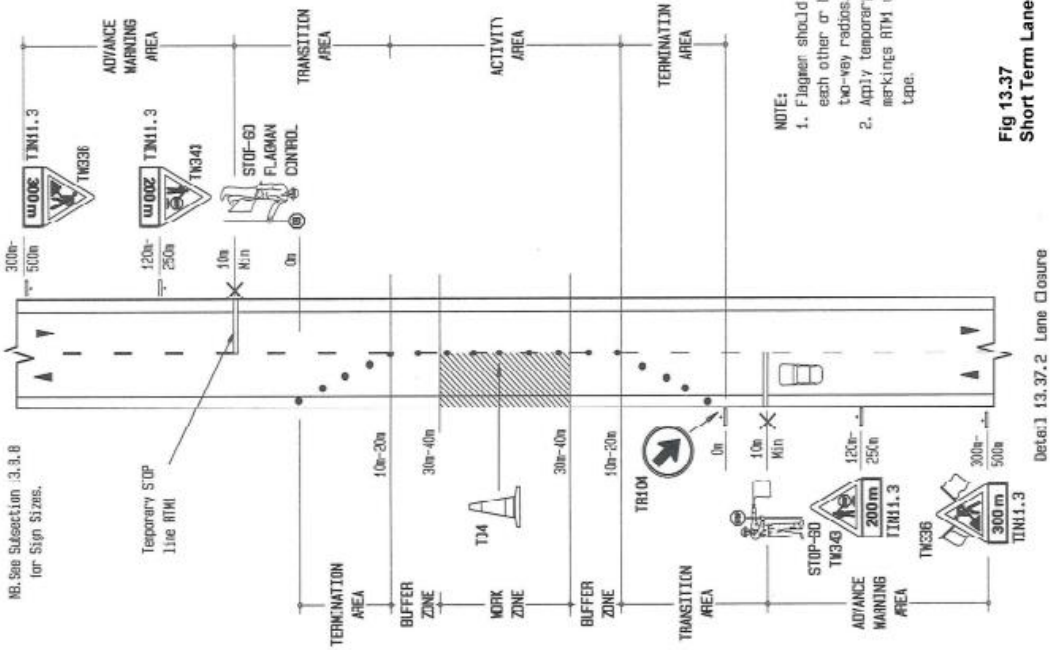
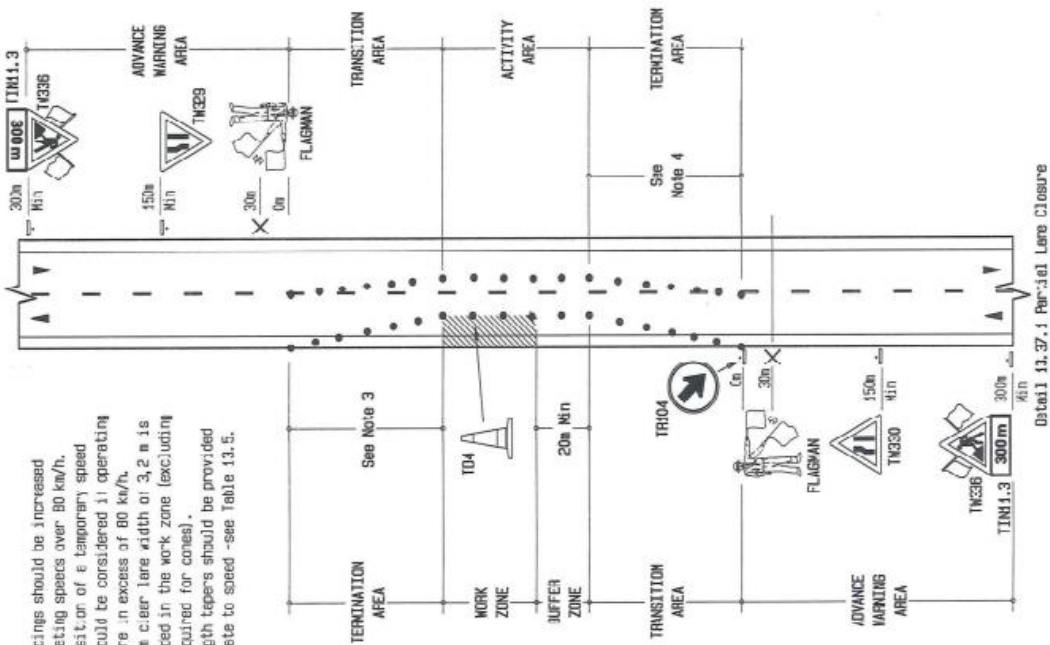
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13.8.13

SHORT TERM WORKS

NOTES:

1. Sign spacings should be increased for operating speeds over 80 km/h.
2. The imposition of a temporary speed limit should be considered if operating speeds are in excess of 80 km/h.
3. A minimum clear lane width of 3,2 m is recommended in the work zone (excluding space required for cones).
4. Full length tapers should be provided appropriate to speed - see Table 13.5.



- NOTE:
1. Flagmen should be able to see each other or be issued with two-way radios.
 2. Apply temporary STOP line markings RTM using removable tape.

Fig 13.37
Short Term Lane Closure

MAY 2012

SARTSM - VOL 2

ROADWORKS