Nkomazi Local Municipality

9 Park Street - Malalane
Private Bag X101
Malalane,
1320
Tel: (013) 790 0245
Fax: (013) 790 088
Customer Care No. (013) 790 0990

www.nkomazi.gov.za

# UPGRADING OF BULK AND EXTENSION OF RETICULATION AT MBANGWANE

## CIDB GRADING: 7CE OR HIGHER

## BID NO: NKO:41/2026

**NKOMAZI LOCAL MUNICIPALITY**
**PRIVATE BAG x 101**
**MALELANE**
**1320**

**The Municipal Manager**
**Mr O Nkosi**

**TEL.: 013 – 790 0245**
**FAX.: 013 – 790 0886**

**VAT Registration No: 4300102938**

**PLEASE NOTE THAT THIS DOCUMENT MUST ACCOMPANY YOUR PROPOSAL AND RELEVANT DOCUMENTATION**

| | |
|---|---|
| **Name of Bidder** | |
| **Address** | |
| **Contact Numbers** | |
| **Telephone No. or Cell phone No.** | |
| **Fax No.** | |
| **E-mail Address** | |
| **Tendered Amount (VAT INC)** | |

**CLOSING DATE: 12h00 on 02/10/2026**

# CLOSING DATE & TIME: 02 OCTOBER 2026 AT 12H00

# TENDER DOCUMENT

## CONTENT


| DESCRIPTION | | COLOUR |
|---|---|---|
| **PORTION 1: TENDER** | | |
| **PART T1** | **TENDERING PROCEDURES** | |
| | T1.1 TENDER NOTICE AND INVITATION TO TENDER | White |
| | T1.5 TENDER DATA | Pink |
| **PART T2** | **RETURNABLE SCHEDULES** | Yellow |
| | T2.1: LIST OF RETURNABLE DOCUMENTS | Yellow |
| | | |
| **PORTION 2: CONTRACT** | | |
| **PART C1** | **AGREEMENTS AND CONTRACT DATA** | |
| | C1.1 FORM OF OFFER AND ACCEPTANCE | Yellow |
| | C1.2 CONTRACT DATA | Yellow |
| | C1.3 FORM OF GUARANTEE | Yellow |
| | C1.4 AGREEMENT WITH ADJUDICATOR | Yellow |
| | C1.5 OCCUPATIONAL HEALTH AND SAFETY AGREEMENT | Yellow |
| | | |
| **PART C2** | **PRICING DATA** | |
| | C2.1 PRICE INSTRUCTIONS | Yellow |
| | C2.2 BILL OF QUANTITIES | Yellow |
| | | |
| **PART C3** | **SCOPE OF WORK** | |
| | C3.1 STANDARD SPECIFICATIONS | Blue |
| | C3.2 PROJECT SPECIFICATIONS | Blue |
| | C3.3 PARTICULAR SPECIFICATIONS | Blue |
| | | |
| **PART C4** | **SITE INFORMATION** | |
| | C4.1 TENDER DRAWINGS | Green |

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**TENDER NO: NKO: 41/2026 UPGRADING OF BULK AND EXTENSION OF RETICULATION AT MBANGWANE FOR NKOMAZI LOCAL MUNICIPALITY**

The Nkomazi Local Municipality invites interested parties who are registered as CIDB 7CE or higher for the upgrading of bulk and extension of reticulation at Mbangwane. Tender documentation with complete details is available upon the payment of a non-refundable amount of R1 851.38 on each tender document or can be downloaded for free on the e-Tender portal. Tender document(s) will be available as from 31/08/2026 and to be obtained at Nkomazi Local Municipality: Budget and Treasury office (Old Malalane Taxi Rank), 22 Impala Street from the Cashiers Desk from 07h45 to 15H30 (Monday-Friday).

A non-compulsory tenderer briefing session will be held on 04/09/2026 at 10h00 at the Municipal Town Hall (Kobwa Hall) at Fish Eagle. Bidders are advised not to commit fraudulent activities or forgery to document. All abusers of the SCM system, including or faking of returnable documents, may be reported to SAPS and restricted from doing business with any public institution for a period not exceeding 10 years is in line with section 28 and 29 of the prevention and combating of corrupt activities Act 12 of 2004.

A preferential system shall apply whereby this contract will be allocated to a bidder in accordance with the Preferential Procurement Policy Framework Act, no 5 of 2000 and as defined in the bid document, read in conjunction with the Preferential Procurement Regulation, 2022 where 80 points will be allocated in respect of price and 20 points in respect of targeted goals.

Completed bid documentation must be deposited on/before 12h00 on 02/10/2026 in the Tender Box situated at the main entrance of the municipality (Civic Centre), 9 Park Street, Malalane.

Tenders/Bids must be submitted in a sealed envelope or container on which the tender/bid number and addressee is clearly marked. No bids transmitted by fax or e-mail will be accepted. It must be noted that the municipality is not bound to accept the lowest on any other tender. Tender/bid documentation which is incomplete or filled incorrectly, not filled in the official bid documentation or which is received after the closing of the bids, will be ignored. It must also be noted the tender submitted in a wrong tender box will not be considered.

For Supply Chain enquiries contact Mr. R. Mabuza at 013 790 0386, and for technical enquiries contact Ms. Gift Mbatsane at 013 790 0145, between 07H15 – 16H00 on working weekdays.

.....
MR. O N NKOSI
MUNICIPAL MANAGER

21/08/26
Date



| BID NO: | NKO:41/2026 | INITIALS | |
|---|---|---|---|

# MBD 1
# PART A:
# INVITATION TO BID

| | | | | | |
|---|---|---|---|---|---|
| **YOU ARE HEREBY INVITED TO BID FOR REQUIREMENTS OF THE NKOMAZI LOCAL MUNICIPALITY** | | | | | |
| BID NUMBER: | **NKO 41/2026** | CLOSING DATE: | **02/10/2026** | CLOSING TIME: | **12H00** |
| DESCRIPTION | **UPGRADING OF BULK AND EXTENSION OF RETICULATION AT MBANGWANE** | | | | |
| **BID RESPONSE DOCUMENTS MAY BE DEPOSITED IN THE BID BOX SITUATED AT *(STREET ADDRESS)*** | | | | | |
| **NKOMAZI Local Municipality Offices, 9 Park Street, Malelane** | | | | | |
| **9 Park Street** | | | | | |
| **Malalane** | | | | | |
| **1320** | | | | | |

| **BIDDING PROCEDURE ENQUIRIES MAY BE DIRECTED TO** | | **TECHNICAL ENQUIRIES MAY BE DIRECTED TO:** | |
|---|---|---|---|
| CONTACT PERSON | **Mr M.R. Mabuza** | CONTACT PERSON | **Ms G Mbatsane** |
| TELEPHONE NUMBER | **013 790 0386** | TELEPHONE NUMBER | **013 790 0145** |
| FACSIMILE NUMBER | **013 790 0245** | FACSIMILE NUMBER | **013 790 0245** |
| E-MAIL ADDRESS | **Richard.mabuza@nkomazi.gov.za** | E-MAIL ADDRESS | **gift.mbatsane@nkomazi.gov.za** |

| **SUPPLIER INFORMATION** | | | | | |
|---|---|---|---|---|---|
| NAME OF BIDDER | | | | | |
| POSTAL ADDRESS | | | | | |
| STREET ADDRESS | | | | | |
| TELEPHONE NUMBER | CODE | | NUMBER | | |
| CELLPHONE NUMBER | | | | | |
| FACSIMILE NUMBER | CODE | | NUMBER | | |
| E-MAIL ADDRESS | | | | | |
| VAT REGISTRATION NUMBER | | | | | |
| SUPPLIER COMPLIANCE STATUS | TAX COMPLIANCE SYSTEM PIN: | | **OR** | CENTRAL SUPPLIER DATABASE No: | MAAA |
| B-BBEE STATUS LEVEL VERIFICATION CERTIFICATE | TICK APPLICABLE BOX]<br>☐ Yes ☐ No | | B-BBEE STATUS LEVEL SWORN AFFIDAVIT | | [TICK APPLICABLE BOX]<br>☐ Yes ☐ No |

***[A B-BBEE STATUS LEVEL VERIFICATION CERTIFICATE/ SWORN AFFIDAVIT (FOR EMES & QSEs) MUST BE SUBMITTED IN ORDER TO QUALIFY FOR PREFERENCE POINTS FOR B-BBEE]***

| | | | |
|---|---|---|---|
| ARE YOU THE ACCREDITED REPRESENTATIVE IN SOUTH AFRICA FOR THE GOODS /SERVICES /WORKS OFFERED? | ☐Yes ☐No<br>[IF YES ENCLOSE PROOF] | ARE YOU A FOREIGN BASED SUPPLIER FOR **THE GOODS /SERVICES /WORKS OFFERED?** | ☐Yes ☐No<br>[IF YES, ANSWER PART B:3 ] |

**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? | ☐ YES ☐ NO |
| DOES THE ENTITY HAVE ANY SOURCE OF INCOME IN THE RSA? | ☐ YES ☐ NO |
| IS THE ENTITY LIABLE IN THE RSA FOR ANY FORM OF TAXATION? | ☐ YES ☐ NO |

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

# PART B
# TERMS AND CONDITIONS FOR BIDDING

| **1. BID SUBMISSION:** |
|---|
| 1.1. BIDS MUST BE DELIVERED BY THE STIPULATED TIME TO THE CORRECT ADDRESS. LATE BIDS WILL NOT BE ACCEPTED FOR CONSIDERATION. |
| 1.2. **ALL BIDS MUST BE SUBMITTED IN THE MANNER PRESCRIBED IN THE BID DOCUMENT.** |
| 1.3. THIS BID IS SUBJECT TO THE PREFERENTIAL PROCUREMENT POLICY FRAMEWORK ACT, 2000 AND THE PREFERENTIAL PROCUREMENT REGULATIONS, 2017, THE GENERAL CONDITIONS OF CONTRACT (GCC) AND, IF APPLICABLE, ANY OTHER SPECIAL CONDITIONS OF CONTRACT. |
| 1.4. **THE SUCCESSFUL BIDDER WILL BE ENGAGED WITH NEGOTIATIONS BY THE CSIR THAT MIGHT RESULT IN THE ISSUING OF A PURCHASE ORDER.** |
| **2. TAX COMPLIANCE REQUIREMENTS** |
| 2.1 BIDDERS MUST ENSURE COMPLIANCE WITH THEIR TAX OBLIGATIONS. |
| 2.2 BIDDERS ARE REQUIRED TO SUBMIT THEIR UNIQUE PERSONAL IDENTIFICATION NUMBER (PIN) ISSUED BY SARS TO ENABLE THE CSIR TO VERIFY THE TAXPAYER'S PROFILE AND TAX STATUS. |
| 2.3 APPLICATION FOR TAX COMPLIANCE STATUS (TCS) PIN MAY BE MADE VIA E-FILING THROUGH THE SARS WEBSITE WWW.SARS.GOV.ZA. |
| 2.4 BIDDERS MAY ALSO SUBMIT A PRINTED TCS CERTIFICATE TOGETHER WITH THE BID. |
| 2.5 IN BIDS WHERE CONSORTIA / JOINT VENTURES / SUB-CONTRACTORS ARE INVOLVED, EACH PARTY MUST SUBMIT A SEPARATE TCS CERTIFICATE / PIN / CSD NUMBER. |
| 2.6 WHERE NO TCS IS AVAILABLE BUT THE BIDDER IS REGISTERED ON THE CENTRAL SUPPLIER DATABASE (CSD), A CSD NUMBER MUST BE PROVIDED. |
| 2.7 NO BIDS WILL BE CONSIDERED FROM PERSONS IN THE SERVICE OF THE STATE, COMPANIES WITH DIRECTORS WHO ARE PERSONS IN THE SERVICE OF THE STATE, OR CLOSE CORPORATIONS WITH MEMBERS PERSONS IN THE SERVICE OF THE STATE |

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

SIGNATURE OF BIDDER: ……

CAPACITY UNDER WHICH THIS BID IS SIGNED: ……

DATE: ……

## 1.2 TENDER SUBMISSION, TERMS AND CONDITIONS

**General**

- Bids must be in South African rands, fixed price basis including VAT;
- The Nkomazi Local Municipality reserves the right to call interviews with short-listed bidder before final selection;
- The Nkomazi Local Municipality reserves the right to negotiate price with preferred bidder in terms of Clause F.1.6.2;
- Bidders must provide details of physical address and contact numbers to enable the Nkomazi Local Municipality to assess the ability of the bidder to deliver on the submission made;
- A bidder must submit a comprehensive tender and cannot tender for portions of the scope;
- The Nkomazi Local Municipality is not compelled to accept the lowest price offer or any other tender.

**Bid Instructions**

1. The tender document(s) have been drafted to ensure that essential information is furnished upon the correct completion of the document(s). Where there is insufficient space, or additional particulars are required to be furnished, such must be provided on a separate annexure, clearly indicated.
2. Tender document(s) may not be retyped or redrafted. Also, no photocopies of the original document(s) may be used.
3. Tender document(s) may be completed by mechanical devices such as typewriters; alternatively black ink must be used to fill in the document(s).
4. Tenderer must ensure that no pages are missing from the bid document(s), and that the pages of the bid are numbered consecutively. Nkomazi Local Municipality shall not be held liable with regard to claims arising from the fact that pages are missing or duplicated.
5. Firm tender prices (rates) and delivery periods are preferred, and tenders must clearly state whether prices and delivery periods will remain firm for the duration of the contract or not.
6. Tenderer must be strictly to specification. In cases where items are not to specification, deviations must be clearly indicated. It must also be noted that supplier/tenderer may quote for other items other than the one indicated on the schedule of quantity on a separate sheet, but it would not form part of items to be evaluated for.
7. Tender prices must be quoted in South African currency and in the specified units, unless the contrary is clearly indicated.
8. All the documents herewith form part of the bid and failure to comply with any part thereof may invalidate a bid.
9. Nkomazi Local Municipality may issue Briefing Notes during the briefing session which may contain amendments or information that may assist bidders in articulating their bids.
10. Nkomazi Local Municipality require as a condition of the bid that the compulsory explanatory meeting be attended by prospective bidders. This requirement will be clearly stated in the tender advertisement as well as in the documentation.
11. Nkomazi Local Municipality requires the furnishing of a non-refundable bid deposit together with the drawing of bid documentation (if applicable). Where such a non-refundable bid deposit is requested in the bid documentation, no bid will be accepted unless such a deposit (or cash) is submitted in the form of a bank cheque payable to Nkomazi Local Municipality before submission of the bid.
12. Tenders must be submitted to the addressee before the closing time. Bids submitted after the closing time shall be considered late, and will not be admitted for consideration.
13. The contractor/Service provider shall not abandon, transfer, assign or sublet a contract or part thereof without prior written consent of the council.
14. It is an irrefutable condition of this contract that the successful tenderer will have to negotiate and conclude a service level agreement with the council.

**Bidders will be evaluated on the following administrative compliance. Therefore, the undermentioned documents must be complied with, and where an attachment is required, it should be attached.**

## PART A

**The following conditions must be complied with failure to adhere to any of these conditions will lead to immediate disqualification:**

a. All pages must be submitted, and all pages that require completion must be completed in the tender document. Therefore, no page removal is allowed.
b. Painting over rates/use of correcting fluid is not allowed.
c. Failure to submit documents required in this tender documentation.
d. Form of offer not filled (it should be completed in words and numbers).
e. Certified COIDA
f. Initial or sign all pages of the tender documents.
g. Certified copies of documentation must not be older than three (3) months to be regarded as valid. Copies of "certified copies" will not be accepted as true copies of original documents.
h. All declarations and authorisation forms must be duly signed.
i. Price amendment without initials or signature of authorised personnel in the bills of quantity is not allowed.
j. Original certified copy of company registration certificate (CK) and all pages certified.
k. Original certified copies of ID's all Directors/members/board members.
l. Copy of the SARS Tax PIN or tax clearance certificate.
m. Original certified copy of current municipal account for addresses that appears on the CSD report (not older than 3 months and not in arrears for more than three months) or copy of valid Lease Agreement of the business. If the rates and taxes account are not in the names of the company, the attached municipal rates and taxes statement must be submitted together with an original affidavit from the property owner whose names are reflected on the municipal rates and taxes statement to confirm that the business/ company operates from their property. If the business is situated in an area where the respective municipality does not bill, attach proof of residence issued by the municipality stating that the area in question is not billed.
n. Original certified copies of current municipal account not older than 3 months and not in arrears for more than three months or copy of valid Lease Agreement for **ALL** directors and or board members of the company. If the rates and taxes account are not in the names of the directors/members of the company, the attached municipal rates and taxes statement must be submitted together with an original affidavit from the property owner whose name is reflected on the municipal rates and taxes statement. If the directors and/or board members reside in an area where the respective municipality does not bill, attach proof of residence issued by the municipality stating that the area in question is not billed.
o. Signed Letter of Authority on the company letterhead
p. CSD detailed report (printed after the tender advert and on or before tender closing date)
q. Joint Venture Agreement (In case of a Joint Venture) must be submitted
r. Joint Ventures must be registered on CSD as Joint Venture.
s. Sign all applicable pages.
t. Full completed bill of quantity.
u. Alterations to the bid document or submission of a copy of the original bid document is not allowed.
v. Completion of the bid document using pencil is not allowed
w. Minimum Bank rating of code C.
x. The bid must be submitted on the closing date and time.
y. Certified Copy of CIDB grading
z. Complete form of offer

Any contract awarded on false information furnished by the bidder, may, without derogating from other remedies available to Nkomazi Local Municipality, be cancelled at the sole discretion of Nkomazi Local Municipality

## T1.4 RETURNABLE DOCUMENTS

The Tenderer must complete the following returnable documents and submit with the complete tender document.

| NO | DOCUMENT NAME | RETURNABLE / INCLUDED IN THE BID DOCUMENT (Mark) | | |
|---|---|---|---|---|
| | | Included in Bid Doc | Returnable | Required Documents from Supplier |
| 1. | All declarations and authorization forms must be duly signed | No | | Yes |
| 2. | Failure to submit documents required in this tender documentation. | No | | Yes |
| 3. | The bid has been submitted after the closing date and time | No | | Yes |
| 4. | Initial or sign all pages of the tender documents. | No | | Yes |
| 5. | Certified copies of documentation must not be older than three (3) months to be regarded as valid. Copies of "certified copies" will not be accepted as true copies of original documents | No | | Yes |
| 6. | Original certified copy of company registration certificate (CK) and all pages certified. | No | | Yes |
| 7. | Original certified copies of ID's all Directors/members/board members. | No | | Yes |
| 8. | Copy of the SARS Tax PIN or tax clearance certificate. | No | | Yes |
| 9. | Joint Venture Agreement (In case of a Joint Venture) must be submitted | No | | Yes |
| 10. | Joint Ventures must be registered on CSD as Joint Venture. | No | | Yes |
| 11. | Alterations to the bid document or submission of a copy of the original bid document is not allowed. | No | | Yes |
| 12. | Completion of the bid document using pencil is not allowed | Yes | | No |
| 13. | Proof of professional Indemnity Insurance | No | | Yes |
| 14. | Certified Municipality Rates and Taxes - Business (Must not be in arrears for over 90 days) | No | | Yes |
| 15. | Certified Municipality Rates and Taxes - Company Directors (Must not be in arrears for over 90 days) | No | | Yes |

## T1.5 TENDER DATA

### 1.5.1 GENERAL

The Conditions of Tender reproduced are the Standard Conditions of Tender as contained in Annex F of SANS 294 – Construction Procurement Processes, Methods and Procedures which contain references to the Tender Data for details that apply specifically to this tender.

The Tender Data shall be read with the Standard Conditions of Tender in order to expand on the Tenderer's obligations and the Employer's undertakings in administering the tender process in respect of the project under consideration.

The Tender Data contained hereafter shall have precedence in the interpretation of any ambiguity or inconsistency between it and the Standard Conditions of Tender.

Each item of Tender Data given below is cross-referenced to the relevant clause in the standard Conditions of Tender.

### 1.5.2 TENDER DATA APPLICABLE TO THIS TENDER

**F.1.1** The Employer for this Contract is: **NKOMAZI LOCAL MUNICIPALITY**

**F.1.2 Tender Documents**

(a) **The Tender Document** consists of the following:

**TENDER**

**T1: Tendering Procedures**
T1.1: Tender Notice and Invitation to Tender
T1.2: Tender Data

**T2: Returnable Documents**
T2.1: List of Returnable Documents
T2.2: Returnable schedules and forms

**CONTRACT**

**Part 1: Agreements and Contract Data**
C1.1: Form of Offer and Acceptance
C1.2: Contract Data

**Part 2: Pricing Data**
C2.1: Pricing Instructions
C2.2: Bill of Quantities

**Part 3: Scope of Work**
C3: Scope of Work

**Part 4: Site Information**
C4: Site information

The Tender Document shall be obtained from the Employer or his authorized representative at the physical addresses stated in the Tender Notice, upon payment of the deposit stated in the Tender Notice.

**F.1.4 The Employer's Agent is:**

| | | |
|---|---|---|
| Name | : | **MZOLO CONSULTING ENGINEERS** |
| Address | : | 4 Coronation Road Scottville, PMB 3201 |
| Telephone | : | 031 001 8932 |
| Fax | : | 086 425 6243 |
| E-Mail | : | admin@mzoloconsulting.co.za |

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

The Employer is not obliged to accept the lowest or any tender offer.

**F.2.1 Eligibility**

A Tenderer will not be eligible to submit a tender if:

(a) the contractor submitting the tender is under restrictions or has principals who are under restriction to participate in the Employer's procurement due to corrupt or fraudulent practices;

(b) the Tenderer does not have the legal capacity to enter into the contract;

(c) the contractor submitting the tender is insolvent, in receivership, bankrupt or being wound up, has his affairs administered by a court or a judicial officer, has suspended his business activities, or is subject to legal proceedings in respect of the foregoing;

(d) The Tenderer does not comply with the legal requirements stated in the Employer's procurement policy;

(e) The Tenderer who cannot demonstrate that he possesses the necessary technical qualifications and competencies, financial resources, equipment and other physical facilities, managerial capability, personnel, experience and reputation to perform the contract; or

**TENDERERS TO TAKE PARTICULAR NOTICE OF THIS CLAUSE AS TENDERERS WHO DO NOT COMPLY HEREWITH WILL NOT BE CONSIDERED ELIGIBLE.**

(f) The Tenderer who cannot provide proof that he is in good standing with respect to duties, taxes, levies and contributions required in terms of legislation applicable to the work in the contract.

**F.2.7 Site visit and clarification meeting**

The arrangements for the non compulsory site inspection visit and clarification meeting are as follows:

**Location:** **Municipal Town Hall, MALELANE (Kobwa Hall) at Fish Eagle**

**Date :** **04 September 2016**

**Starting time:** **10: 00AM**

**F.2.12 Alternative tenders**

If a Tenderer wishes to submit an alternative tender offer, the only criteria permitted for such an alternative tender offer are:

(a) Individual items

Individual items offered as alternatives to items in the Bill of Quantities will only be considered if listed and priced in Form G: *Amendments, Qualifications and Alternatives* in Part 2 of the Contract Document, accompanied by a detailed statement as necessary.

(b) Alternative designs

Where a Tenderer desires to submit an alternative tender involving modifications to the design or method of construction that would alter the character of the tender, the following procedure must be observed:

(i) The alternative offer must be accompanied by supporting information, drawings, calculations and a priced alternative Bill of Quantities to enable its technical acceptability, construction time and price to be fully assessed. Such information, drawings and Bill of Quantities must be sufficient for the proper evaluation of the tendered alternative, otherwise the offer will not be considered;
(ii) Any alternative tender involving modifications to the design will be assessed on its merits and may be accepted. An accepted alternative design will become the design for the purpose of the contract.
(iii) If an alternative design with its priced Bill of Quantities has been accepted, the sum thus tendered for the alternative will not be subject to re-measurement and will be the final amount payable to the Contractor, except only for variations arising from:

- Changes in design parameters ordered by the Engineer;
- Changes not arising from any failure or fault of the Contractor, but from modifications requested by the Engineer.

(iv) A decision whether or not to adopt a technically acceptable modified design will be governed by the amount of the overall saving and the advantages to the Employer which the modified design can be reliably expected to achieve. Matters to be considered in arriving at the overall saving will include the effect of any deferment in starting date arising from extra time needed for the preparation of an amended contract for signature.
(v) The priced alternative Bill of Quantities must include an amount equal to 5% of the amount tendered therein to cover the Employer's costs of checking the alternative design offered.

**F.2.13 Submitting a Tender Offer**

**F.2.13.5** Tender offers shall be submitted as an original only.

Under no circumstances whatsoever may the tender forms be retyped or redrafted.
Photocopies of the original tender documentation may be used, but an original signature must appear on such photocopies.

**F.2.13.6** A two-envelope procedure will not be followed.

**F.2.15 Closing Time**

The closing time for submission of Tender Offers is as per the Tender Bulletin.
Telephonic, telegraphic, facsimile, telex, electronic or e-mailed tenders will **not** be accepted.

**F.2.16 Tender Validity**

All tenders shall remain valid for a period of ninety (90) days after the time and date set for the opening of tenders, or until the Tenderer is relieved of this obligation by the Employer, in writing, at an earlier date. However, the Tenderer may be requested in writing, not later than fourteen (14) days before this validity period will lapse, to extend the validity of this tender for a specific period. The written approval of the Tenderer must then be received before the lapsing of the original validity period, in order to remain valid.

Should a Tenderer –

- Withdraw his tender during the period of its validity; or
- give notice of his inability to execute the contract or fail to execute the contract; or
- fail to sign the contract agreement or furnish the required security within the period fixed in the Contract Data or any extended time agreed to by the Employer;

then he shall be liable for and pay to the Employer –

- all expenses incurred in calling for fresh tenders, if it should be necessary;
- the difference between his tender and any less favourable tender accepted either by fresh tenders being called or by another tender being accepted from those already received;
- any escalation of the final contract price resulting from any delay caused in calling for fresh tenders:

Provided always that the Employer may exempt a Tenderer from the provisions hereof, if it is of the opinion that the circumstances justify such exemption.

**F.2.19 Access**

Access shall be provided for inspections and testing by personnel acting on behalf of the Employer.

**F.2.22 Return of Tender Documents**

Not applicable.

**F.2.23 Certificates**

The following certified certificates must be provided with the tender (Compulsory):

- Joint Venture Agreement and Power of Attorney in case of Joint Ventures;
- Workman's Compensation Registration Certificate (or proof of payment of contributions in terms of the Compensation for Occupational Injuries and Diseases Act No. 130 of 1993);
- Company/CC/Trust/Partnership registration certificates; and
- Certified Copies of Identity Document of company owner/directors.

**F.3.5** The two-envelope system **<u>will not</u>** apply to this tender.

**F.3.11 Evaluation of Tender Offers**

The Mpumalanga Department of Public Works, Roads & Transport has adopted a policy in the legislation applicable to procurement of tenders and management of Construction Contracts. To achieve the Government's community empowerment policies, an environment conducive to emerging and SMME's Contractors has to be created. Therefor the procurement policy adopted by Mpumalanga Department of Public Works, Roads and Transport will be implemented in this contract to give effect to Section 217(2) of the Constitution and as published in Government Gazette no 16085, dated 23 November 1994.

**F.3.11.2** Tenders will be evaluated in a single stage in accordance with the standard tender evaluation Method 2: Financial Offer and preference:

STAGE 1: TEST FOR RESPONSIVENESS/ELIGIBILITY

In order for a tender to be considered responsive, it must comply with **ALL** of the following criteria:

a) The tender documentation must be completed and signed in all respects;
b) The Contractor must have the required CIDB grading;
c) The tender documentation must include all necessary and applicable documentation as listed in F.2.23 above; and
d) The tender must comply with the eligibility criteria noted in F.2.1.

The responsiveness of a tender will be assessed by scoring the bid according to the criteria detailed in the table overleaf.

It is incumbent on the Tenderer to ensure that the returnable documents in T2 are completed in sufficient detail to enable the score to be properly assessed. If the information provided renders a specific criterion not being fully complied with, then the bid will be scored on the next criterion down.

## Annex F: Standard Conditions of Tender

**(As contained in Annexure F of Board Notice 12 of 2009: Standards for Uniformity in Construction Procurement)**

**F.1 General**

**F.1.1 Actions**

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

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

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

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

**F.1.2 Tender Documents**

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

**F.1.3 Interpretation**

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

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

**F.1.3.3** For the purposes of these conditions for the calling for expressions of interest, the following definitions apply:

a) **conflict of interest** means any situation in which:

i) someone in a position of trust has competing professional or personal interests which make it difficult to fulfil his or her duties impartially;
ii) an individual or organisation is in a position to exploit a professional or official capacity in some way for their personal or corporate benefit; or
iii) incompatibility or contradictory interests exist between an employee and the organisation which employs that employee.

b) **comparative offer** means the tenderer's financial offer after all tendered parameters that will affect the value of the financial offer have been taken into consideration in order to enable comparisons to

be made between offers on a comparative basis;

c) **corrupt practice** means the offering, giving, receiving or soliciting of anything of value to influence the action of the employer or his staff or agents in the tender process; and

d) **fraudulent practice** means the misrepresentation of the facts in order to influence the tender process or the award of a contract arising from a tender offer to the detriment of the employer, including collusive practices intended to establish prices at artificial levels

e) **organization** means a company, firm, enterprise, association or other legal entity, whether incorporated or not, or a public body

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

**F.1.4 Communication and employer's agent**

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

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

**F.1.5.1** The employer may accept or reject any variation, deviation, tender offer, or alternative tender offer, and may cancel the tender process and reject all tender offers at any time before the formation of a contract. The employer shall not accept or incur any liability to a tenderer for such cancellation and rejection, but will give written reasons for such action upon written request to do so.

**F.1.5.2** The employer may not subsequent to the cancellation or abandonment of a tender process or the rejection of all responsive tender offers re-issue a tender covering substantially the same scope of work within a period of six months unless only one tender was received, and such tender was returned unopened to the tenderer.

**F.1.6 Procurement procedures**

**F.1.6.1 General**

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

**F.1.6.2 Competitive negotiation procedure**

**F.1.6.2.1** Where the tender data require that the competitive negotiation procedure is to be followed, tenderers shall submit tender offers in response to the proposed contract in the first round of submissions. Notwithstanding the requirements of F.3.4, the employer shall announce only the names of the tenderers who make a submission. The requirements of F.3.8 relating to the material deviations or qualifications which affect the competitive position of tenders shall not apply.

**F.1.6.2.2** All responsive tenderers, or not less than three responsive tenderers that are highest ranked in terms of the evaluation method and evaluation criteria stated in the tender data, shall be invited in each round to enter into competitive negotiations, based on the principle of equal treatment and keeping confidential the proposed solutions and associated information. Notwithstanding the provisions of F.2.17, the employer may request that tenders be clarified, specified and fine-tuned in order to improve a tenderer's competitive position provided that such clarification, specification, fine-tuning or additional information does not alter any fundamental aspects of the offers or impose substantial new requirements which restrict or distort competition or have a discriminatory effect.

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

tender offer, based on the same evaluation criteria, with or without adjusted weightings. Tenderers shall be advised when they are to submit their best and final offer.

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

**F.1.6.3 Proposal procedure using the two stage-system**

**F.1.6.3.1 Option 1**

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

**F.1.6.3.2 Option 2**

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

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

**F.2 Tenderer's obligations**

**F.2.1 Eligibility**

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

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

**F.2.2 Cost of tendering**

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

**F.2.3 Check documents**

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

**F.2.4 Confidentiality and copyright of documents**

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

**F.2.5 Reference documents**

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

**F.2.6 Acknowledge addenda**

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

**F.2.7 Clarification meeting**

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

**F.2.8 Seek clarification**

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

**F.2.9 Insurance**

Insurance for this contract is to be supplied by contractor as per the contract data. The tenderer is advised to seek qualified advice regarding insurance.

**F.2.10 Pricing the tender offer**

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

**F2.10.2** Show VAT payable by the employer separately as an addition to the tendered total of the prices.

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

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

**F.2.11 Alterations to documents**

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. Erasures and the use of masking fluid are prohibited.

**F.2.12 Alternative tender offers**

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

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

**F.2.13 Submitting a tender offer**

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

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

**F.2.13.3** Submit the parts of the tender offer communicated on paper as an original plus the number of copies stated in the tender data, with an English translation of any documentation in a language other than English, and

the parts communicated electronically in the same format as they were issued by the employer.

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

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

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

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

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

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

**F.2.14 Information and data to be completed in all respects**

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

**F.2.15 Closing time**

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

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

**F.2.16 Tender offer validity**

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

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

**F.2.16.3** Accept that a tender submission that has been submitted to the employer may only be withdrawn or substituted by giving the employer’s agent written notice before the closing time for tenders that a tender is to be withdrawn or substituted.

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

**F.2.17 Clarification of tender offer after submission**

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

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

**F.2.18 Provide other material**

**F.2.18.1** Provide, on request by the employer, any other material that has a bearing on the tender offer, the tenderer's commercial position (including notarized joint venture agreements), preferencing arrangements, or samples of materials, considered necessary by the employer for the purpose of a full and fair risk assessment. Should the tenderer not provide the material, or a satisfactory reason as to why it cannot be provided by the time for submission stated in the employer's request, the employer may regard the tender offer as non-responsive.

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

**F.2.19 Inspections, tests and analysis**

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

**F.2.20 Submit securities, bonds, policies, etc.**

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

**F.2.21 Check final draft**

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

**F.2.22 Return of other tender documents**

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

**F.2.23 Certificates**

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

**F.2.24 Contract Price Adjustment.**

The tender price given is fixed and will not be adjusted for escalation, unless provided for in the contract data. Fluctuations in the foreign currency exchange rate, however, shall be dealt with in the following manner:

1. No change in the tendered rates shall be allowed if the foreign currency (Rand versus US dollar) exchange rate on the date of letter of acceptance, by the client, of this contract has fluctuated up or down by less than or equal to 5% of the base exchange rate. (Refer to note 3 below)

2. Should the foreign currency (Rand versus US Dollar) exchange rate on the date of letter of acceptance, by the client, of this contract have fluctuated up or down by more than 5% of the base exchange rate (See note 3 below), the tendered rates for Section 2 in the Schedule of Quantities shall be adjusted up or down by an amount equal to the difference between the exchange rate on the date of letter of acceptance and the base exchange rate plus or minus 5 %, whichever is applicable.

3. The base foreign currency (Rand versus US dollar) exchange rate shall be the exchange rate determined by the Johannesburg Stock Exchange (JSE) at **4h00 pm** on the Monday before the tender closing date.

**F.3 The Employer's undertakings**

**F.3.1 Respond to requests from the tenderer**

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

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

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

**F.3.2 Issue Addenda**

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

**F.3.3 Return late tender offers**

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

**F.3.4 Opening of tender submissions**

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

**F.3.4.2** Announce at the meeting held immediately after the opening of tender submissions, at a venue indicated in the tender data, the name of each tenderer whose tender offer is opened and, where applicable, the total of his prices, preferences claimed and time for completion, if any, for the main tender offer only.

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

**F.3.5 Two-envelope system**

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

**F.3.5.2** Evaluate the quality 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 quality evaluation more than the minimum number of points for quality stated in the tender data, and announce the score obtained for the technical proposals and the total price and any preferences claimed. Return unopened financial proposals to tenderers whose technical proposals failed to achieve the minimum number of points for quality.

**F.3.6 Non-disclosure**

Not disclose to tenderers, or to any other person not officially concerned with such processes, information relating to the evaluation and comparison of tender offers, the final evaluation price and recommendations

for the award of a contract, until after the award of the contract to the successful tenderer.

**F.3.7 Grounds for rejection and disqualification**

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

**F.3.8 Test for responsiveness**

**F.3.8.1** Determine, after opening and before detailed evaluation, whether each tender offer properly received:
a) complies with the requirements of these Conditions of Tender,
b) has been properly and fully completed and signed, and
c) is responsive to the other requirements of the tender documents.

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

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

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

**F.3.9 Arithmetical errors, omissions or discrepancies**

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

**F.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 F.3.11 for:

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

**F.3.9.3** 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.

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

a) If bills of quantities or pricing schedules apply and there is an error in the line item total resulting from the product of the unit rate and the quantity, the line item total shall govern and the rate shall be corrected.

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

**F.3.10 Clarification of a tender offer**

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

## F.3.11 Evaluation of tender offers

### F.3.11.1 General

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

### F.3.11.2 Method 1: Financial offer

In the case of a financial offer:

a) Rank tender offers from the most favourable to the least favourable comparative offer.
b) Recommend the highest ranked tenderer for the award of the contract, unless there are compelling and justifiable reasons not to do so.
c) Re-rank all tenderers should there be compelling and justifiable reasons not to recommend the highest ranked tenderer and recommend the highest ranked tenderer, unless there are compelling and justifiable reasons not to do so and the process set out in the sub clause is repeated.

### F.3.11.3 Method 2: Financial offer and preference

In the case of a financial offer and preferences:

a) Score each tender in respect of the financial offer made and preferences claimed, if any, in accordance with the provisions of F.3.11.7 and F.3.11.8.
b) Calculate the total number of tender evaluation points ($T_{EV}$) in accordance with the following formula:

$$T_{EV} = N_{FO} + N_P$$

Where: $N_{FO}$ is the number of tender evaluation points awarded for the financial offer made in accordance with F.3.11.7;
$N_P$ is the number of tender evaluation points awarded for preferences claimed in accordance with F.3.11.8.

c) Rank tender offers from the highest number of evaluation points to the lowest.
d) Recommend the tenderer with the highest number of tender evaluation points for the award of the contract, unless there are compelling and justifiable reasons not to do so.
e) Rescore and re-rank all tenderers should there be compelling and justifiable reasons not to recommend the tenderer with the highest number of tender evaluation points, and recommend the tenderer with the highest number of tender evaluation points, unless there are compelling and justifiable reasons not to do so and the process set out in the sub clause is repeated.

### F.3.11.4 Method 3: Financial offer and quality

In the case of a financial offer and quality:

a) Score each tender in respect of the financial offer made and the quality offered in accordance with the provisions of F.3.11.7 and F.3.11.9, rejecting all tender offers that fail to score the minimum number of points for quality stated in the tender data, if any
b) Calculate the total number of tender evaluation points ($T_{EV}$) in accordance with the following formula:

$$T_{EV} = N_{FO} + N_Q$$

Where: $N_{FO}$ is the number of tender evaluation points awarded for the financial offer made in accordance with F.3.11.7;
$N_Q$ is the number of tender evaluation points awarded for quality offered in accordance with F.3.11.9.

c) Rank tender offers from the highest number of evaluation points to the lowest.

d) Recommend the tenderer with the highest number of tender evaluation points for the award of the contract, unless there are compelling and justifiable reasons not to do so.
e) Rescore and re-rank all tenderers should there be compelling and justifiable reasons not to recommend the tenderer with the highest number of tender evaluation points, and recommend the tenderer with the highest number of tender evaluation points, unless there are compelling and justifiable reasons not to do so and the process set out in the sub clause is repeated.

**F.3.11.5 Method 4: Financial offer, quality and preferences**

In the case of a financial offer, quality and preferences:

a) Score each tender in respect of the financial offer made and the quality offered in accordance with the provisions of F.3.11.7 and F.3.11.9, rejecting all tender offers that fail to score the minimum number of points for quality stated in the tender data, if any
b) Calculate the total number of tender evaluation points ($T_{EV}$) in accordance with the following formula:

$$T_{EV} = N_{FO} + N_P + N_Q$$

Where: $N_{FO}$ is the number of tender evaluation points awarded for the financial offer made in accordance with F.3.11.7;
$N_P$ is the number of tender evaluation points awarded for preference claimed in accordance with F.3.11.8.
$N_Q$ is the number of tender evaluation points awarded for quality offered in accordance with F.3.11.9.

c) Rank tender offers from the highest number of evaluation points to the lowest.
d) Recommend the tenderer with the highest number of tender evaluation points for the award of the contract, unless there are compelling and justifiable reasons not to do so.
e) Rescore and re-rank all tenderers should there be compelling and justifiable reasons not to recommend the tenderer with the highest number of tender evaluation points and recommend the tenderer with the highest number of tender evaluation points, unless there are compelling and justifiable reasons not to do so and the process set out in the sub clause is repeated.

**F.3.11.6 Decimal places**

Score financial offers, preferences and quality, as relevant, to two decimal places.

**F.3.11.7 Scoring Financial Offers**

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

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

where: $N_{FO}$ is the number of tender evaluation points awarded for the financial offer.
$W_1$ is the maximum possible number of tender evaluation points awarded for the financial offer as stated in the Tender Data.
A is a number calculated using the formula and option described in Table F.1 as stated in the Tender Data.

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

| Formula | Comparison aimed at achieving | Option 1[a] | Option 2[a] |
|---|---|---|---|
| 1 | Highest price or discount | $A = (1 + \frac{(P - P_m)}{P_m})$ | $A = P / P_m$ |
| 2 | Lowest price or percentage commission / fee | $A = (1 - \frac{(P - P_m)}{P_m})$ | $A = P_m / P$ |

[a] $P_m$ is the comparative offer of the most favourable comparative offer.

| | |
|---|---|
| P | is the comparative offer of the tender offer under consideration. |

**F.3.11.8 Scoring preferences**

Confirm that tenderers are eligible for the preferences claimed in accordance with the provisions of the tender data and reject all claims for preferences where tenderers are not eligible for such preferences. Calculate the total number of tender evaluation points for preferences claimed in accordance with the provisions of the tender data.

**F.3.11.9 Scoring quality**

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

Calculate the total number of tender evaluation points for quality using the following formula:
$N_Q = W_2 \times S_o / M_s$

where: $S_O$ is the score for quality allocated to the submission under consideration;
$M_s$ is the maximum possible score for quality in respect of a submission.
$W_2$ is the maximum possible number of tender evaluation points awarded for the quality as stated in the tender data

**F.3.12 Insurance provided by the employer**

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

**F.3.13 Acceptance of tender offer**

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

a) is not under restrictions, or has principals who are under restrictions, preventing participating in the employer's procurement,
b) can, as necessary and in relation to the proposed contract, demonstrate that he or she possesses the professional and technical qualifications, professional and technical competence, financial resources, equipment and other physical facilities, managerial capability, reliability, experience and reputation, expertise and the personnel, to perform the contract,
c) has the legal capacity to enter into the contract,
d) is not insolvent, in receivership, bankrupt or being wound up, has his affairs administered by a court or a judicial officer, has suspended his business activities, or is subject to legal proceedings in respect of any of the foregoing,
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.

**F.3.14 Prepare contract documents**

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

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

**F.3.15 Complete adjudicator's contract**

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

**F.3.16 Notice to unsuccessful tenderers**

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

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

**F.3.17 Provide copies of the contracts**

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

**F.3.18 Provide written reasons for actions taken**

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

# T2 Returnable Documents

## T2.1 List of Returnable Documents

The Tenderer must complete the following returnable documents and submit with the complete tender document.

| DOCUMENT REF. | DESCRIPTION | ACTION |
|---|---|---|
| **RETURNABLE SCHEDULES AND CERTIFICATES** | | |
| **A** | Proof of Registration on the National Treasury Centralised Supplier Database (CSD) | Attach |
| **B** | Proof of tax compliance status and a valid SARS PIN | Complete/ Attach |
| **C** | Bank Rating Letter | Complete/ Attach |
| **D** | BBBEE Verification Certificate. In case of Joint Venture (JV); B-BBEE must be SANAS approved | Attach |
| **FAILURE TO SUBMIT/FULLY COMPLETE THE BELOW DOCUMENTS WILL RENDER THE TENDER SUBMISSION NON-RESPONSIVE (COMPULSORY RETURNABLES)** | | |
| **E** | Certificate of Attendance at a Tender Site Meeting | Complete |
| **F** | Record of Addenda to Tender Documents (If applicable) | Complete |
| **G** | Amendments, Qualifications and Alternatives (If applicable) | Attach |
| **H** | Certificate of Authority for Signature | Complete |
| **I** | Copy Workmen's Compensation Registration Certificate (or proof of payment of contributions in terms of the Compensation for Occupational Injuries and Disease Act No. 130 of 1993) | Attach |
| **J** | Fully Completed MBD Forms: MBD2, MBD3.2, MBD3.3, MBD4, MBD5, MBD6.1, MBD7.1, MBD7.2, MBD7.3, MBD8, MBD9 | Complete |
| **K** | Municipal Declaration | Complete |
| **INFORMATION REQUIRED FOR EVALUATION PURPOSES** | | |
| **L** | Key Personnel | Attach |
| **M** | Qualifications and Relevant Experience of the Site Agent/Contracts Manager (Curriculum Vitae Format) | Attach |
| **N** | Qualifications and Relevant Experience of the Foreman (Curriculum Vitae Format) | Attach |
| **O** | Relevant Experience of the Safety Officer (Curriculum Vitae Format) | Attach |

| DOCUMENT REF. | DESCRIPTION | ACTION |
|---|---|---|
| **p** | Relevant Experience of the Plant Operator (Curriculum Vitae Format) | Attach |
| **Q** | Summary of Tendering Firms Experience (Similar Work and Environment) | Attach |
| **R** | Provisional Programme | Attach |
| **S** | Schedule of Plant and Equipment/Letter of Intent to Hire | Attach |
| **T** | Occupational Health & Safety Plan | Attach |
| **U** | Certified CIDB Grading Certificate | Attach |

## A: CENTRAL SUPPLIER DATABASE REGISTRATION NUMBER

**IMPORTANT NOTES:**

1. The following is an abstract from the Preferential Procurement Regulations 2001 promulgated with the Preferential Policy Framework Act No 5 of 2000:

**Central Supplier Database Registration Number**

## VALID CSD REPORT:

***[Valid CSD report to be attached to this page]***

## B: PROOF OF TAX COMPLIANCE STATUS AND A VALID SARS PIN

**IMPORTANT NOTES:**

1. The following is an abstract from the Preferential Procurement Regulations 2001 promulgated with the Preferential Policy Framework Act No 5 of 2000:

   "**Valid Tax clearance certificate / Central Supplier Database Registration Number**

   16. No contract may be awarded to a person who has failed to submit an original Tax Clearance Certificate from the South African Revenue Service ("SARS") certifying the taxes of that person to be in order or that suitable arrangement have been made with SARS."

2. The ST 5.1 form, Application for Tax Clearance Certificate (in respect of tenders), must be **completed by the tenderer in every detail and submitted to the Receiver of Revenue** where the tenderer is registered for income tax purposes. The Receiver of Revenue will then furnish the tenderer with a Tax Clearance Certificate that will be valid for 6 months from date of issue.

   Each party to a Consortium/Joint Venture/Sub-contractors must complete a separate Tax Clearance Certificate.

## TAX CLEARANCE CERTIFICATE / SARS PIN

***[Tax Clearance Certificate obtained/ PIN from SARS to be attached to this page]***

## C: BANK RATING AND CONFIRMATION OF BANKING DETAILS

Tenderers financial capacity to finance and undertake a contract of this nature will also be checked and consequently it is a requirement that the details below be provided.

| | | | | | | |
|---|---|---|---|---|---|---|
| NAME OF TENDERER | | | | | | |
| NAME OF ACCOUNT HOLDER AT BANK | | | | | | |
| TYPE OF ACOUNT (Please tick) | CURRENT/CHEQUE | | SAVINGS | | TRANSMISSION | |
| BANK | | | | | | |
| BRANCH NAME | | | | | | |
| ACCOUNT NUMBER | | | | | | |
| BRANCH CODE | | | | | | |
| BANK RANKING CODE | | | | | | |
| BANK TELEPHONE NO | | | | | | |
| BANK ADDRESS | | | | | | |
| | | | | | | |
| | | | | | | |
| NAME OF BANK MANAGER | | | | | | |
| TELEPHONE NUMBER | | | | | | |
| FAX NUMBER | | | | | | |
| NO OF YEARS ABOVE ACCOUNT HAS BEEN WITH BANK | | | | | | |
| CREDIT FACILITIES AVAILABLE (State Amount) | | | | | | |

SIGNATURE: .....…….. DATE: .....

*(of person authorised to sign on behalf of the Tenderer)*

## D: REGISTRATION CERTIFICATES OF AN ENTITY

### ENTITY REGISTRATION:

***[Important note to Tenderer: Registration Certificates for Companies, Close Corporations and Partnerships and ID documents for Sole Proprietors, must be inserted here. In the case of a Joint Venture, a copy of a duly signed Joint Venture Agreement clearly setting out the roles and responsibilities of the parties must be included with particular reference to the guarantees required in terms of the Contract Data. The Joint Venture Agreement must also clearly indicate how payment is to be effected to the entity and distributed to the parties]***

### CIDB REGISTRATION:

Tenderer's must also indicate their CIDB registration details in the space provided.
(*If not registered, attach proof that the enterprise can be registered with the CIDB within 10 days*)

| **Registered Name** | **Registration Number** |
|---|---|
| | |

### BBBEE CERTIFICATION:

The Tenderer must also attach hereto a certified copy of their B-BBEE Verification Certificate from a Verification Agency accredited by the South African Accreditation System (SANAS).

SIGNATURE: .....……..  DATE: .....
*(of person authorised to sign on behalf of the Tenderer)*

## E: CERTIFICATE OF ATTENDANCE AT CLARIFICATION MEETING

This is to certify that *(Tenderer)* ……..….

of (*address)*.....

.....……..... was represented by the person(s) named below at the compulsory meeting held for all tenderers on TBA

We acknowledge that the purpose of the meeting was to acquaint myself / ourselves with the site of the works and / or matters incidental to doing the work specified in the tender documents in order for me / 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 person(s) at the meeting is confirmed by the Employer's representative, namely:**

Name: …….. Signature: .....

Capacity: ……

## F: RECORD OF ADDENDA TO TENDER DOCUMENTS

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

| ADD. No. | DATE | TITLE OR DETAILS |
|---|---|---|
| 1 | | |
| 2 | | |
| 3 | | |
| 4 | | |
| 5 | | |

SIGNATURE: .....……..  DATE: ….....

*(of person authorised to sign on behalf of the Tenderer)*

## G: AMENDMENTS, QUALIFICATIONS AND ALTERNATIVES

(***This is not an invitation for amendments, deviations or alternatives*** *but should the Tenderer desire to make any departures from the provisions of this contract he shall set out his proposals clearly hereunder. The Employer will not consider any amendment, alternative offers or discounts unless forms (a), (b) and (c) have been completed to the satisfaction of the Employer*).

I / We herewith propose the amendments, alternatives and discounts as set out in the tables below:

**(a) AMENDMENTS**

| PAGE, CLAUSE OR ITEM NO | PROPOSED AMENDMENT |
|---|---|
| | |
| | |
| | |
| | |
| | |
| | |

***Notes****: (1) Amendments to the General and Special Conditions of Contract are not acceptable;*

*(2) The Tenderer must give full details of all the financial implications of the amendments and qualifications in a covering letter attached to his tender.*

**(b) ALTERNATIVES**

| PROPOSED ALTERNATIVE | DESCRIPTION OF ALTERNATIVE |
|---|---|
| | |
| | |
| | |
| | |
| | |

Notes: (1) Individual alternative items that do not justify an alternative tender, and an alternative offer for time for completion should be listed here.

(2) In the case of a major alternative to any part of the work, a separate Bill of Quantities, programme, etc, and a detailed statement setting out the salient features of the proposed alternatives must accompany the tender.

(3) Alternative tenders involving technical modifications to the design of the works and methods of construction shall be treated separately from the main tender offer.

**(c) DISCOUNTS**

| ITEM ON WHICH DISCOUNT IS OFFERED | DESCRIPTION OF DISCOUNT OFFERED |
|---|---|
| | |
| | |
| | |
| | |
| | |
| | |

***Note:*** The tenderer must give full details of the discounts offered in a covering letter attached to his tender, failing which, the offer will be prejudiced

SIGNATURE: .....……..…….. DATE: …….....
*(of person authorised to sign on behalf of the Tenderer)*

## H: CERTIFICATE OF AUTHORITY FOR SIGNATURE OF AN ENTITY

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.

| (I) Company | (II) Close Corporation | (III) Partnership | (IV) Joint Venture | (V) Sole Proprietor |
|---|---|---|---|---|
| | | | | |

### (I) CERTIFICATE FOR COMPANY

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

**Signature of Chairman**: .....

**Signature of Signatory**: .....

**As Witnesses**:

1..... Name in Block Letters.....

2..... Name in Block Letters.....

**Date:** .....

**(II) CERTIFICATE FOR CLOSE CORPORATION**

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

.....hereby authorise Mr/Ms .....

acting in the capacity of ....., to sign all documents

in connection with the tender for Contract No ..... and any contract resulting from it on our behalf.

**Signature of Signatory**: .....

**As Witnesses**:

1..... Name in Block Letters.....

2..... Name in Block Letters.....

**Date:** .....

| NAME | ADDRESS | SIGNATURE | DATE |
|---|---|---|---|
| | | | |
| | | | |
| | | | |
| | | | |

***Note: This certificate is to be completed and signed by all of the key members upon whom rests the direction of the affairs of the Close Corporation as a whole.***

**(III) CERTIFICATE FOR PARTNERSHIP**

We, the undersigned, being the key partners in the business trading as,

.....hereby authorise

Mr/Ms…..... …… acting in the capacity of

....., to sign all documents in connection

with the tender for Contract No ..... and any contract resulting from it on our behalf.

**Signature of Signatory**: .....

**As Witnesses**:

1..... Name in Block Letters.....

2..... Name in Block Letters.....

**Date:** .....

| NAME | ADDRESS | SIGNATURE | DATE |
|---|---|---|---|
| | | | |
| | | | |
| | | | |
| | | | |

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

**(IV) CERTIFICATE FOR JOINT VENTURE**

We, the undersigned, are submitting this tender offer in Joint Venture and hereby authorize

Mr/Ms....., authorized signatory of the company,

……..…….....acting in the capacity of lead partner, to sign all documents in

connection with the tender offer for Contract No .....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.

**Signature of Signatory**: .....

**As Witnesses**:

1..... Name in Block Letters.....

2..... Name in Block Letters.....

**Date:** .....

| NAME OF FIRM | ADDRESS | AUTHORISING SIGNATURE, NAME AND CAPACITY |
|---|---|---|
| **Lead partner** | | |
| | | |
| | | |

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

**(V) CERTIFICATE FOR SOLE PROPRIETOR**

I....., hereby confirm that I am the sole owner of the Business trading as:

**Signature of Sole owner**: .....

**As Witnesses**:

1..... Name in Block Letters.....

2..... Name in Block Letters.....

**Date:** .....

## I: WORKMANS' COMPENSATION REGISTRATION CERTIFICATE (OR PROOF OF PAYMENT OF CONTRIBUTIONS IN TERMS OF THE COMPENSATION FOR OCCUPATIONAL INJURIES AND DISEASES ACT NO. 130 OF 1993)

***[Certified Copy of the Certificate or Proof of Payment thereof obtained from the Workmen's Compensation Commissioner to be inserted here]***

## J: RETURNABLE SCHEDULE REQUIRED ONLY FOR TENDER EVALUATION PURPOSES, FORMS (MBD Forms)

| | |
|---|---|
| **MBD2:** | Tax Clearance Certificate Requirements |
| **MBD3:** | Pricing Schedule-Non-firm prices |
| **MBD4:** | Declaration of Interest |
| **MBD5:** | Declaration for procurement above R10m (all applicable taxes included) |
| **MBD6.1:** | Preference Points claim form in terms of the preferential procurement regulations 2011 |
| **MBD7.1:** | Contract form-purchase of goods/works |
| **MBD7.2:** | Contract Form-rendering of services |
| **MBD7.3:** | Contract Form-Sale of Goods/Works |
| **MBD8:** | Declaration of bidder's past Supply Chain Management Practices |
| **MBD9:** | Certificate of Independent bid determination |

**MBD 2**

## TAX CLEARANCE CERTIFICATE REQUIREMENTS

**It is a condition of bid that the taxes of the successful bidder must be in order, or that satisfactory arrangements have been made with South African Revenue Service (SARS) to meet the bidder's tax obligations.**

1. In order to meet this requirement bidders are required to complete in full the attached form TCC 001 "Application for a Tax Clearance Certificate" and submit it to any SARS branch office nationally. The Tax Clearance Certificate Requirements are also applicable to foreign bidders / individuals who wish to submit bids.

2. SARS will then furnish the bidder with a Tax Clearance Certificate that will be valid for a period of 1 (one) year from the date of approval.

3. The Tax Clearance Certificate must be submitted together with the bid. Failure to submit the Tax Clearance Certificate will result in the invalidation of the bid.

4. In bids where Consortia / Joint Ventures / Sub-contractors are involved, each party must submit a separate Tax Clearance Certificate.

5. Copies of the TCC 001 "Application for a Tax Clearance Certificate" form are available from any SARS branch office nationally or on the website www.sars.gov.za.

6. Applications for the Tax Clearance Certificates may also be made via eFiling. In order to use this provision, taxpayers will need to register with SARS as eFilers through the website www.sars.gov.za.

## MBD 4

## DECLARATION OF INTEREST

1. No bid will be accepted from persons in the service of the state:
2. Any person or having kinship with a person in the service of state, or persons who act on behalf of Nkomazi Local Municipality, including a blood relationship, may make an offer or offers in terms of this bid invitation. In view of possible allegations of favouritism or bias, should the resulting bid, or part thereof, be awarded to persons employed by State, or to persons who act on behalf of Nkomazi Local Municipality, or to persons connected with or related to them, it is required that the bidder or his authorised representative shall declare any interest of whatever nature and/or relationship (including blood relationship) to any employees, or persons who act on behalf of, or persons connected with or related to Nkomazi Local Municipality.

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

1.1. Full Name of the bidder or his representative:……

1.2. Identify Number: ……

1.3. Position occupied in the Company (director, trustee shareholder): ……

1.4. Company Reference Number: ……

1.5. Tax Reference Number: ……

1.6. VAT Registration Number: ……

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

1.8. Are you presently in the service of the state? YES/NO

3.8.1 If yes, 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

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

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

If yes, furnish particulars: ……

……

1.10. Do you, have any relationship (family, friend, other) with a person employed by state/Nkomazi Local municipality, who may be involved in the evaluation and adjudication of this bid?

*YES / NO



| BID NO: | NKO:41/2026 | INITIALS | |
|---|---|---|---|

3.10.1 If yes, furnish particulars:

……

……

1.11. Are you, aware of any relationship (family, friend, other) between the bidder and any person employed by state/Nkomazi Local Municipality, who may be involved in the evaluation and adjudication of this bid?

*YES / NO

3.11.1 If yes, furnish particulars:

……
……

1.12. Are any of the company's directors, trustees, managers, principle shareholders or stakeholders in the service of state?

3.12.1 If yes, furnish particulars. YES/NO

……

……

1.13. Are any spouses, child or parent of the company's directors trustees, managers, principle shareholders or stakeholders in service of state?

YES/NO

13.13.1 If yes, furnish particulars.

……

……

13.14 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.
13.14.1 If yes, furnish particulars.

…… YES/NO

……

2. Full details of directors. Trustees/ members/ shareholders.

| Full Name | Position filled in the "State" | ID number | State employee number |
|---|---|---|---|
| | | | |
| | | | |
| | | | |
| | | | |

…… …… ……
Signature Bid Number Date

…… ……..
Capacity Name of the Company



| BID NO: | NKO:41/2026 | INITIALS | |
|---|---|---|---|

**MBD 5**

**DECLARATION FOR PROCUREMENT ABOVE R10 MILLION (ALL APPLICABLE TAXES INCLUDED)**

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

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

1.1 If yes, submit audited annual financial statements for the past three years or since the date of establishment if established during the past three years. *YES / NO

……

……

2. Do you have any outstanding undisputed commitments for? municipal services towards any municipality for more than three months or any other service provider in respect of which payment is overdue for more than 30 days?

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

2.2 If yes, provide particulars.

……

…….

…….

……..

* Delete if not applicable

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



| BID NO: | NKO:41/2026 | INITIALS | |
|---|---|---|---|

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, THE UNDERSIGNED (NAME) ……**

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

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

…….. ……..
Signature Date

…….... …….
Position Name of Bidder

**MBD 6.1**

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

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

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

### 1. GENERAL CONDITIONS

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

- the 80/20 system for requirements with a Rand value of up to R50 000 000 (all applicable taxes included)

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

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

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

(a) Price; and

(b) Specific Goals.

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

The maximum points for this tender are allocated as follows:

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

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

1.6 The organ of state reserves the right to require of a tenderer, either before a tender is adjudicated

or at any time subsequently, to substantiate any claim in regard to preferences, in any manner required by the organ of state.

**2. DEFINITIONS**

(a) **"tender"** means a written offer in the form determined by an organ of state in response to an invitation to provide goods or services through price quotations, competitive tendering process or any other method envisaged in legislation;

(b) **"price"** means an amount of money tendered for goods or services, and includes all applicable taxes less all unconditional discounts;

*(c)* **"rand value"** means the total estimated value of a contract in Rand, calculated at the time of bid invitation, and includes all applicable taxes;

(d) **"tender for income-generating contracts"** means a written offer in the form determined by an organ of state in response to an invitation for the origination of income-generating contracts through any method envisaged in legislation that will result in a legal agreement between the organ of state and a third party that produces revenue for the organ of state, and includes, but is not limited to, leasing and disposal of assets and concession contracts, excluding direct sales and disposal of assets through public auctions; and

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

**3. FORMULAE FOR PROCUREMENT OF GOODS AND SERVICES**

3.1. **POINTS AWARDED FOR PRICE**

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

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

**80/20**

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

Where

Ps = Points scored for price of tender under consideration

Pt = Price of tender under consideration

Pmin = Price of lowest acceptable tender

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

3.2.1. **POINTS AWARDED FOR PRICE**

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

**80/20**

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

Where

Ps = Points scored for price of tender under consideration

Pt = Price of tender under consideration

Pmax = Price of highest acceptable tender

## 4. POINTS AWARDED FOR SPECIFIC GOALS

4.1. In terms of Regulation 4(2); 5(2); 6(2) and 7(2) of the Preferential Procurement Regulations, preference points must be awarded for specific goals stated in the tender. For the purposes of this tender the tenderer will be allocated points based on the goals stated in table 1 below as may be supported by proof/ documentation stated in the conditions of this tender:

4.2. In cases where organs of state intend to use Regulation 3(2) of the Regulations, which states that, if it is unclear whether the 80/20 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 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 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 the 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 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.*)**

| **POINTS FOR CONTRACTING AN ENTERPRISE OWNED BY HISTORICALLY DISADVANTAGED PERSONS OR INDIVIDUALS** | | |
|---|---|---|
| A total of 8 preference points shall be allocated on a proportional or pro rata basis for contracting an enterprise owned by historically disadvantaged persons or individuals who meet the following requirements - | | |
| **HISTORICALLY DISADVANTAGED PERSONS OR INDIVIDUALS** | **POINTS ALLOCATION** | **SOURCE DOCUMENTS REQUIRED TO CLAIM POINTS** |
| 100% black person or people owned enterprise | **2** | A copy of a ***Full CSD report*** not older than 3 months |
| More than 30% woman or women shareholding or owned enterprise | **2** | |
| more than 30% youth shareholding or owned enterprise | **2** | |
| More than 30% people living with disability shareholding or owned enterprise | **2** | A copy of a Medical Certificate to confirm disability |

| **POINTS FOR IMPLEMENTING OF RDP PROGRAMMES** | | |
|---|---|---|
| A total of 12 preference points shall be allocated on a proportional or pro rata basis for implementing of programmes for RDP - | | |
| Enterprises regarded as ***EMEs located within** the Ehlanzeni District Municipality area of jurisdiction | **2** | ➢ A copy of a Full CSD report not older than 3 months<br>**NB:** Points will only be awarded if the CSD physical address is the same as the address for the proof of residence required in 1.9 above. |
| Enterprise who will sub-contract minimum of 30% of the contract value to EMEs in the ward or local communities where the services of work to be rendered will be undertaken; | **2** | ➢ Joint venture requirements as per the tender document and all relevant legislations pertaining to join ventures |
| Points for Corporate Social Investment (CSI) or Social Labour Plan proposition | **5** | Comprehensive Methodology on how the tenderer is planning to invest back to the community of Nkomazi Local Municipality:<br>• Community development grounded on the principles of empowerment, social justice, collective action to mention but a few.<br>• These undertakings shall form part of the service level agreements SLA and be managed as such. |
| Points for valid B-BBEE level 1 contribution (SANAS accredited B-BBEE certificate for generic enterprise, and for EME and SME a sworn affidavit or CIPC issued certificate confirming annual turnover and level of Black Ownership). | **3** | ➢ Certified Valid BBBEE certificate<br>➢ or Certified Valid EME and SME a sworn affidavit<br>➢ or Certified Valid CIPC issued certificate confirming annual turnover and level of Black Ownership |
| **TOTAL PREFERENCE POINTS TO BE CLAIMED** | **20** | |

**All certified copies must not be older than three months**.

**TENDERER'S MUST SCORE A MINIMUM OF 70 POINTS IN ORDER FOR THE BID TO BE ELIGIBLE IN TERMS OF F.2.1 (e).**

**TECHNICAL EVALUATION CRITERIA**

| Criterion | Assessment | Points Awarded | Max Score |
|---|---|---|---|
| Construction Team Key Personnel<br>(Forms L, M, N, O,P,Q)<br>Certification of all credentials for critical personnel is mandatory. An uncertified copy of the qualifications will not be accepted, and a copy of the CV must be included. | Contract manager has Certified BEng/B-Tech in Civil Engineering NQF 7 or higher (4); NQF 7 (Labour Intensive) Qualification (2); Minimum of Ten years' experience managed 6 bulk water and water reticulation projects (4). | 10 | 30 |
| | Site Agent has Certified BEng/B-Tech in Civil Engineering NQF 7 or higher (4); NQF 5 (Labour Intensive) Qualification (1); Minimum of 6 years' experience managed 4 bulk water and water reticulation projects (3) | 08 | |
| | General Foreman has Certified ND in Civil Engineering NQF 6 or higher (2); Minimum of 5 years' experience managed 3 bulk water and water reticulation projects (2). | 04 | |
| | Health and Safety Officer with a Certified relevant NQF 5 safety qualification (2); Registered with the SACPCMP as a construction health and safety officer (1) and Minimum of 3 years' experience managing projects (1) | 04 | |
| | Plant Operator with a Certified relevant trade certificate (2); Three years' experience (2).<br><br>**DISCLAIMER: The key personnel proposed by the Contractor in the completed tender submission shall be deemed committed to the Contract. No substitution or replacement of such personnel shall be made without prior written notification to and approval by the Engineer. The Contractor shall provide full motivation for the proposed change together with the qualifications and experience of the proposed replacement. Replacement personnel shall have qualifications, experience and competency equal to or greater than those originally tendered**. | 04 | |
| Experience of similar work and environment<br>(Form P) | Company Experience of similar work in the past 7 years;<br>(12.5 point for each similar successfully completed project with value of R30 million and above).<br><br>6.5 points for each similar completed project with value of R15 Million to R29 million)<br><br>4 points for each similar completed project with value of R7 to R14 million)<br><br>0 point for each similar completed project with value of R0 to R6.9 million) | 12.5<br><br>8.5<br><br>04<br><br>0 | 50 |



| BID NO: | NKO:41/2026 | INITIALS | |
|---|---|---|---|

| | | | |
|---|---|---|---|
| | **Tenderers are required to attach certified appointment letters and their corresponding completion certificates. Failure to attach both appointment letter and completion certificate will result in zero points being awarded** | | |
| Company financial Capacity (Form C) | Bank Rating of:<br>C or better - 5;<br>D - 3;<br>E or Lower - 0; | | 05 |
| Plant and Equipment<br>(Form R) | 2X TLB (Own/Hired) – 3<br>2X Excavators - (Own/Hired) – 8<br>Water Tanker (Own/Hired) – 2<br>Plate Compactor - (Own/Hired) – 2 | | 15 |
| **MAXIMUM SCORE:** | | | **100** |

1. **DECLARATION WITH REGARD TO COMPANY/FIRM**

1.1 Name of company/firm…….

1.2 Company registration number: ……...

TYPE OF COMPANY/ FIRM [TICK APPLICABLE BOX]

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

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

i) The information furnished is true and correct;

ii) The preference points claimed are in accordance with the General Conditions as indicated in paragraph 1 of this form;

iii) In the event of a contract being awarded as a result of points claimed, as shown in paragraphs 1.4 and 4.2, the contractor may be required to furnish documentary proof to the satisfaction of the organ of state that the claims are correct;

iv) If the specific goals have been claimed or obtained on a fraudulent basis or any of the conditions of the contract have not been fulfilled, the organ of state may, in addition to any other remedy it may have –

(a) disqualify the person from the tendering process;

(b) recover costs, losses or damages it has incurred or suffered as a result of that person's conduct;

(c) cancel the contract and claim any damages which it has suffered as a result of having to make less favourable arrangements due to such cancellation;

(d) recommend that the tenderer or contractor, its shareholders and directors, or only the shareholders and directors who acted on a fraudulent basis, be restricted from obtaining business from any organ of state for a period not exceeding 10 years after the *audi alteram partem* (hear the other side) rule has been applied; and

(e) forward the matter for criminal prosecution, if deemed necessary.

……
**SIGNATURE(S) OF TENDERER(S)**

**SURNAME AND NAME**: ……

**DATE:** ……

**ADDRESS**: ……

……

……

**MBD 7.1**

## CONTRACT FORM - PURCHASE OF GOODS/WORKS

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

### PART 1 (TO BE FILLED IN BY THE BIDDER)

1. I hereby undertake to supply all or any of the goods and/or works described in the attached bidding documents to (name of institution)…….…… in accordance with the requirements and specifications stipulated in bid number……..…….. at the price/s quoted. My offer/s remain binding upon me and open for acceptance by the purchaser during the validity period indicated and calculated from the closing time of bid.

2. The following documents shall be deemed to form and be read and construed as part of this agreement:

(i) Bidding documents, *viz*

- Invitation to bid;
- 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 2011;
- Declaration of interest;
- Declaration of bidder's past SCM practices;
- Certificate of Independent Bid Determination;
- Special Conditions of Contract;

(ii) General Conditions of Contract; and

(iii) Other (specify)

3. I confirm that I have satisfied myself as to the correctness and validity of my bid; that the price(s) and rate(s) quoted cover all the goods and/or works specified in the bidding documents; that the price(s) and rate(s) cover all my obligations and I accept that any mistakes regarding price(s) and rate(s) and calculations will be at my own risk.

4. I accept full responsibility for the proper execution and fulfilment of all obligations and conditions devolving on me under this agreement as the principal liable for the due fulfillment of this contract.

5. I declare that I have no participation in any collusive practices with any bidder or any other person regarding this or any other bid.

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

NAME (PRINT) ……

PACITY ……

SIGNATURE ……

NAME OF FIRM ……

DATE ……

WITNESSES

1 ……..……

2. ……

DATE: …….



| BID NO: | NKO:41/2026 | INITIALS | |
|---|---|---|---|

**MBD 7.1**

## CONTRACT FORM - PURCHASE OF GOODS/WORKS

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

1. I…… in my capacity as……..…..
accept your bid under reference number ……dated…….for the supply of goods/works indicated hereunder and/or further specified in the annexure(s).

2. An official order indicating delivery instructions is forthcoming.

3. I undertake to make payment for the goods/works delivered in accordance with the terms and conditions of the contract, within 30 (thirty) days after receipt of an invoice accompanied by the delivery note.

| ITEM NO. | PRICE (ALL APPLICABLE TAXES INCLUDED) | BRAND | DELIVERY PERIOD | B-BBEE STATUS LEVEL OF CONTRIBUTION | MINIMUM THRESHOLD FOR LOCAL PRODUCTION AND CONTENT (if applicable) |
|---|---|---|---|---|---|
| | | | | | |

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

SIGNED AT ……ON……..

NAME (PRINT) …….

SIGNATURE …….

OFFICIAL STAMP

WITNESSES

1. ……

2. ……

DATE: ……

**MBD 7.2**

## CONTRACT FORM - RENDERING OF SERVICES

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

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

1. I hereby undertake to render services described in the attached bidding documents to (name of the institution)…… in accordance with the requirements and task directives / proposals specifications stipulated in Bid Number…….. at the price/s quoted. My offer/s remain binding upon me and open for acceptance by the Purchaser during the validity period indicated and calculated from the closing date of the bid.

2. The following documents shall be deemed to form and be read and construed as part of this agreement:

(iv) Bidding documents, *viz*
- Invitation to bid;
- Tax clearance certificate;
- Pricing schedule(s);
- Filled in task directive/proposal;
- Preference claims for Broad Based Black Economic Empowerment Status Level of Contribution in terms of the Preferential Procurement Regulations 2011;
- Declaration of interest;
- Declaration of Bidder's past SCM practices;
- Certificate of Independent Bid Determination;
- Special Conditions of Contract;

(v) General Conditions of Contract; and
(vi) Other (specify)

3. I confirm that I have satisfied myself as to the correctness and validity of my bid; that the price(s) and rate(s) quoted cover all the services specified in the bidding documents; that the price(s) and rate(s) cover all my obligations and I accept that any mistakes regarding price(s) and rate(s) and calculations will be at my own risk.

4. I accept full responsibility for the proper execution and fulfilment of all obligations and conditions devolving on me under this agreement as the principal liable for the due fulfillment of this contract.

5. I declare that I have no participation in any collusive practices with any bidder or any other person regarding this or any other bid.

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

NAME (PRINT) …….

CAPACITY …….

SIGNATURE …….

NAME OF FIRM …….

DATE …….

WITNESSES

1 ……

2 ……

DATE: ……..



| BID NO: | NKO:41/2026 | INITIALS | |
|---|---|---|---|

**MBD 7.2**

## CONTRACT FORM - RENDERING OF SERVICES

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

1. I……. in my capacity as……..…… accept your bid under reference number ……dated……for the rendering of services indicated hereunder and/or further specified in the annexure(s).

2. An official order indicating service delivery instructions is forthcoming.

3. I undertake to make payment for the services rendered in accordance with the terms and conditions of the contract, within 30 (thirty) days after receipt of an invoice.

| DESCRIPTION OF SERVICE | PRICE (ALL APPLICABLE TAXES INCLUDED) | COMPLETION DATE | B-BBEE STATUS LEVEL OF CONTRIBUTION | MINIMUM THRESHOLD FOR LOCAL PRODUCTION AND CONTENT (if applicable) |
|---|---|---|---|---|
| | | | | |

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

SIGNED AT …… ON ……..

NAME (PRINT) ……

SIGNATURE ……

OFFICIAL STAMP

WITNESSES

1 ……

2 ……

DATE: ……..

**MBD 7.3**

## CONTRACT FORM - SALE OF GOODS/WORKS

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

## PART 1 (TO BE FILLED IN BY THE BIDDER)

1. I hereby undertake to purchase all or any of the goods and/or works described in the attached bidding documents from (name of institution)…….…..…… in accordance with the requirements stipulated in (bid number)……..…….. at the price/s quoted. My offer/s remain binding upon me and open for acceptance by the seller during the validity period indicated and calculated from the closing time of bid.

2. The following documents shall be deemed to form and be read and construed as part of this agreement:

(vii) Bidding documents, *viz*
- Invitation to bid;
- Tax clearance certificate;
- Pricing schedule(s);
- Declaration of interest;
- Declaration of Bidder's past SCM practices;
- Special Conditions of Contract;

(viii) General Conditions of Contract; and

(ix) Other (specify)

3. I confirm that I have satisfied myself as to the correctness and validity of my bid; that the price(s) quoted cover all the goods and/or works specified in the bidding documents; that the price(s) cover all my obligations and I accept that any mistakes regarding price(s) and calculations will be at my own risk.

4. I accept full responsibility for the proper execution and fulfilment of all obligations and conditions devolving on me under this agreement as the principal liable for the due fulfillment of this contract.

5. I undertake to make payment for the goods/works as specified in the bidding documents.

6. I declare that I have no participation in any collusive practices with any bidder or any other person regarding this or any other bid.

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

NAME (PRINT) ……

CAPACITY ……

SIGNATURE ……

NAME OF FIRM ……

DATE ……

WITNESSES

1. ……

2. ……..

DATE:……..



| BID NO: | NKO:41/2026 | INITIALS | |
|---|---|---|---|

**MBD 7.3**

## CONTRACT FORM - SALE OF GOODS/WORKS

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

4. I…… in my capacity as……..…..
accept your bid under reference number ……dated……for the purchase of goods/works indicated hereunder and/or further specified in the annexure(s).

5. I undertake to make the goods/works available in accordance with the terms and conditions of the contract.

| ITEM NO. | DESCRIPTION | PRICE (ALL APPLICABLE TAXES INCLUDED) | | |
|---|---|---|---|---|
| | | | | |

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

SIGNED AT ……ON……..

NAME (PRINT) …….

SIGNATURE …….

OFFICIAL STAMP

WITNESSES

3. …….

4. …….

DATE …….

**MBD 8**

## DECLARATION OF BIDDER'S PAST SUPPLY CHAIN MANAGEMENT PRACTICES

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

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

3 The bid of any bidder may be disregarded if that bidder, or any of its directors have-

a. abused the institution's supply chain management system;
b. committed fraud or any other improper conduct in relation to such system; or
c. failed to perform on any previous contract.

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

| Item | Question | Yes | No |
|---|---|---|---|
| 4.1 | Is the bidder or any of its directors listed on the National Treasury's Database of Restricted Suppliers as companies or persons prohibited from doing business with the public sector?<br>(Companies or persons who are listed on this Database were informed in writing of this restriction by the Accounting Officer/Authority of the institution that imposed the restriction after the *audi alteram partem* rule was applied).<br><br>**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)?<br>**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 outside of 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 | Was any contract between the bidder and any organ of state terminated during the past five years on account of failure to perform on or comply with the contract? | Yes ☐ | No ☐ |
| 4.4.1 | If so, furnish particulars: | | |

**CERTIFICATION**

**I, THE UNDERSIGNED (FULL NAME)……**

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

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

**……...** **……..**

**Signature** **Date**

**……** **……..**

**Position** **Name of Bidder**

**MBD 9**

## CERTIFICATE OF INDEPENDENT BID DETERMINATION

1 This Standard Bidding Document (SBD) must form part of all bids[1] 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 *pe se* prohibition meaning that it cannot be justified under any grounds.

3 Treasury Regulation 16A9 prescribes that accounting officers and accounting authorities must take all reasonable steps to prevent abuse of the supply chain management system and authorizes accounting officers and accounting authorities to:

a. disregard the bid of any bidder if that bidder, or any of its directors have abused the institution's supply chain management system and or committed fraud or any other improper conduct in relation to such system.

b. cancel a contract awarded to a supplier of goods and services if the supplier committed any corrupt or fraudulent act during the bidding process or the execution of that contract.

4 This SBD 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 (SBD 9) 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.**

**MBD 9**

## 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:

_____

(Name of Institution)

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)

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 or not 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 consortium[3] 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.

…… ……

Signature Date

…… ……

Position Name of Bidder

2

**[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.**

| AUTHORISATION CERTIFICATE | T 8 |
|---|---|

1. I/We hereby bid to supply all or any of the supplies and/or to bid all or any of the services as described and required in the bid documentation to Nkomazi Local Municipality, on the terms and conditions and in accordance with the specifications as stipulated in the bid documentation (which bid documentation shall be taken as part of, and incorporated into, this bid) at the prices and delivery periods as required therein.

2. I/We agree that –
   the offer herein contained shall remain binding on me/us and open for acceptance by Nkomazi Local Municipality during the validity period indicated in the bid documentation, which period shall be calculated from the closing time of the bid;

3. this bid and its acceptance shall be subject to the Standard Terms and Conditions of Bid [T 5] which are contained in this bid documentation and with which contents I am/we are fully acquainted with;

4. if I/we withdraw my/our bid within the validity period of the bid for which I/we have agreed that the bid shall remain open for acceptance, or fail to fulfil the contract when called upon to do so, Nkomazi Local Municipality may, without prejudice to any other remedies at its disposal, agree to the withdrawal or cancellation of the bid or contract that may have been entered into and I/we will then pay to Nkomazi Local Municipality any additional expense incurred by Nkomazi Local Municipality having to either accept any less favourable bid, or if fresh bids have to be invited, the additional expenditure incurred by the invitation of fresh bids and by the subsequent acceptance of any less favourable bid;

5. if my/our bid is accepted the acceptance may be communicated to me/us by letter by ordinary post or registered post and that the Post Office shall be regarded as my/our agent, and delivery of such acceptance to the Post Office shall be treated as a delivery to me/us;

6. The law of the Republic of South Africa shall govern the contract created by the acceptance of my/our bid and that I/we choose our *domicilium citandi et executandi* in the Republic at:

   ……

7. I/We furthermore confirm that I/we have satisfied myself/ourselves as to the correctness and validity of my/our bid and that the prices and scope of work bided cover all my/our obligations in terms of the bid documentation and that I/we accept that any mistakes regarding prices or calculations will be at my/our risk.

8. I/We hereby accept full responsibility for the proper execution and due fulfilment of all obligations and conditions devolving on me/us under this contract as the principal bidder liable for the contract.

9. I/We agree that any action arising from this contract may in all respects be instituted against me/us and I/we hereby undertake to satisfy fully any judgment obtained against me/us as a result of such action.

Signature …… Tender/Bid no……..

Capacity ……..

Duly authorised to sign on behalf of

……...

## K: MUNICIPAL DECLARATION AND RETURNABLE DOCUMENTS

The following particulars must be furnished in relation to tenders for municipalities and municipal entities where:

a) consultancy services are required; and

b) goods, services or a combination thereof where the estimated total of the prices exceeds R 10 million including VAT.

In the case of a joint venture, separate municipal declarations and returnable documents shall be submitted in respect of each partner.

**Section 1: Enterprise Details**

| | |
|---|---|
| **Name of enterprise:** | |
| **Contact person:** | |
| **Email:** | |
| **Telephone:** | |
| **Cell no** | |
| **Fax:** | |
| **Physical address** | |
| **Postal address** | |

**Section 2: Declaration for consultancy services:**

The enterprise has been awarded the following consultancy services by an organ of state during the last five years.

| **Name of organ of state** | **Estimated number of contracts** | **Nature of service, e,g, quantity surveying** | **Service similar to required service (yes / no) ?** |
|---|---|---|---|
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |

Attach separate page as necessary

**Section 3 Goods, services or a combination thereof where the estimated total of the prices exceeds R 10 million including VAT**

I / we certify that

1) *(tick one of the boxes):*

□ the enterprise **is not** required by law to prepare annual financial statements for auditing

□ the enterprise **is** required by law to have audited annual financial statements and attached the audited financial statements for the past three financial years, or since the establishment as the enterprise was established within the past three years.

2) the enterprise and its directors has / have 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 *(ie: all municipal accounts are paid up to date)*;

3) source of goods and / or services :

*(tick one of the boxes and insert percentages if applicable):*

□ goods and / or services are sourced only from within the Republic of South Africa

□ [ ] % of the total cost of goods and / or services will be sourced from outside the Republic of South Africa and the percentage of payment from the municipality or municipal entity which is expected to be transferred out of the Republic is [ ] %

I furthermore confirm that the following contracts were awarded to the enterprise by an organ of state during the last five years and attached particulars of any material non-compliance or dispute concerning the execution of such contracts:

| **Name of organ of state** | **Estimated number of contracts** | **Nature of contracts** |
|---|---|---|
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |

Attach separate page as necessary

I, the undersigned who warrants that I am duly authorised on behalf of the tendering entity, hereby declare that the contents of this Declaration are within my personal knowledge, and save where stated otherwise are to the best of my belief both true and correct

Signed ..... Date _____

Name ..... Position _____

*Enterprise name* _____

## L: KEY PERSONNEL

In terms of the Project Specification, all unskilled workers are to be locally sourced.

**The Tenderer shall list below the personnel which he intends to utilize on the Works, including key personnel which may have to be brought in from outside if not available locally.**

| Category of Employee | Number of Persons | | | | | |
|---|---|---|---|---|---|---|
| | Key Personnel, Part of the Contractor's Organisation | | Key Personnel to be imported if not available locally | | Unskilled Personnel to be recruited from local community | |
| | PDI | NON-PDI | PDI | NON-PDI | PDI | NON-PDI |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |

SIGNATURE: .....…... DATE: ….....
*(of person authorised to sign on behalf of the Tenderer)*

## M: CURRICULUM VITAE OF KEY PERSONNEL –CONTRACTS MANAGER

The success of this project will largely depend on the ability of the **Key Personnel** to manage local resources that are largely unskilled. The Tenderer must indicate who they intend using for this function and must list the incumbent's experience.

**Failure to provide proof of a suitable candidate to manage the work on a permanent basis on site during the currency of the contract will result in dis-qualification in terms of Clause F.2.1.**

| **Site Agent / Contracts Manager:** | **Years with firm:** |
|---|---|
| **Qualifications:** | |
| | |
| **Employment Record:** | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| **Experience Record Pertinent to Required Service:**<br><br>**(Indicate no of years' experience)** | |
| | |
| | |
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| | |
| | |

SIGNATURE: .....…... DATE: ….....
*(of person authorised to sign on behalf of the Tenderer)*

## N: CURRICULUM VITAE OF KEY PERSONNEL – SITE AGENT

| **Site Agent:** | **Years with firm:** |
|---|---|
| **Qualifications:** | |
| | |
| **Employment Record:** | |
| | |
| | |
| | |
| | |
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| | |
| | |
| | |
| **Experience Record Pertinent to Required Service:**<br>**(Indicate no of years' experience)** | |
| | |
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| | |

SIGNATURE: .....…….. DATE: ….....

*(of person authorised to sign on behalf of the Tenderer)*

## O: CURRICULUM VITAE OF KEY PERSONNEL – FOREMAN

| **Foreman:** | **Years with firm:** |
|---|---|
| **Qualifications:** | |
| | |
| **Employment Record:** | |
| | |
| **Experience Record Pertinent to Required Service:**<br><br>**(Indicate no of years' experience)** | |

SIGNATURE: .....…... DATE: ….....
*(of person authorised to sign on behalf of the Tenderer)*

## P: CURRICULUM VITAE OF KEY PERSONNEL – PLANT OPERATOR

| **Foreman:** | **Years with firm:** |
|---|---|
| **Qualifications:** | |
| | |
| **Employment Record:** | |
| | |
| | |
| | |
| | |
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| | |
| **Experience Record Pertinent to Required Service:**<br>**(Indicate no of years' experience)** | |
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SIGNATURE: .....…... DATE: ….....

*(of person authorised to sign on behalf of the Tenderer)*

## Q: CURRICULUM VITAE OF KEY PERSONNEL – SAFETY OCFFICER

| **Foreman:** | **Years with firm:** |
|---|---|
| **Qualifications:** | |
| | |
| **Employment Record:** | |
| | |
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| | |
| **Experience Record Pertinent to Required Service:**<br>**(Indicate no of years' experience)** | |
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| | |

SIGNATURE: .....…... DATE: ….....

*(of person authorised to sign on behalf of the Tenderer)*

## R: SCHEDULE OF TENDERING FIRM'S EXPERIENCE (SIMILAR WORK AND ENVIRONMENT)

***[REFER TO THE TENDER DATA FOR THE SCOPE OF WORK)***

| PROJECT NAME | DESCRIPTION | VALUE | REFERENCE |
|---|---|---|---|
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |

SIGNATURE: .....……..…….. DATE: ….....
*(of person authorised to sign on behalf of the Tenderer)*

## S: PROVISIONAL PROGRAMME

The Tenderer shall detail below or attach a preliminary programme reflecting the proposed sequence and tempo of execution of the various activities comprising the work for this tender.

The programme must indicate all key activities, time frames and must clearly demonstrate the Tenderer's understanding of the scope of works.

The competency and clarity of the programme will help to inform the Employer's assessment of the Tenderer's eligibility to execute the contract.

**PROGRAMME**

**WEEKS / MONTHS**

**ACTIVITY**

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | |
| | | | | | | | | | | |
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SIGNATURE: .....……..…….. DATE: …….....
*(of person authorised to sign on behalf of the Tenderer)*



| BID NO: | NKO:41/2026 | INITIALS | |
|---|---|---|---|

## T: SCHEDULE OF PLANT AND EQUIPMENT

It is important that the Tenderer be able to demonstrate that he/she has adequate plant and equipment to efficiently execute the proposed scope of works.

**The Tenderer's response to this section will be used in assessing the eligibility of the tender offer.**

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

| Quantity | Description | Size | Capacity |
|---|---|---|---|
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |

Attach additional pages if more space is required.

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

| Quantity | Description | Size | Capacity |
|---|---|---|---|
| | | | |
| | | | |

Attach additional pages if more space is required.

SIGNATURE: .....…... DATE: ….....
*(of person authorised to sign on behalf of the Tenderer)*

## U: CONTRACTOR/SERVICE PROVIDER'S HEALTH AND SAFETY DECLARATION

In terms of the Occupational Health and Safety Act No 85 of 1993 a Contractor may only be appointed to perform key services if the *Purchaser* is satisfied that the Contractor has the necessary competencies and resources to carry out the work safely in accordance with the provisions of the Act.

To that effect a person duly authorised by the tenderer must complete and sign the declaration hereafter in detail.

**Declaration by Tenderer**

1. I the undersigned hereby declare and confirm that I am fully conversant with the Occupational Health and Safety Act No 85 of 1993 (as amended by the Occupational Health and Safety Amendment Act No 181 of 1993) herein after referred to as the "Act"

2. I hereby declare that my company has the competence and the necessary resources to safely carry out the services specified under this contract in compliance with the Employer's Health and Safety Specifications.

3. I propose to achieve compliance with the Regulations by one of the following:

| | | |
|---|---|---|
| (a) | From my own competent resources | ***Yes / No** |
| (b) | From my own resources still to be appointed or trained until competency is achieved | ***Yes / No** |
| (c) | From outside sources by appointment of competent specialist subcontractors | ***Yes / No** |

**(* = *delete whatever is not applicable*)**

4. I confirm that copies of my company's approved Health and Safety Plan, will at all times be available for inspection by the *Purchaser*'s personnel, Nkomazi Local Municipality officials and inspectors of the Department of Labour.

5. I hereby confirm that adequate provision has been made in my tendered rates and prices in the schedule of quantities to cover the cost of all resources, actions, training and all health and safety measures envisaged in the Act and that I will be liable for any penalties that may be applied for failure to comply with the provisions of the Act.

6. I agree that my failure to complete and execute this declaration to the satisfaction of the *Purchaser* will mean that I am unable to comply with the requirements of the Act and accept that my tender will be prejudiced and may as a result be rejected at the discretion of the *Purchaser*.

SIGNATURE: ..... DATE: .....…….....
(of person authorised to sign on behalf of the Tenderer)

## V: CERTIFIED CIDB GRADING CERTIFICATE

# CONTRACT

**PART C1: AGREEMENTS AND CONTRACT DATA**

**PART C2: PRICING DATA**

**PART C3: SCOPE OF WORK**

**PART C4: SITE INFORMATION**

# UPGRADING OF BULK AND EXTENSION OF RETICULATION AT MBANGWANE

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**C1.2: CONTRACT DATA**

**C1.2.1: CONDITIONS OF CONTRACT**

**C1.2.2: PART A: CONTRACT DATA PROVIDED BY THE EMPLOYER**

**PART B: CONTRACT DATA PROVIDED BY THE CONTRACTOR**

**C1.3: FORM OF GUARANTEE**

**C1.4: AGREEMENT WITH ADJUDICATOR**

**C1.5: AGREEMENT IN TERMS OF SECTION 37(2) OF THE OCCUPATIONAL HEALTH AND SAFETY ACT No 85 OF 1993**

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**C2.2: BILL OF QUANTITIES**

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**C4.2: CONSTRUCTION NOTICE BOARD**

**C4.3: TENDER DRAWINGS**

**UPGRADING OF BULK AND EXTENSION OF RETICULATION AT MBANGWANE**

## C1.1 Form of Offer and Acceptance

## Offer

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

**BID NUMBER: NKO: 41/2026**

**UPGRADING OF BULK AND EXTENSION OF RETICULATION AT MBANGWANE**

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

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

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

……

…….. Rand (in words);

**R** ……. (in figures)

This offer may be accepted by the Employer by signing the acceptance part of this Form of Offer and Acceptance and returning one copy of this document to the tenderer before the end of the period of validity stated in the tender data, whereupon the tenderer becomes the party named as the Contractor in the conditions of Contract identified in the Contract Data.

| **Signature Block: Tenderer** | |
|---|---|
| Signature . . . . . | Date . . . . . |
| Name . . . . . | |
| Capacity . . . . . | |
| Name of organization. . . . . | |
| Address of organization . . . . . | |
| . . . . . | |
| Signature of witness . . . . . | Date . . . . . |
| Name of witness . . . . . | |



| BID NO: | NKO:41/2026 | INITIALS | |
|---|---|---|---|

## C1.1 Form of Offer and Acceptance (Continued)

**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 Parts C1 to C4 above.

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

The tenderer shall within two weeks after receiving a completed copy of this agreement, including the schedule of deviations (if any), contact the Employer's Agent (whose details are given in the Contract Data) for delivery of any 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 working days of the date of such receipt notifies the Employer in writing of any reason why he cannot accept the contents of this agreement, this agreement shall constitute a binding Contract between the parties.

| **Signature Block: Employer** | |
|---|---|
| Signature . . . . . | Date . . . . . |
| Name . . . . . | |
| Capacity . . . . . | |
| **for the Employer** | |
| Signature of witness . . . . . | Date . . . . . |
| Name of witness . . . . . | |



| BID NO: | NKO:41/2026 | INITIALS | |
|---|---|---|---|

## C1.1 Form of Offer and Acceptance (continued)

### Schedule of Deviations

Notes:

1. The extent of deviations from the tender documents issued by the Employer prior to the tender closing date is limited to those permitted in terms of the Conditions of Tender.
2. A tenderer's covering letter shall not be included in the final contract document. Should any matter in such, letter, which constitutes a deviation as aforesaid become the subject of agreements reached during the process of, offer and acceptance, the outcome of such agreement shall be recorded here.
3. Any other matter arising from the process of offer and acceptance either as a confirmation, clarification or change to the tender documents and which it is agreed by the parties becomes an obligation of the contract shall also be recorded here.
4. Any change or addition to the tender documents arising from the above agreements and recorded here shall also be incorporated into the final draft of the Contract.

1 Subject . . . . . .

Details . . . . . .

. . . . . .

. . . . . .

2 Subject . . . . . .

Details . . . . . .

. . . . . .

. . . . . .

3 Subject . . . . . .

Details . . . . . .

. . . . . .

. . . . . .

4 Subject . . . . . .

Details . . . . . .

. . . . . .

. . . . . .

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

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

## C1.1 Form of Offer and Acceptance (continued)

**For the Tenderer:**

Signature(s) _____ _____

Name(s) _____ _____

Capacity _____ _____

_____

(Name and address of organization)

Name & signature of Witness _____ _____

**For the Employer:**

Signature(s) _____ _____

Name(s) _____ _____

Capacity _____ _____

_____

(Name and address of organization)

Name & signature of Witness _____ _____

## Confirmation of Receipt

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

the . . . . . (day)

of . . . . . (month)

20. . . . . (year)

at . . . . . (place)

For the Contractor:

. . . . . .
Signature

. . . . . .
Name

. . . . . .
Capacity

Signature and name of witness:

. . . . . .
Signature

. . . . . .
Name



| BID NO: | NKO:41/2026 | INITIALS | |
|---|---|---|---|

**UPGRADING OF BULK AND EXTENSION OF RETICULATION AT MBANGWANE**

## C1.2 Contract Data

*Section 1.01 The General Conditions of Contract for Construction Works (2015) published by the South African Institution of Civil Engineering, is applicable to this Contract. Copies of these conditions of Contract may be obtained from the South African Institution of Civil Engineering (Tel: 011-805 5947).*

The General Conditions of Contract for Construction Works 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 for Construction Works to which it mainly applies.



| BID NO: | NKO:41/2026 | INITIALS | |
|---|---|---|---|

# UPGRADING OF BULK AND EXTENSION OF RETICULATION AT MBANGWANE

## BID: NKO: 41/2026

## C1.2.1: CONDITIONS OF CONTRACT

**GENERAL CONDITIONS OF CONTRACT**

**SPECIAL CONDITIONS OF CONTRACT**

1. **GENERAL**

2. **APPENDIX A: TRANSFER OF RIGHTS**

## C1.2.1 CONDITIONS OF CONTRACT

### GENERAL CONDITIONS OF CONTRACT

This Contract will be based on the "General Conditions of Contract for Construction Works - Third Edition, 2015", issued by the South African Institution of Civil Engineering (Short title: **"General Conditions of Contract 2015**") and can be obtained from:

**SAICE**
Waterfall Park
Howick Gardens
Vorna Valley Halfway House
Becker Street
MIDRAND
1685
Gauteng Province
Tel: (011) 805-5947/8
Fax: (011) 805-5971.

It is agreed that the only variations from the General Conditions of Contract 2015 are those set out hereafter under "Special Conditions of Contract".

### SPECIAL CONDITIONS OF CONTRACT

**1. GENERAL**

These Special Conditions of Contract (SCC) form an integral part of the Contract. The Special Conditions shall amplify, modify or supersede, as the case may be, the General Conditions of Contract 2015 to the extent specified below, and shall take precedence and shall govern.

The clauses of the Special Conditions hereafter are numbered "SCC" followed in each case by the number of the applicable clause or sub clause in the General Conditions of Conditions 2015, and the applicable heading, or (where a new special condition that has no relation to the existing clauses is introduced) by a number that follows after the last clause number in the General Conditions, and an appropriate heading.

| Clause no. | Description |
|---|---|
| **SCC 6.11** | Replace the Heading with "**VARIATIONS EXCEEDING 20 PERCENT**" |
| **SCC 6.11.1.3** | Replace the wording: "*greater than 15 percent"* with *"greater than 20 percent".* |

## APPENDIX A: TRANSFER OF RIGHTS

**TRANSFER OF RIGHTS AND INDEMNITY (To be completed during construction by successful Tenderer only)**

**Claim for materials on site, Payment Certificate No.** …… **Date:** ……..

**Contract No:** …….. for (contract title) ……..……

……..……

I, the undersigned (name of signatory) ……..……...… in my capacity as

…….. of (name of Contractor) ……

duly authorized hereto on behalf of the Contractor hereby transfer, cede and assign all the Contractor's rights, title and interest in and to the materials and goods, for which evidence of bona fide ownership is attached hereto, unto and in favour of (name of Employer) . . . . . insofar as the Contractor retains actual control of the materials and goods, the right of ownership thereof passes to the Employer by *constitutum possessorium.*

I herewith indemnify the Employer against any claim to and in respect of said materials by reason of the Contractor's sequestration or liquidation or of any defect in the Contractor's title to the materials and agree that no payment for materials on site will be made by the Employer until such time as I have submitted documentary proof of bona fide ownership of the said materials and goods.

This transfer shall become effective upon conclusion of the Contractor receiving payment from the Employer or from any other person on behalf of the Employer for the materials and goods as materials on site, payment of retention money thereon excluded.

I further confirm that I am fully responsible for all materials and goods listed under this Transfer of Rights and that they have been insured adequately against all risks and will remain insured until they are built into or used in the Permanent Works and taken over by the Employer.

**This certificate of Transfer of Rights applies only to the materials and goods as listed in the following table:**

| Description of Item | Unit | Quantity | Rate | Amount | Supplier |
|---|---|---|---|---|---|
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| **Total Value of Materials and goods** | | | | | |

**Signed by:** ……Date: ……..……..……
for and on behalf of the Contractor.

**Witnessed by:** …….. Date: ……

**NOTE:** This form, together with the documentary proof of ownership or proof of payment by the Contractor to the supplier, shall accompany the Contractor's claim for payment for materials on site in terms of Clause 6.10.1.5 of the General Conditions of Contract 2010.

## C1.2.2 PART A: CONTRACT DATA PROVIDED BY THE EMPLOYER

The following Contract specific data are applicable to this Contract.

**REFERENCE CONTRACT SPECIFIC DATA BY THE EMPLOYER**

**Clause**

1.1.1.13 The Defects Liability Period is **12 months** *(measured from the date of the Certificate of Completion).*

1.1.1.14 The time for achieving Practical Completion will be **15 months** *(measured from the Commencement Date).*

1.1.1.15 The name of the Employer is: **Nkomazi Local Municipality**

1.1.1.16 The Engineer is: **Mzolo Consulting Engineering and Project Managers PTY (LTD)** represented by a Director duly authorized thereto in writing.

1.1.1.26 The Pricing Strategy is: Re-measurement Contract

1.2.1.2 The Employer's address for receipt of communications is:

Physical address:
Telephone: 013 790 0245
Facsimile: 013 790 0886
Address (physical): 9 Park Street, Malelane, 1320
Address (postal): Private Bag X101, Malelane, 1320

1.2.1.2 The Engineer's address for receipt of communications is:

Postal address:
07 Fairhaven,04 Coronation Road
Pietermatizburg
3201

Telephone: 031 001 8932

5.3.1 The documentation required before commencement with Works execution are:

Health and Safety Plan (Refer to Clause 4.3)
Initial programme (Refer to Clause 5.6)
Security (Refer to Clause 6.2)
Insurance (Refer to Clause 8.6)

3.1.3 The Engineer is required to obtain the specific approval of the Employer before executing any of the following: The Engineer requires the Clients approval in order to authorize any expenditure in excess of the tender sum excluding contingencies as per Clause 6.4.

5.3.2 The time to submit the documentation required before commencement with Works execution is fourteen (14) days after appointment.

5.4.2 The access and possession of site shall not be exclusive to the Contractor but as set out in the Site Information.

5.8.1 The non-working days are Sundays.
The special non-working days are:

1 Public holidays and voting days if published prior to the tender closing date.
2 The year end break commencing and ending on dates as specified by SAFCEC.

5.13.1 The penalty for failing to complete the Works within the abovementioned time limit, plus approved extensions of time or condonation thereof is R 5000.00 of the Contract Sum per calendar day.

5.14.1: Practical Completion will be considered when:

- The pipelines are successfully pressure tested and all earthworks are complete.

5.16.3 The latent defect period is ten (10) years for civil engineering works

6.5.1.2.3 The percentage allowance to cover overhead charges is 10%.

6.8.2 Contract Price Adjustment: The Contract shall be subject to Contract Price Adjustment.

The value of the certificates issued shall be adjusted in accordance with the Contract Price Adjustment Schedule included in the General Conditions of Contract.

The value of "x" is 0.15

The values of the coefficients are:

a = 0.2 Labour
b = 0.35 Contractor's equipment
c = 0.35 Material
d = 0.1 Fuel

**Clause:**

The Province wherein the larger part of the site is located is: Mpumalanga.

The applicable industry for the Producer Price Index for material is Diesel

The area for the Producer Price Index for fuel is: **Belfast, Mpumalanga.** (or closest listed location)

The base month is: the month prior to the closing of the tender.

6.8.3 Price adjustments for variations in the cost of special materials are allowed.

6.10.1.5 The percentage advance on materials not yet built into the Permanent Work is 80%.

6.10.3 The limit of retention money is 10% of the Contract Sum.

8.2.2 The safekeeping of all material paid as material on site not yet built into the works remains the responsibility of the contractor, although ownership rest with the client as per clause 6.10.1.5.

8.6.1.1.2 The value of Plant and materials supplied by the Employer to be included in the insurance sum is R Nil.

8.6.1.1.3 The amount to cover professional fees for repairing damage and loss to be included in the insurance sum is R 5,000,000.

8.6.1.3 The limit of indemnity for liability insurance is R 10 000 000 for any single claim, the number of claims to be unlimited during construction and Defects Liability Period.

8.6.1.5 No additional insurance is required

10.5.2 Dispute resolution is to be by means of ad-hoc adjudication

10.5.3 The number of Adjudication Board Members to be appointed is three.

10.7.1 Disputes to be referred for final settlement to arbitration

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

**Clause**

1.1.1.9 Name of Contractor: ……..

1.2.1.2 The Contractor's address for receipt of communications is:

Physical address: Postal address:

……. .....

……. .....

……. .....

……. .....

Telephone: .....

Fax: .....

E-mail: ……..……

6.2.1 The security to be provided by the Contractor shall be:

*Performance guarantee of 10% of the Contract Sum plus retention of 10% of the value of the Works*

## C1.3 Form of Guarantee - Pro Forma

## Appendix C:

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

**PRO FORMA**

**PERFORMANCE GUARANTEE**

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

**GUARANTOR DETAILS AND DEFINITIONS**

“Guarantor” means: ……

Physical address: ……

“Employer” means: ……

“Contractor” means: ……

“Employer's Agent” means:

……

“Works” means: ……

“Site” means: ……

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

“Contract Sum” means: The accepted amount inclusive of tax of R ……

Amount in words: ……

“Guaranteed Sum” means: The maximum aggregate amount of R ……

Amount in words: ……

Type of Performance Guarantee: …….. *(Insert Variable or Fixed)*

“Expiry Date” means: …… *(Give date)* or any other later date set by the Contractor and/or Employer provided such instruction is received prior to the Expiry Date as indicated here.

**CONTRACT DETAILS**

Employer's Agent issues: Interim Payment Certificates, Final Payment Certificate and the Certificate of Completion of the Works as defined in the Contract.

**1. VARIABLE PERFORMANCE GUARANTEE**

1.1 Where a Variable Performance Guarantee has been selected, the Guarantor's liability shall be limited during the following periods to diminishing amounts of the Guaranteed Sum as follows:

1.1.1 From and including the date of signing the Performance Guarantee up to and including the date of the interim payment certificate certifying, for the first time, more than 50% of the Contract Sum:

R……..

(Amount in words ……..……..)

1.1.2 From the day following the date of the said interim payment certificate up to and including the Expiry Date, or the date of issue by the Employer's Agent of the Certificate of Completion of the Works, whichever occurs first:

R……

(Amount in words ……)

1.2 The Employer's Agent and/or the Employer shall advise the Guarantor in writing of the date on which the interim payment certificate certifying, for the first time, more than 50% of the Contract Sum, has been issued and the date on which the Certificate of Completion of the Works has been issued.

**2. FIXED PERFORMANCE GUARANTEE**

2.1 Where a Fixed Performance Guarantee has been selected, the Guarantor's liability shall be limited to the amount of the Guaranteed Sum.

2.2 The Guarantor's period of liability shall be from and including the date on which the Performance Guarantee is signed, up to and including the Expiry Date, or the date of issue by the Employer's Agent of the Certificate of Completion of the Works, or the date of payment in full of the Guaranteed Sum, whichever occurs first.

2.3 The Employer's Agent and/or the Employer shall advise the Guarantor in writing of the date on which the Certificate of Completion of the Works has been issued.

**3. CONDITIONS APPLICABLE TO VARIABLE AND FIXED PERFORMANCE GUARANTEES**

3.1 The Guarantor hereby acknowledges that:

3.1.1 Any reference in this Performance Guarantee to the Contract is made for the purpose of convenience and shall not be construed as any intention whatsoever to create an accessory obligation or any intention whatsoever to create a suretyship.

3.1.2 Its obligation under this Performance Guarantee is restricted to the payment of money.

3.2 Subject to the Guarantor's maximum liability referred to in 1.1 or 2.1, the Guarantor hereby undertakes to pay the Employer the sum certified upon receipt of the documents identified in 3.2.1 to 3.2.3:

3.2.1 A copy of a first written demand issued by the Employer to the Contractor stating that payment of a sum certified by the Employer's Agent in an Interim or Final Payment Certificate has not been made in terms of the Contract and failing such payment within seven (7) calendar days, the Employer intends to call upon the Guarantor to make payment in terms of 3.2.2;

3.2.2 A first written demand issued by the Employer to the Guarantor at the Guarantor's physical address with a copy to the Contractor stating that a period of seven (7) Days has elapsed since the first written demand in terms of 3.2.1 and the sum certified has still not been paid;

3.2.3 A copy of the aforesaid payment certificate which entitles the Employer to receive payment in terms of the Contract of the sum certified in 3.2.

3.3 Subject to the Guarantor's maximum liability referred to in 1.1 or 2.1, the Guarantor undertakes to pay to the Employer the Guaranteed Sum or the full outstanding balance upon receipt of a first written demand from the Employer to the Guarantor at the Guarantor's physical address calling up this Performance Guarantee, such demand stating that:

3.3.1 the Contract has been terminated due to the Contractor's default and that this Performance Guarantee is called up in terms of 3.3; or

3.3.2 a provisional or final sequestration or liquidation court order has been granted against the Contractor and that the Performance Guarantee is called up in terms of 3.3; and

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

3.4 It is recorded that the aggregate amount of payments required to be made by the Guarantor in terms of 3.2 and 3.3 shall not exceed the Guarantor's maximum liability in terms of 1.1 or 2.1.

3.5 Where the Guarantor has made payment in terms of 3.3, the Employer shall upon the date of issue of the Final Payment Certificate submit an expense account to the Guarantor showing how all monies received in terms of this Performance Guarantee have been expended and shall refund to the Guarantor any resulting surplus. All monies refunded to the Guarantor in terms of this Performance Guarantee shall bear interest at the prime overdraft rate of the Employer's bank compounded monthly and calculated from the date payment was made by the Guarantor to the Employer until the date of refund.

3.6 Payment by the Guarantor in terms of 3.2 or 3.3 shall be made within seven (7) calendar days upon receipt of the first written demand to the Guarantor.

3.7 Payment by the Guarantor in terms of 3.3 will only be made against the return of the original Performance Guarantee by the Employer.

3.8 The Employer shall have the absolute right to arrange his affairs with the Contractor in any manner which the Employer may consider fit and the Guarantor shall not have the right to claim his release from this Performance Guarantee on account of any conduct alleged to be prejudicial to the Guarantor.

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

3.10 This Performance Guarantee is neither negotiable nor transferable and shall expire in terms of 1.1.2 or 2.2, where after no claims will be considered by the Guarantor. The original of this Guarantee shall be returned to the Guarantor after it has expired.

3.11 This Performance Guarantee, with the required demand notices in terms of 3.2 or 3.3, shall be regarded as a liquid document for the purposes of obtaining a court order.

3.12 Where this Performance Guarantee is issued in the Republic of South Africa the Guarantor hereby consents in terms of Section 45 of the Magistrates' Courts Act No 32 of 1944, as amended, to the jurisdiction of the Magistrate's Court of any district having jurisdiction in terms of Section 28 of the said Act, notwithstanding that the amount of the claim may exceed the jurisdiction of the Magistrate's Court.

**Signed at** …….

**Date** ……..

**Guarantor's signatory (1)** …….

**Capacity**……

**Guarantor's signatory (2)** ……..

**Capacity** ……..

**Witness signatory (1)** ……

**Witness signatory (2)** ……

## C1.4: Agreement with Adjudicator:

This agreement is made on the.....day of ..... 20.....between: the Employer

*(name of company / organisation)*.....

of (*address)*.....

.....and the Contractor

*(name of company / organisation)* .....

of *(address)*.....

..... (hereinafter called **the Parties**)

**and**

*(name)*.....

of *(address)* .....

..... (hereinafter called **the Adjudicator**)

Disputes or differences may arise/have arisen* between the Parties under a Contract dated.....

and known as ..... (Insert Contract number)

*(Contract title)*.....

and these disputes or differences shall be/have been* referred to adjudication in accordance with the CIDB Adjudication Procedure, (hereinafter called "**the Procedure**") and the Adjudicator may be or has been requested to act.
*(* Delete as necessary)*

**IT IS NOW AGREED** as follows:

1. The rights and obligations of the Adjudicator and the Parties shall be as set out in the Procedure.

2. The Adjudicator hereby accepts the appointment and agrees to conduct the adjudication in accordance with the Procedure.

3. The Parties bind themselves jointly and severally to pay the Adjudicator's fees and expenses in accordance with the Procedure as set out in the Contract Data.

4. The Parties and the Adjudicator shall at all times maintain the confidentiality of the adjudication and shall endeavour to ensure that anyone acting on their behalf or through them will do likewise, save with the consent of the other Parties which consent shall not be unreasonably refused.

5. The Adjudicator shall inform the Parties if he intends to destroy the documents which have been sent to him in relation to the adjudication and he shall retain documents for a further period at the request of either Party.

**SIGNED by**:

| | | |
|---|---|---|
| (*Signature*)*:* ..... | (*Signature*)*:* ..... | (*Signature*)*:* ..... |
| **Name**: ..... | **Name**: ..... | **Name**: ..... |
| who warrants that he/ she is duly authorised to sign for and on behalf of the **First Party** in the presence of | who warrants that he/ she is duly authorised to sign for and on behalf of the S**econd Party** in the presence of | the **Adjudicator** in the presence of |
| **Witness:** | **Witness:** | **Witness:** |

| | | |
|---|---|---|
| (*Signature*)..... | (*Signature*)..... | (*Signature*)..... |
| **Name**: ..... | **Name**: ..... | **Name**: ..... |
| Address: ..... | Address: ..... | Address: ..... |
| ..... | ..... | ..... |
| ..... | ..... | ..... |
| Date: ..... | Date: ..... | Date: ..... ..... .. |

## C1.5: Agreement in terms of Section 37(2) of the Occupational Health and Safety Act No 85 of 1993

THIS AGREEMENT is made between **the Nkomazi Local Municipality**

(hereinafter called the EMPLOYER of the one part, herein represented by:

..... .....

in his capacity as: ..... ;

AND: ..... .....

(hereinafter called the CONTRACTOR) of the other part, herein represented by .....

..... .....

in his capacity as: .....

duly authorised to sign on behalf of the Contractor.

**WHEREAS:**

1. The Municipality and the mandatory entered into a written, alternatively oral agreement on the……...Day of ……20…….. in terms of which the Mandatory undertook to carry out the following work for the Municipality, viz. (give a short description of the type of contract work to be done as well as the address where work will be done)

_____

_____

_____

*(The said contract work is hereinafter referred to as the **Work**)*

2. The Occupational Health and Safety Act, Act 85 of 1993 as amended (hereinafter referred to as **the Act**) contains amongst others certain provisions with regard to the health and safety of people at work and in connection with the usage of plant and machinery, as well as the protection of other persons than persons at work against hazards to health and safety that originates from or in connection with the activities of persons at work.

3. Section 37(2) of the Act makes provision for the exclusion by the parties, by way of a written agreement, of supposition and accompanying liability of the Municipality as stipulated in section 37(1) of the Act.

4. The parties have reached consensus with regard to the terms and conditions to which they agree in terms of the provisions of section 37(2) of the Act.

## THE PARTIES AGREE AS FOLLOWS

### 1. WRITTEN AGREEMENT

The parties herewith agree in terms of section 37(2) of the Act on the arrangements and procedures that must be followed to ensure compliance with the provisions of the Act by the Mandatory.

### 2. ACKNOWLEDGEMENT BY THE MANDATORY

The mandatory acknowledge herewith that he is fully acquainted with the contents of the Act, as well as with all regulations and SABS codes of practice that have been made in terms of section 43 of the Act.

### 3. UNDERTAKING BY MANDATORY

(a) The Mandatory hereby undertakes and binds himself to the Municipality to ensure prompt and strict compliance with the provisions of the Act and the said regulations as well as with the provisions included in this Safety Agreement at all times during the execution of the Works

(b) It is hereby recorded that the provisions of this Safety Agreement as set out hereinafter are in no way intended to restrict the duties of the Mandatory, nor to exempt the Mandatory from his obligation in accordance with the Act and the said regulations

### 4. PERSONAL PROTECTIVE EQUIPMENT

(a) It is compulsory to wear equipment for eye protection when working in an eye protection zone or where the Work requires eye protection.

(b) It is compulsory to wear safety helmets when working in a safety helmet zone or where the Work requires safety helmets.

(c) It is compulsory to wear hearing protection when working in a noise zone or where the Work requires hearing protection.

(d) The wearing of other protective clothing and equipment as prescribed by the Occupational Health and Safety Officer of Nkomazi Municipality is compulsory.

(e) The Mandatory shall ensure that the statutory requirements are complied with at all times.

### 5. FENCING AND GENERAL MACHINERY PROTECTION

No shield or fencing may be removed from or be moved at any machinery or installation without written permission.

### 6. SCAFFOLDING, LADDERS, TOOLS, ET CETERA

The Mandatory without the written permission of the Municipality may use no equipment or tools that belong to the Municipality.

Except where agreed beforehand the Mandatory shall provide enough tools and equipment to enable him to complete the Works and the Mandatory shall provide all storerooms, offices and eating halls that he may need. The Mandatory will be responsible for all his material on site.

In special case where the Municipality may lend equipment, tools, or materials to the Mandatory, the Mandatory will use such equipment, tools and/or materials at his own risk and the Mandatory herewith indemnifies the Municipality against any liability of whichever nature or from any cause whatsoever, whether direct or indirect, that may arise from such usage.

## 7. SERVICES AND WORKING METHODS

The written permission of the Chief Executive/Town Clerk of the Municipality shall be obtained where any work which must be undertaken by the Mandatory is connected with a working process or machinery or any other service in connection therewith, or may possibly affect it, before he commences with such work.

Approval shall be obtained from the City Electrical Engineer of the Municipality before any equipment is connected to the electrical supply of the Municipality All equipment shall be isolated before any equipment is connected to the electrical supply of the Municipality. It shall be isolated and be provided with earth leakage protection. Electrical machinery, portable electrical tools, and portable lights must comply with the requirements of the applicable regulations.

Work permits must be issued in terms of the Occupational Health and Safety Act and Regulations when the nature of the work requires it. Permits must be issued by the relevant departmental head where necessary.

## 8. EXCAVATIONS

Written permission for excavations shall be obtained from the City Engineer of the Municipality and the Mandatory shall make sure of the existence and position of electrical cables, discharge pipes, gas lines, water conduits, et cetera before he commences with any excavation work.

All excavations and obstructions and/or any openings in platforms or floors shall be enclosed in a safe way and warning notices shall be erected to ensure absolute safety. An adequate number of red or orange caution lights shall be provided when it is dark or should bad light prevail.

The area surrounding excavations shall be kept in a safe, orderly, and tidy condition. No loose material of whatever nature may be left in walkways or workplaces or be allowed to block walkways or workplaces.

Nobody may enter into any restricted area in which hazardous fumes or a shortage of oxygen exists without a permit giving permission to do so, issued by the head of the relevant department of the Municipality and until it has been certified safe for entrance by the Occupational Health and Safety Officer and the Health Inspector of the Municipality.

## 9. RESTRICTION TO WORKPLACE

Employees of the Mandatory shall be restricted to their workplaces except when they have to leave their area for work purposes or when they visit toilets.

## 10. SUBCONTRACTORS

The Mandatory shall ensure that all subcontractors receive a copy of this safety agreement and must ensure they comply with it.

## 11. OCCUPATIONAL HEALTH AND SAFETY OFFICER AND THE REPORTING OF ALL ACCIDENTS

The Occupational Health and Safety Officer of the Municipality is available for consultation and he will make periodical visits to the workplace of the Mandatory. Any hazardous occurrence or incident to the employees of the Mandatory that results in absence from work for a period longer than three days shall be reported in writing to the Occupational Health and Safety Officer of the Municipality within forty eight hours as well as to the Department of Labour as specified by the Act. Every user, employer, occupier, builder, or excavator must, under this Act, keep record of all accidents that occur.

In the case of an accident that results in loss of life, nobody may disturb the scene of the accident or any articles involved in the accident prior to the arrival of the Occupational Health and Safety Officer and the Inspector, unless it is to prevent another accident from happening or the prevention of loss of life or to remove corpses.

The Occupational Health and Safety Officer will issue contravention notices to the Mandatory or a sub-contractor when there is a non-compliance and will specify the time in which it must be rectified.

The Occupational Health and Safety Officer will issue work stop notices to the Mandatory or sub-contractor whenever he is of the opinion that the health and safety of any person at work is threatened or that the contravention notices

are not adhered to.

**12. FIRST AID**

Where five or more persons are employed at a workplace, the Mandatory shall provide and maintain an adequately equipped first-aid box that meets the following requirements.

(a) Every first-aid box shall contain the minimum contents as prescribed by the Occupational Health and Safety Act.

(b) Nothing except articles and equipment required for first-aid purposes may be kept in the first-aid box.

(c) Each first-aid box shall be kept in a place readily accessible in case of an accident.

All first-aid boxes shall be placed under control of a responsible person except where five or less persons are at work. The responsible person must be in the possession of a valid first-aid certificate issued by one of the following organisations:

| | |
|---|---|
| A | South-African Red Cross Society |
| B | St. John's Ambulance Foundation |
| C | South-African First-Aid League |

A notice indicating where the first-aid box is kept as well as the name of the person in charge, shall be affixed in a conspicuous place. The first-aid facilities of the Municipality may be used during emergencies.

**13. FIRE PREVENTION MEASURES AND STORAGE OF FLAMMABLE MATERIAL**

The Fire department of the Municipality shall be notified before any welding, oxyacetylene welding, cutting, burning of paint or tar from floors or roofs is undertaken so that the necessary fire prevention measures can be arranged. All "NO SMOKING AND OPEN SURFACE FIRES/LIGHTS PROHIBITED" notices shall be adhered to. The Mandatory and his senior employee shall acquaint themselves and their fellow workers with the fire prevention measures of the Municipality, which will also include fire alarm notices and exits in case of fire, and they shall ensure that these rules are strictly complied with.

**14. COMPLETION OF WORK**

Before the mandatory or his sub-contractors leaves the site they shall inform the Head of the relevant Department of the Municipality and obtain his/her written approval that the work has been completed satisfactory and that the site of the work is left in a good condition.

**15. SALVAGED MATERIAL AND EQUIPMENT**

Any building demolished or equipment or materials that are salvaged whilst carrying out the work shall remain the property of the Municipality, unless the contract specifically provides otherwise.

**16. BREAKING OF THESE RULES AND POOR CONDUCT**

The Mandatory is warned that no behaviour that causes danger to their own employees, to the employees of the Municipality or general public will be tolerated. The Occupational Health and Safety Officer of the Municipality reserves the right of the withdrawal of any employees of the Mandatory or Municipality from the premises in the case of any default or breach of the agreement and to order that the completion of the work be stayed, pending compliance with this agreement; alternatively to cancel the agreement referred to in par.2 in which event the Municipality will be entitled to appoint an alternative contractor to complete the work and recover the costs thereof from the mandatory, without prejudice to any alternative or additional right or action or remedy to the Municipality, to recover from the mandatory damages for the default or breach and the cancellation.

The senior employees of the Mandatory shall sign a note of acknowledgement of this safety agreement to certify that they have received the regulations as included herein and that they understand the regulations

## 17. INTOXICATION

Nobody that is in a state of intoxication or that is in any other condition that causes or may cause his/her incapability to control him/herself or persons under his control may and shall not be permitted on the premises of the Municipality. The Occupational Health and Safety Officer of the Municipality reserves the right to the withdrawal of any employees of the Mandatory or Municipality from the premises in the case of any transgression of this nature.

## 18. CONFIDENTIALLY

The Mandatory shall at all times treat data and information that have been made known to him or that he requires in connection with his work from the Municipality as confidential and he may not make unauthorized use thereof. He must also ensure that such data and information are not communicated to anybody else that is not an employee of the Mandatory without obtaining prior written approval from the Municipality and he must further ensure that such persons do in fact know that the said information is confidential and that they are obliged to treat it as such.

The Mandatory shall provide for adequate physical protection for any confidential documents, sketches, et cetera that he receives from the Municipality in connection with the work as well as for any copies thereof that he makes. He shall hand back all documents sketches and copies thereof to the Municipality upon completion of the work, or earlier, if so requested by the Municipality. The Mandatory shall inform the Municipality immediately should any such documents or sketches become lost.

## 19. INDEMNIFICATION BY THE MANDATORY

The following conditions will be applicable to the Mandatory:

(a) The Mandatory is liable and herewith indemnifies the Municipality irrevocably and in full against any claim for loss or damage to property or arising from death or injury of any person and any associated loss or damage suffered, and against all lawsuits, claims, demands, costs, expenses, and charges that may arise when the said occurrences are caused on purpose or through the negligence, violation of legal obligations or failure by the Mandatory or its employees.

(b) Whenever any of the employees of the Municipality is busy with work to, or with the supply of material that will be used during the execution of the work by the Mandatory, or otherwise busy with work under the instruction and supervision of the Mandatory, in as far as they may be negligent or fail to do their duty, they will be regarded as employees of the mandatory

(c) All installations, equipment, hoisting-apparatus and other implements, scaffolding, ladders, material, et cetera that are borrowed from the Municipality by the Mandatory for usage during the execution of the work, will be used entirely at the risk of the Mandatory or employees of the Mandatory and the Mandatory herewith indemnifies the Municipality irrevocably and in full against any liability that may arise from such usage.

## 20. AMENDMENTS MUST BE IN WRITING

The parties agree herewith that this safety agreement is the only safety agreement between them and that no amendment thereof will be valid unless it is in writing and signed by both parties.

## 21. JURISDICTION AND LEGAL COSTS

In the event of any legal action being instituted pertaining to this agreement the party in default or breach will be liable for the other party's legal costs on the scale as between attorney and own client and the parties consent to the jurisdiction of the magistrate's court for purpose of any legal action being instituted.

**PARTICULARS OF THE MANDATORY**

Name (Mandatory) _____

C.E.O. (Section 16(1)) _____

ID NO _____

Designation _____

Name of Business _____

Address of Business _____

_____

_____

_____

Tel number (h) _____ (w) _____ e-mail _____

Number of employees employed _____

Registration number as allocated to the Mandatory by the Workman's Compensation Commissioner

_____

Date allocated _____

Thus done and signed on this _____ day of _____ 20 _____

As witnesses:

_____ (Signature) _____ (Name in print)

_____ (Signature) _____ (Name in print)

_____(Signature) _____ (Name in print)

**THE MANDATORY**



| BID NO: | NKO:41/2026 | INITIALS | |
|---|---|---|---|

Thus done and signed on this day of 20

As witnesses

_____ (Signature) _____ (Name in print)

_____ (Signature) _____ (Name in print)

_____(Signature)_____ (Name in print)

**THE MUNICIPALITY**

Acknowledgement of receipt of the agreement:

_____

**THE MANDATORY**

**UPGRADING OF BULK AND EXTENSION OF RETICULATION AT MBANGWANE**

**BID: NKO: 41/2026**

## C2.1 Pricing Instructions

1. Measurement and payment shall be in accordance with the relevant provisions of the SANS1200 Specification as amended in the Scope of Works subject to the variations and amendments contained in the Section C3.5 Project Specifications.

   Descriptions in the Bill of Quantities are abbreviated and comply generally with those in the Standardised Specifications. Clause 8 of each Standardised Specification, read together with the relevant clauses of Part C3: 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 Bill of Quantities, the Employer's Agent shall direct the applicable requirements.

   The clauses in a specification in which further information regarding the listed items in the Bill of Quantities can be obtained appear under "Payment Reference" column.

   The reference clauses indicated are not necessarily the only sources of information in respect of billed items. Further information and set specifications may be found in Section C3.5 Project Specifications. Standardised Specifications are identified by the letter or letters which follow "SANS" in the SANS 1200 series of specifications, e.g. G for SABS 1200 G.

   Unless otherwise stated, items are measured net in accordance with the drawings and no allowance is made for waste. The quantities set out in the Bill of Quantities are approximate and do not necessarily represent the actual amount of work to be done. The quantities of work accepted and certified for payment will be used for determining payments due only.

   The prices and rates to be inserted in the Bill of Quantities are to be the full inclusive prices for the work described under the various items. The 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. The prices will be used as a basis for assessment of payment for additional work that may have to be carried out.

   It will be assumed that prices included in these Bill of Quantities are based on Acts, Ordinances, Regulations, By-laws, International Standards and National Standards that were published 28 days before the closing date for tenders. (Refer to www.stanza.org or www.iso.org for information on standards).

   Where the Scope of Work requires detailed drawings and designs or other information to be provided, all costs associated therewith are deemed to have been provided for and included in the unit rates and sum amount tendered such items

   A price or rate is to be entered against each item in the Bill of Quantities, whether the quantities are stated or not. An item against which no price is entered will be considered to be covered by the other prices or rates in the Bill of Quantities and recorded as zero. A single lump sum will apply should a number of items be grouped together for pricing purposes.

   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.

2. The units of measurement described in these Bills of Quantities are metric units. Abbreviations used in the Bills of Quantities are as follows:

| | | |
|---|---|---|
| Ha | = | hectare |
| h | = | hour |
| kℓ | = | kilolitre |
| kg | = | kilogram |
| km | = | kilometre |
| kW | = | kilowatt |
| km-pass | | =kilometre pass |
| MN | = | Mega Newton |
| kPa | = | kilopascal |
| MN.m | = | Mega Newton- metre |
| ℓ | = | litre |
| % | = | percentage |
| m | = | metre |
| PC Sum | | Prime Cost Sum |
| mm | = | millimetre |
| P Sum | | Provisional Sum |
| PS/m | = | Provisional Sum per month |
| PS/d | = | Provisional Sum per day |
| Sum/wd | | Sum per working day |
| $m^2$ | = | square metre |
| No. | = | number |
| $m^2$.pass | | =square metre-pass |
| R/Only | | =Rate Only |
| $m^3$ | = | cubic metre |
| Sum | = | lump sum |
| $m^3$.km | = | cubic metre-kilometre |
| t | = | ton (1 000 kg) |
| MPa | = | Mega Pascal |
| W/day | = | Work day |
| % | = | percentage |
| mth | = | month |

**NOTE:** The schedule of quantities shall be completed in **BLACK INK**.

3. For the purpose of these Bills of Quantities, the following words shall have the meanings hereby assigned to them:

| | |
|---|---|
| Unit: | The unit of measurement for each item of work as defined in the SANS 1200 Standard Specification. |
| Quantity: | The number of units of work for each item. |
| Rate: | The agreed payment per unit of measurement. |
| Amount: | The product of the quantity and the agreed rate for an item. |
| Lump sum: | An agreed amount for an item, the extent of which is described in the Bills of Quantities but the quantity of work of which is not measured in any units. |

4. Unless otherwise stated, items are measured net in accordance with the drawings, and no allowance is made for waste.

**NKOMAZI LOCAL MUNICIPALITY**

**BID: NKO: 41/2026**

# C2.2 Bill of Quantities



| | | | |
|---|---|---|---|
| **BID NO:** | **NKO:41/2026** | **INITIALS** | |

**SCHEDULE 1 : PRELIMINARY AND GENERAL**

| ITEM NO. | REF | DESCRIPTION | UNIT | QUANT | RATE | AMOUNT |
|---|---|---|---|---|---|---|
| | **SABS 1200A** | **SCHEDULE 1 : PRELIMINARY AND GENERAL** | | | | |
| **1.1** | 8.3 | **FIXED CHARGE AND VALUE RELATED ITEMS** | | | | |
| 1.1.1 | **PSA 4.1** | Contractual Requirements | Sum | 1 | | |
| 1.1.2 | 8.3.2 | **Establish facilities on the site** | | | | |
| 1.1.2.1 | 8.3.2.1 | i) Facilities for Engineer | | | | |
| | | a) Engineer's office **(PSA 4.3.1)** | Sum | 1 | | |
| | | b) Name board **(PSA 4.3.2)** | No | 2 | | |
| | | c) Survey assistants and material | Sum | 1 | | |
| 1.1.2.2 | 8.3.2.2 | ii) Facilities for Contractor | | | | |
| | | a) Offices and storage sheds | Sum | 1 | | |
| | | b) Workshops | Sum | 1 | | |
| | | c) Laboratories | Sum | 1 | | |
| | | d) Living accommodation | Sum | 1 | | |
| | | e) Ablution and latrine facilities | Sum | 1 | | |
| | | f) Tools and equipment | Sum | 1 | | |
| | | g) Water supplies, electric power & communications | Sum | 1 | | |
| | | h) Dealing with water | Sum | 1 | | |
| | | i) Access | Sum | 1 | | |
| | | j) Plant | Sum | 1 | | |
| 1.1.3 | 8.3.3 | Other fixed charge obligations | Sum | 1 | | |
| 1.1.4 | 8.3.4 | Removal of Engineer's and Contractor's site establishment from site on completion of works. | Sum | 1 | | |
| | **SABS 1200A** | | | | | |
| **1.2** | **8.4** | **TIME RELATED ITEMS** | | | | |
| 1.2.1 | **PSA 4.2** | Contractual requirements | month | 15 | | |
| 1.2.2 | 8.4.2 | **Operations and maintenance of facilities on site** | | | | |
| 1.2.2.1 | 8.4.2.1 | Facilities for Engineer for duration of construction (SANS 1200 AB) | | | | |
| | | a) Engineer's office | Month | 15 | | |
| | | b) Name board | Month | 15 | | |
| | | c) Survey assistants and material | Month | 15 | | |
| 1.2.3 | 8.4.2 | **Operations and maintenance of facilities on site** | | | | |
| 1.2.3.1 | 8.4.2.2 | Facilities for the Contractor for the duration of the Contract, except where otherwise stated | | | | |
| | | a) Offices and storage sheds | Month | 15 | | |
| | | **AMOUNT CARRIED FORWARD** | | | | |

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|---|---|---|---|---|---|---|
| | | **AMOOUNT BROUGHT FORWARD** | | | | |
| | | b) Workshops | Month | 15 | | |
| | | c) Laboratories | Month | 15 | | |
| | | d) Ablution and latrine facilities | Month | 15 | | |
| | | e) Tools and equipment | Month | 15 | | |
| | | f) Water supplies, electric power & communications | Month | 15 | | |
| | | g) Dealing with water | Month | 15 | | |
| | | h) Access | Month | 15 | | |
| | | i) Plant | Month | 15 | | |
| 1.2.4 | 8.4.3 | Supervision for duration of the construction | Month | 15 | | |
| 1.2.5 | 8.4.4 | Company and Head Office overhead costs for the duration of the Contract | Month | 15 | | |
| 1.2.6 | 8.4.5 | Other time related obligations | Month | 15 | | |
| 1.2.7 | **PSA** | | | | | |
| | **4.4** | Excavation by hand in all materials to expose existing services | m³ | 150 | | |
| **1.3** | **PSA** | **Occupational Health and Safety** | | | | |
| | **4.5** | Provision for the cost related to the Occupational Health and Safety Act, 85 of 1993, and the relevant Regulations: | | | | |
| | | a) Preparation of a Health & safety Plan | Sum | 1 | | |
| | | b) Compilation of a Risk Assessment prior to Construction | Sum | 1 | | |
| | | c) Health & Safety induction Training of employees | Sum | 1 | | |
| | | d) Compilation and keeping up to date the Health & Safety file which shall include all documentation required in terms of the act | Sum | 1 | | |
| | | e) Implementation of the Health and Safety Plan over the entire construction period | Sum | 1 | | |
| | **PSA** | | | | | |
| **1.4** | **1.4** | **SUMS STATED PROVISIONALLY BY THE ENGINEER** | | | | |
| | **1.4.1** | a) Community Liaison Officer ( Allowance for one person at R8000 a month) | Prov. Sum | 1 | 120 000.00 | R 120 000.00 |
| | **1.4.2** | b) Underground water services survey and logging using GSM loggers loggers | Prov. Sum | 1 | 150 000.00 | R 150 000.00 |
| | | Extra-over item 1.4.1 to 1.4.6 for: Contractor's handling fee | % | R 270 000.00 | | |
| **1.5** | | **MATERIAL** | | | | |
| | | Actual cost of materials delivered to site inclusive of transport charges. (supporting invoices to be supplied) | Prov. Sum | 1 | 100 000.00 | R 100 000.00 |
| | | Percentage adjustment to item 1.5.1 for materials | % | R 100 000.00 | | |
| | | **AMOUNT CARRIED FORWARD** | | | | |

| | | | | | | |
|---|---|---|---|---|---|---|
| | | **AMOOUNT BROUGHT FORWARD** | | | | |
| **1.6** | | **QUALIFIED CIVIL ENGINEERING TECHNICIAN** | | | | |
| | | Allowance for payment of a Qualified Civil Engineering technician | Prov. Sum | 1 | 120 000.00 | R 120 000.00 |
| | | Contractor's markup to item 1.10.1 | % | R 120 000.00 | | |
| **1.7** | | **TRAINING** | | | | |
| | | Allowance for training | Prov. Sum | 1 | 250 000.00 | R 250 000.00 |
| | | Contractor's markup to item 1.10.1 | % | R 250 000.00 | | |
| **1.8** | | **PLANT** | | | | |
| | | a) Compressor | | | | |
| 1.8.1 | | With 2 Breakers and 2 Operators | day | 20 | | |
| 1.8.2 | | Establishment / Destablishment for item 1.8.1 | No | 2 | | |
| 1.8.3 | | b) TLB | hr | 20 | | |
| 1.8.4 | | Establishment / Destablishment for item 1.8.3 | No | 2 | | |
| 1.8.5 | | c) 10kl Water Tanker | hr | 100 | | |
| 1.8.6 | | Establishment / Destablishment for item 1.8.5 | No | 2 | | |
| 1.8.7 | | c) Wacker | day | 10 | | |
| 1.8.8 | | d) Water Pump | day | 10 | | |
| **1.9** | | **SURVEY** | | | | |
| 1.9.1 | | Allowance for any As-Built" survey" | Prov. Sum | 1 | R 80 000.00 | R 80 000.00 |
| 1.9.2 | | Contractor's markup to item 1.9.1 | % | R 80 000.00 | | |
| | | **TOTAL SCHEDULE 1 CARRIED FORWARD TO SUMMARY** | | | | |

| SCHEDULE 2 : MASIBEKELA RAW WATER PUMP STATION AND WATER TREATMENT WORKS | | | | | | |
|---|---|---|---|---|---|---|
| **ITEM NO.** | **REF** | **DESCRIPTION** | **UNIT** | **QUANT** | **RATE** | **AMOUNT** |
| **2** | **SANS 1200** | **MASIBEKELA RWPS AND WTW** | | | | |
| **2.1** | | ***Raw Water Pump Station*** | | | | |
| 2.1 | | Refurbishment of KSB ETANORM centrifugal pump set. | No. | 2.00 | | |
| 2.2 | | Refurbishment of MCC units | Sum | 1.00 | | |
| 2.3 | | Removal of the suction pipes 500mmØ for cleaning | Sum | 1.00 | | |
| 2.4 | | Fabrication of galvanized suction pipe inlet screen and installation | Sum | 1.00 | | |
| **2** | | ***Water Treatment Works*** | | | | |
| 2.1 | | Removal of dislodging DN300 PN10 butterfly valves on sedimentation tank and replacement with new | No. | 1.00 | | |
| 2.2 | | Removal of D300 PN10 Okzan butterfly valves complete with gearbox and replace from sand filters and replacement with new | No. | 8.00 | | |
| 2.3 | | Removal of DN150 PN gate valve from sand filters and replacement with new | No. | 3.00 | | |
| 2.4 | | Removal of sand media from filters and disposal at a dedicated dump site | $m^3$ | 100.00 | | |
| 2.5 | | Supply, delivery and application of silica sand media | $m^3$ | 100.00 | | |
| 2.6 | | Supply, delivery, installation and commissioning of booster pump set with capacity of 171$m^3$/h and duty head of 92.94m *(The rate to include removal of existing pump sets, pipework and storage onsite)* | Set | 2.00 | | |
| 2.7 | | Installation of pre-chlronation system at the inlet (System to include pipework, provision of cage to chlorine cylinders dosing 2 dosing pumps) | Sum | 1.00 | | |
| 2.8 | | Supply, delivery and installation of 250mmØ ultrasonic flow meter | No | 1.00 | | |
| 2.9 | | Upgrading of existing soft starter MCC panel to suit the new pump set | No | 2.00 | | |
| **2.10** | | **Truckfilling Station and Guardhouse** | | | | |
| | **SABS 1200 D** | **SITE PREPARATION** | | | | |
| | | **Site Clearance** | | | | |
| | 8.3.1.1 | Clear and strip site | | | | |
| 2.10.1 | | i) All structures | $m^2$ | 150.00 | | |
| | | **Remove topsoil** | | | | |
| | 8.3.1.2 | Remove topsoil to a nominal depth of 150mm stockpile and maintain | | | | |
| 2.10.2 | | i) All structures | $m^2$ | 100.00 | | |

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|---|---|
| **AMOUNT CARRIED FORWARD** | |

| | | AMOUNT BROUGHT FORWARD | | | | |
|---|---|---|---|---|---|---|
| | | **RESTRICTED EXCAVATION** | | | | |
| | 8.3.3 a) | Excavate for restricted foundations, footings and pipe | | | | |
| | **PSD 2.1** | trenches in all materials and backfill to 95% Mod | | | | |
| | | AASHTO density: | | | | |
| 2.10.3 | | iii) Guardhouse | m³ | 10.00 | | |
| | 8.3.3 a) | Excavate for restricted foundations, footings and pipe | | | | |
| | **PSD 2.1** | trenches in all materials and dispose: | | | | |
| 2.10.4 | | iii) Truckfilling station | m³ | 20.00 | | |
| | 8.3.3 b) | Extra-over items 2.10.3 to 2.10.4 for excavation in: | | | | |
| 2.10.5 | | a) Intermediate excavation (Provisional) | m³ | 12.00 | | |
| 2.10.5 | | b) Hard rock excavation (Provisional) | m³ | 4.40 | | |
| | 8.3.4 a) | Importing of materials | | | | |
| 2.10.7 | | i) Extra-over for importation of materials from borrow pit for foundation filling and under truckfilling point slab Material to have a minimum quality of G6 | m³ | 50.00 | | |
| | **SABS** | | | | | |
| | **1200G** | **CONCRETE WORK** | | | | |
| | | Concrete | | | | |
| | 8.4.2 | Blinding layer in class 15MPa/19mm to a minimum thickness of 50mm underneath structures | | | | |
| 2.10.8 | | i) Guard house | m² | 15.00 | | |
| | | ii) Truckfilling point | m² | 40.00 | | |
| | 8.4.3 | Strength concrete - class 25MPa/19mm | | | | |
| 2.10.9 | | iii) Guardhouse footings | m³ | 4.00 | | |
| | 8.4.3 | Strength concrete - Class 25 MPa/19mm | | | | |
| 2.10.10 | | i) All structures (provisional) | m³ | 18.00 | | |
| | 8.4.3 | Strength concrete - class 15MPa/10mm Mass concrete to: | | | | |
| 2.10.11 | | i) All structures (provisional) | m³ | 2.00 | | |
| | 8.4.3 | Screed to: | | | | |
| 2.10.12 | | i) All structures | m³ | | | Rate only |
| | **SABS** | | | | | |
| | **1200G** | **CONCRETE: Formwork** | | | | |
| | 8.2.2 | **Formwork - Smooth:** | | | | |
| | | a) **Vertical plane** | | | | |
| 2.10.13 | | iii) Pump Station | m² | 23.00 | | |
| | | c) **Inclined** | | | | |
| 2.10.14 | | i) Staircase | m² | | | Rate Only |
| | | d) **Horizontal plane** | | | | |
| 2.10.15 | | iii) Guardhouse coverslabs and roof | m² | 5.00 | | |
| | 8.2.5 | d) **Narrow widths (up to 300mm wide) to:** | | | | |
| 2.10.16 | | ii) Guardhouse | m | | | Rate Only |
| | | AMOUNT CARRIED FORWARD | | | | |

| | | AMOUNT BROUGHT FORWARD | | | | |
|---|---|---|---|---|---|---|
| | 8.2.5 | e) **Curved narrow widths (up to 300mm wide) to:** | | | | |
| 2.10.17 | | i) Guardhouse | m | | | Rate Only |
| | | **REINFORCEMENT** | | | | |
| | 8.3.1 | Reinforcement, high tensile steel | | | | |
| 2.10.18 | | iii) Guardhouse and truckfilling point | t | 4.50 | | |
| | 8.3.1 | Reinforcement, mild steel | | | | |
| 2.10.19 | | iii) Guardhouse and truckfilling point | t | 1.50 | | |
| | 8.3.2 | High tensile welded mesh - Ref No 295 (Provisional) | | | | |
| 2.10.20 | | i) v-drains and aprons | m² | 45.00 | | |
| | 8.4.4 | **Unformed surface finish** | | | | |
| 2.10.21 | | iii) Guardhouse, v-drains, and truckfilling point slab | m² | 110.00 | | |
| | **PART** | **PARTICULAR SPECIFICATION** | | | | |
| | **SPEC PB** | **BUILDING WORK** | | | | |
| | **PB9** | Brickwork | | | | |
| | PB9.1.1 | Walls (including brickforcing every fourth course) | | | | |
| 2.10.22 | | a) One brick walls (230 mm wide)<br>Face bricks Type FBS external with 6 mm half round ruled joints and type NFP internal, the latter with joints raked for cement plaster | m² | 65.00 | | |
| 2.10.23 | | b) Half brick walls (115 mm wide)<br>NFP bricks with joints raked for cement plaster both sides | m² | 20.00 | | |
| 2.10.24 | | Damp Proofing<br>a) Single layer 375 micron "Gundle Brickgrip" plastic waterproof sheeting under all walls at top of floor level, and underneath window cills: | m | 60.00 | | |
| | **PB9.1.3** | **Windows** | | | | |
| 2.10.25 | | a) Standard aluminium windowPT69 at guard house | no | | | Rate Only |
| 2.10.26 | | b) Standard aluminium windowPT99 at guard house | no | 1.00 | | |
| 2.10.27 | | c) Standard aluminium window PT129 at guard house | no | 1.00 | | |
| 2.10.28 | | d) Standard aluminium window PT159 at guard house | no | 4.00 | | |
| 2.10.29 | | e) Standard aluminium window PT219 at guard house | no | | | Rate only |
| | **PB9.1.3** | **Doors and Frames** | | | | |
| 2.10.30 | | a) Standard double sided FL&B 815x2 032mm solid meranti door and frame, 3 lever lockset, chrome plated handles and painted | no | 3.00 | | |
| | | **Roof and celing**<br>0.6mm IBR Chromadek roof sheeting on wooden rafters and fixed to wooden purlins. | | | | |
| 2.10.31 | | a) Chromadek IBR Roof Sheeting | m² | 38.00 | | |
| 2.10.32 | | b) Roof trussees | Sum | 1.00 | | |
| 2.10.33 | | c) Ceiling | m² | 20.00 | | |
| | | AMOUNT CARRIED FORWARD | | | | |

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|---|---|---|---|---|---|---|
| **AMOOUNT BROUGHT FORWARD** | | | | | | |
| | PB9.1.2 | Plaster | | | | |
| 2.10.34 | | a) One layer cement plaster rendered 12 mm thick and finished smooth with steel trowel | m² | 89.00 | | |
| | PB9.1.2 | Painting wall finishes | | | | |
| 2.10.35 | | a) One coat universal undercoat, Type 1 to SABS 681 | m² | 89.00 | | |
| 2.10.36 | | b) Two coats of Plascon Double Velvet (Camel Hair) | m² | 89.00 | | |
| | | Waterproofing of pump station roof | | | | |
| 2.10.39 | | "Acrylastic" as supplied by "Gundle" coatings, supplied and applied to manufacturer's specifications | m² | | | Rate only |
| 2.10.40 | | Plumbing works (guardhouse) | Sum | 1.00 | | |
| 2.10.41 | | Electrifical works (guardhouse) | Sum | 1.00 | | |
| 2.10.42 | | Septic Tank as per drawing STD-SEPT/01 | Sum | 1.00 | | |
| 2.10.43 | | DN100 smart-token-meter for truckfilling point Rate to include modification of pipework,connection and commissioning | Sum | 1.00 | | |
| 2.10.44 | | Fencing of truckfilling point | | | | |
| | | i) Deliver and erect 1.8m high 50x50x2.5mm weldedmesh fence complete as per drawing DET/TFP-01 | m | 50.00 | | |
| | | ii) Gate - 5m double swing gate as per drawing DET/TFP-01 | No | 2.00 | | |
| **TOTAL SCHEDULE 2 CARRIED FORWARD TO SUMMARY** | | | | | | |

**SCHEDULE 3 : HOYI BULKLINE**

| ITEM NO. | REF | DESCRIPTION | UNIT | QUANT | RATE | AMOUNT |
|---|---|---|---|---|---|---|
| **3.1** | **SANS 1200DB** | **SITE CLEARANCE** | | | | |
| 1.1 | 8.3.1 LI | a) Clear vegetation and tress of girth up to 1 m, stockpile and reinstate topsoil (150mm deep) along route of pipeline | m | 2 350.00 | | |
| 1.2 | 8.3.1 I I | b) Clear trees of girth over 1,0m and designated obstacles | No. | 4.00 | | |
| **3.2** | **SANS 1200DB** | **Earthworks: Pipe Trenches** | | | | |
| | 8.3.2 | **EXCAVATION** | | | | |
| 3.2.1 | 8.3.2 a) | a) Excavate in all materials for trenches for 315ND pipes and smaller. Rates to include backfill, compact, and dispose of surplus material<br>Over Up to and including | | | | |
| 3.2.1.1 | | 1) 0,00 1,50m | m | 352.50 | | |
| 3.2.1.2 | | 2) 1,50 2,00m | m | 822.50 | | |
| 3.2.1.3 | | 3) 2,00 2,50m | m | 1 175.00 | | |
| 3.2.1.4 | | 4) 2,50 3,00m | m | 500.00 | | |
| 3.2.2 | 8.3.2 | b) Extra over Item 2.2.1 above for: | | | | |
| 3.2.2.1 | | 1) Intermediate excavation | $m^3$ | 2 087.50 | | |
| 3.2.2.2 | | 2) Hard rock excavation | $m^3$ | 1 587.50 | | |
| 3.2.3 | 8.3.2 | c) Excavate and dispose of unsuitable material from trench bottom (Prov) | $m^3$ | 95.00 | | |
| 3.2.4 | 8.3.3 | Excavation ancillaries (Prov) | | | | |
| 3.2.4.1 | 8.3.3.1 | Make up deficiency in backfill material | | | | |
| | | a) From other necessary excavations on site | $m^3$ | 125.00 | | |
| | | b) by importation from designated borrow pits | $m^3$ | 1 587.50 | | |
| | | c) by importation from commercial or off-site sources selected by the | $m^3$ | 930.00 | | |
| **3.3** | **SANS 1200LB** | **BEDDING** | | | | |
| 3.1 | 8.2.1 | Provision of bedding from trench excavation: | | | | |
| 3.1.1 | | a) Selected granular material | $m^3$ | 150.00 | | |
| 3.1.2 | | b) Selected fill material | $m^3$ | 500.00 | | |
| 3.2 | 8.2.2.2 | Provision from approved borrow pits including all costs for additional handling and transport. | | | | |
| 3.2.1 | | a) Selected granular material (Prov) | $m^3$ | 85.00 | | |
| 3.2.2 | | b) Selected fill material (Prov) | $m^3$ | 200.00 | | |
| 3.3 | 8.2.2.3 | Provision from commercial or off-site sources, where ordered by the Engineer (Prov) | | | | |
| | | **AMOUNT CARRIED FORWARD** | | | | |

| | | AMOUNT BROUGHT FORWARD | | | | |
|---|---|---|---|---|---|---|
| 3.3.1 | | a) Selected granular material | $m^3$ | 50.00 | | |
| 3.3.2 | | b) Selected fill material | $m^3$ | 150.00 | | |
| 3.3.3 | | c) 19mm crushed stone | $m^3$ | 300.00 | | |
| **3.4** | **SANS 1200DB 8.3.3.4** | **Overhaul** | | | | |
| 3.4.1 | | a) Short haul over 0,5km up to 1,0km (Prov.) | $m^3$ | 285.00 | | |
| 3.4.2 | | b) Truck haul over 1,0km (Prov.) | $m^3$.km | 20 760.00 | | |
| **3.5** | **SANS 1200L** | **Medium Pressure Pipelines** | | | | |
| | | uPVC PIPES | | | | |
| 3.5.1 | 8.2.1 LI | Supply, handle, lay, bed, joint, test and disinfect uPVC Class "12" pipe with spigot and socket ends to SABS 966, Part 2 (1988) | | | | |
| | | a) 315mmØ class 16 (u-PVC) | m | 2 300.00 | | |
| 3.5.2 | 8.2.2 | Extra over Item D4.1 for the Supplying, Laying, and Bedding of Specials Complete with Couplings including jointing, cutting of pipes to length where required, testing and disinfecting. | | | | |
| 3.5.2.1 | | Specials and Fittings in uPVC | | | | |
| *3.5.2.1.1* | | *Bends:* | | | | |
| | | a) 45° | No | 2.00 | | |
| | | b) 22.5° | No | 4.00 | | |
| | | c) 11.25° | No | 4.00 | | |
| | | *Specials and Fittings in SG Iron* | | | | |
| *3.5.2.1.2* | | Reducers (for uPVC pipe) | | | | |
| | | a) 315 - 250mmØ | No | 2.00 | | |
| | | b) 200 - 160mmØ | No | 1.00 | | |
| *3.5.2.1.3* | | Equal Tees (Cast iron) | | | | |
| | | a) 315mmØ | No | 1.00 | | |
| *3.5.2.1.4* | | Reducing Tees (for uPVC pipe) | | | | |
| | | a) 315 x 200mm diameter | No | 1.00 | | |
| *3.5.2.1.5* | | Flange Adaptor (for uPVC pipes) | | | | |
| | | a) 315mm diameter | No | 8.00 | | |
| | | b) 250mm diameter | No | 8.00 | | |
| | | AMOUNT CARRIED FORWARD | | | | |

| | | AMOUNT BROUGHT FORWARD | | | | |
|---|---|---|---|---|---|---|
| *3.5.2.1.6* | | Valves | | | | |
| | | PN16 300 mm ND flanged resilient seal gate valve (Drawing No. CON/DET-01) | No | 3.00 | | |
| | | Valve key for opening isolating valves | No | 1.00 | | |
| | | Supply and install the following material complete as per drawing: | | | | |
| | | a) 80mm Airvalve on 315mm diameter | No | 3.00 | | |
| | | **Valve Chambers** | | | | |
| | | Supply all material labour and equipment for the construction of valve chambers as per drawings: | | | | |
| | | Valve chamber | No | 3.00 | | |
| | | Connection chamber | No | 3.00 | | |
| | **SANS 1200L 8.2.11** | Construct anchor/thrust blocks to detail on D for tees, 90° bends and end caps: | | | | |
| | | a) 315mmØ | No | 10.00 | | |
| | | b) 250mmØ | No | 4.00 | | |
| **3.6** | | **HORIZONTAL DIRECTIONAL DRILLING** | | | | |
| | | Horizontal directional drilling underneath a road to accommodate 300mmØ Steel pipe 18m long ((SABS 719, Grade B, 4,5 mm wall thickness), both end flanged, internally lined and externally coated with carboline 891, minimum thickness 250 microns as per drawing (HDD/01) | | | | |
| | | a) Railway Crossing | Sum | 1.00 | | |
| | | b) Road D2953 | Sum | 1.00 | | |
| **3.7** | | **ROAD D2953 CROSSING** | | | | |
| | | *Clearance, earthworks, beddings and medium pressure pipes are covered under item no. 3.1, 3,2, 3,3 3.4.and 3.5* | | | | |
| | | a) Traffic accomodation | Sum | 1.00 | | |
| | | b) Reinstatement of the road pavement structure: | | | | |
| | | i) 150mm G7 Lower selected layer,93% ModAASHTO | $m^3$ | - | | Rate only |
| | | ii) 150mm G6 Upper selected layer, 95% ModAASHTO | $m^3$ | - | | Rate only |
| | | iii) 150mm C4 Subbase layer, 98% ModAASHTO | $m^3$ | - | | Rate only |
| | | iv) 150mm G2 base layer | $m^3$ | - | | Rate only |
| | | v) 30mm Medium Continoiusly Graded Asphalt including prime @ 1l/$m^2$ | $m^2$ | - | | Rate only |
| | | **AMOUNT CARRIED FORWARD** | | | | |

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|---|---|---|---|---|---|---|---|
| **AMOUNT BROUGHT FORWARD** | | | | | | | |
| 3.8 | | PN16 200 mm ND flanged electromagentic flow meter (Proline Promag 50P, 53P compact or approved similar) (Item No. 7 on Drawing no. CON/DET-01 ) | No | 1.00 | | | |
| | | Pipe marker posts as shown on Drawing No. STD/PLM01 | No | 8.00 | | | |
| 3.9 | | Removal of unathorized connections on the existing DN315 uPVC pipeline and repairs as and when required (ordered by the Engineer) | Prov. Sum | 1.00 | 350 000.00 | R | 350 000.00 |
| **TOTAL SCHEDULE 3 CARRIED FORWARD TO SUMMARY** | | | | | | | |

**SCHEDULE 4 : MBANGWANE BOOSTER PUMP STTION**

| ITEM NO. | REF | DESCRIPTION | UNIT | QUANT | RATE | AMOUNT |
|---|---|---|---|---|---|---|
| | SANS | | | | | |
| 4.1 | 1200 D | **SITE PREPARATION** | | | | |
| | | **Site Clearance** | | | | |
| 4.1.1 | 8.3.1.1 | Clear and strip site | | | | |
| | | i) All structures | m² | 40.00 | | |
| | | **Remove topsoil** | | | | |
| 4.1.2 | 8.3.1.2 | Remove topsoil to a nominal depth of 150mm stockpile and maintain | | | | |
| | | i) All structures | m² | 40.00 | | |
| | | **RESTRICTED EXCAVATION** | | | | |
| 4.1.3 | 8.3.3 a) PSD 2.1 | Excavate for restricted foundations, footings and pipe trenches in all materials and backfill to 95% Mod AASHTO density: | | | | |
| | | i) Pump Station | m³ | 7.35 | | |
| 4.1.4 | 8.3.3 a) PSD 2.1 | Excavate for restricted foundations, footings and pipe trenches in all materials and dispose: | | | | |
| | | i) Pump Station | m³ | 20.00 | | |
| 4.1.5 | 8.3.3 b) | Extra-over items 2.3.1 to 2.3.2 for excavation in: | | | | |
| | | a) Intermediate excavation (Provisional) | m³ | 3.70 | | |
| | | b) Hard rock excavation (Provisional) | m³ | 3.70 | | |
| 4.1.6 | 8.3.4 a) | Importing of materials | | | | |
| | | i) Extra-over for importation of materials from commercial sources for reservoir terrace. Material to have a minimum quality of G5. | m³ | 13.30 | | |
| | SANS | | | | | |
| 4.1.7 | 1200G | **CONCRETE WORK** | | | | |
| | | Concrete | | | | |
| | 8.4.2 | Blinding layer in class 15MPa/19mm to a minimum thickness of 50mm underneath structures | | | | |
| | | i) Pump Station | m² | 56.00 | | |
| 4.1.8 | 8.4.3 | Strength concrete - class 35MPa/19mm | | | | |
| | | iii) Pump Station | m³ | 8.50 | | |
| 4.1.9 | 8.4.3 | Strength concrete - Class 25 MPa/19mm | | | | |
| | | i) All structures (provisional) | m³ | 7.10 | | |
| 4.1.10 | 8.4.3 | Strength concrete - class 15MPa/10mm Mass concrete to: | | | | |
| | | i) All structures (provisional) | m³ | 2.00 | | |
| 4.1.11 | 8.4.3 | Screed to: | | | | |
| | | i) All structures | m³ | 3.00 | | |
| | | **AMOUNT CARRIED FORWARD** | | | | |

| | | AMOUNT BROUGHT FORWARD | | | | |
|---|---|---|---|---|---|---|
| | SABS 1200G | **CONCRETE: Formwork** | | | | |
| | 8.2.2 | **Formwork - Smooth:** | | | | |
| 4.1.12 | | a) **Vertical plane** | | | | |
| | | i) Pump Station | m² | 7.00 | | |
| 4.1.13 | | b) **Inclined - to staircases** | | | | |
| | | i) Pump Station staircase | m² | | | Rate Only |
| 4.1.14 | | d) **Horizontal plane - elevated to walkways and slabs** | | | | |
| | | iii) Pump Station walkway and roof | m² | 32.00 | | |
| 4.1.15 | 8.2.5 | d) **Narrow widths (up to 300mm wide) to:** | | | | |
| | | ii) Pump Station | m | | | Rate Only |
| 4.1.16 | 8.2.5 | e) **Curved narrow widths (up to 300mm wide) to:** | | | | |
| | | i) Reservoir | m | | | Rate Only |
| 4.1.17 | | **Box-out holes for pipes** | | | | |
| | 8.2.6 | Box-out holes, rectangular through concrete 200 to 500 mm thick: for pipework supplied and installed by the Mechanical Contractor : | | | | |
| | | i) 280 x 280mm box-out for 80mm flanged steel pipe | no | 1.00 | | |
| | | ii) 370 x 370mm box-out for 150mm flanged steel pipe | no | 1.00 | | |
| | | iii) 420 x 420mm box-out for 200mm flanged steel pipe | no | | | Rate Only |
| 4.1.18 | | **REINFORCEMENT** | | | | |
| | 8.3.1 | Reinforcement, high tensile steel | | | | |
| | | iii) Pump Station | t | 4.75 | | |
| | 8.3.1 | Reinforcement, mild steel | | | | |
| | | iii) Pump Station | t | 1.50 | | |
| | 8.3.2 | High tensile welded mesh - Ref No 295 (Provisional) | | | | |
| | | i) All structures | m² | 56.00 | | |
| 4.1.19 | 8.4.4 | **Unformed surface finish** | | | | |
| | | iii) Pump Station | m² | 135.00 | | |
| | | **AMOUNT CARRIED FORWARD** | | | | |

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|---|---|---|---|---|---|---|
| | | **AMOUNT BROUGHT FORWARD** | | | | |
| | **PART SPEC PB PB9** | **PARTICULAR SPECIFICATION**<br>**BUILDING WORK**<br>Brickwork | | | | |
| 4.1.20 | PB9.1.1 | Walls (including brickforcing every fourth course) | | | | |
| | | a) One brick walls (230 mm wide)<br>Face bricks Type FBS external with 6 mm half round ruled joints and type NFP internal, the latter with joints raked for cement plaster | m² | 85.00 | | |
| | | b) Half brick walls (115 mm wide)<br>NFP bricks with joints raked for cement plaster both sides | m² | 17.50 | | |
| | | Damp Proofing<br>a) Single layer 375 micron "Gundle Brickgrip" plastic waterproof sheeting under all walls at top of floor level, and underneath window cills: | m | 25.00 | | |
| 4.1.21 | **PB9.1.3** | **Windows** | | | | |
| | | a) Standard aluminium windowPT69 at guard house | no | 1.00 | | |
| | | b) Standard aluminium windowPT99 at guard house | no | 1.00 | | |
| | | c) Standard aluminium window PT129 at guard house | no | 1.00 | | |
| | | d) Standard aluminium window PT159 at guard house | no | 1.00 | | |
| | | e) Standard aluminium window PT219 at guard house | no | 1.00 | | |
| 4.1.22 | **PB9.1.3** | **Doors and Frames**<br>a) Standard double sided FL&B 815x2 032mm solid meranti door and frame | no | 3.00 | | |
| 4.1.23 | | **Roof and celing**<br>0.6mm Chromadek IBR roof sheeting on wooden rafters and fixed to wooden purlins. | | | | |
| | | a) Chromadek IBR Roof Sheeting | m² | 60.00 | | |
| | | b) Roof trussees | Sum | 1.00 | | |
| | | c) Ceiling | m² | 35.00 | | |
| 4.1.24 | PB9.1.2 | Plaster<br>a) One layer cement plaster rendered 12 mm thick and finished smooth with steel trowel | m² | 45.00 | | |
| | | **AMOUNT CARRIED FORWARD** | | | | |

| | | **AMOOUNT BROUGHT FORWARD** | | | | | |
|---|---|---|---|---|---|---|---|
| 4.1.25 | PB9.1.2 | Painting wall finishes<br>a) One coat universal undercoat, Type 1 to SABS 681 | m² | 150.00 | | | |
| | | b) Two coats of Plascon Double Velvet (Camel Hair) | m² | 150.00 | | | |
| 4.1.26 | PB9.1.3 | Doors and Frames<br>a) Steel and door frame,<br>815 mm wide x 2 032 mm high<br>thick complete with standard mild steel frame,<br>3 lever lockset, chrome plated handles and painted | no | 1.00 | | | |
| | | b) Mild steel and door frame,<br>2400 mm wide x 3000 mm high<br>thick complete with standard mild steel frame,<br>3 lever lockset, chrome plated handles and painted | no | 1.00 | | | |
| 4.1.27 | | Waterproofing of pump station roof<br>"Acrylastic" as supplied by "Gundle" coatings, supplied and applied to manufacturer's specifications | m² | 40.00 | | | |
| 4.1.28 | | Plumbing works | Sum | 1.00 | | | |
| 4.1.29 | | Electrifical works | Sum | 1.00 | | | |
| 4.1.30 | | Septic Tank | Sum | 1.00 | | | |
| **4.2** | | **Pump Sets** | | | | | |
| 4.2.1 | | Supply, delivery, installation and commissioning of booster pump set with capacity of 65m³/h and duty head of 93.46m<br>*(The rate to include removal of existing pump set and storage onsite)* | No | 2.00 | | | |
| 4.2.2 | | Pipework | Sum | 1.00 | | | |
| 4.2.3 | | Upgrading of existing soft starter MCC panel to suit the new pump set | Sum | 1.00 | | | |
| 4.2.4 | | Supply, delivery and installation of 150mmØ electromagnetic flow meter | No | 2.00 | | | |
| **4.3** | | **Steel Tanks** | | | | | |
| 4.3.1 | | Resealing of existing steel tanks<br>*(Dismantling of the tank, Re-assembling of the tanks with new rubber seals, sealants, bolt and nuts including replacement of rusted steel panels)* | | | | | |
| | | i) 1 424kl | Prov. Sum | 1.00 | 1 035 600.00 | R | 1 035 600.00 |
| | | ii) 565 kl | Prov. Sum | 1.00 | 450 000.00 | R | 450 000.00 |
| | | iii) Contractor's handling fee for steel tanks | % | 1 485 600.00 | | | |
| 4.3.2 | | Steel tank base slab | | | | | |
| | | i) Demolition of existing base slab | Sum | 1.00 | | | |
| | | ii) Ground preparation | m² | 180.00 | | | |
| | | **AMOUNT CARRIED FORWARD** | | | | | |

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|---|---|---|---|---|---|---|
| | | **AMOUNT BROUGHT FORWARD** | | | | |
| | | iii) Formwork | m² | 25.00 | | |
| | | iv) Strength concrete - class 30MPa/19mm | m³ | 52.50 | | |
| | | v) Reinforcement, high tensile steel | t | 5.00 | | |
| | | vi) Unformed surface finish | m² | 205.00 | | |
| **4.4** | | **Fencing** | | | | |
| | | i) Removal of existing barbwire fence and storing on-site | m | 160.00 | | |
| | | ii) Removal of existing concrete palisade and re-erection *(The rate to include new bolts and nuts)* | m | 115.00 | | |
| | | iii) Relocation of existing gate | No | 1.00 | | |
| | | iv) Deliver and erect 2.4m high concrete palisade fence complete as per manufacturers specifications | m | 321.00 | | |
| | | v) Gate - Install 6m sliding vehicle gate complete | No | 1.00 | | |
| **4.5** | | **Mastlight** | | | | |
| | | i) Construction of mastlight base, supply and erection of 12m high mastlight with 4 100w floodlights and electrification | Sum | 1.00 | | |
| **4.6** | | **Pump Station Crane** | | | | |
| | | i) 254x146x37 I-beam | m | 6.00 | | |
| | | ii) 1.5T Electric chain hoist complete with trolley to suit to beam | Sum | 1.00 | | |
| | | **TOTAL SCHEDULE 4 CARRIED FORWARD TO SUMMARY** | | | | |

**SCHEDULE 5 : MBANGWANE BULKLINE**

| ITEM NO. | REF | DESCRIPTION | UNIT | QUANT | RATE | AMOUNT |
|---|---|---|---|---|---|---|
| **5.1** | **SANS 1200DB** | **SITE CLEARANCE** | | | | |
| 5.1.1 | 8.3.1 LI | a) Clear vegetation and tress of girth up to 1 m, stockpile and reinstate topsoil (150mm deep) along route of pipeline | m | 1 670.00 | | |
| 5.1.2 | 8.3.1 LI | b) Clear trees of girth over 1,0m and designated obstacles | No. | 8.00 | | |
| **5.2** | **SANS 1200DB** | **Earthworks: Pipe Trenches** | | | | |
| | 8.3.2 | **EXCAVATION** | | | | |
| 5.2.1 | 8.3.2 a) | a) Excavate in all materials for trenches for 315ND pipes and smaller. Rates to include backfill, compact, and dispose of surplus material | | | | |
| | | Over Up to and including | | | | |
| | | 1) 0,00 1,50m | m | 450.00 | | |
| | | 2) 1,50 2,00m | m | 1 220.00 | | |
| | | 3) 2,00 2,50m | m | | | |
| 5.2.2 | 8.3.2 | b) Extra over Item 2.2.1 above for: | | | | |
| | | 1) Intermediate excavation | $m^3$ | 1 062.00 | | |
| | | 2) Hard rock excavation | $m^3$ | 1 520.00 | | |
| 5.2.3 | 8.3.2 | c) Excavate and dispose of unsuitable material from trench bottom (Prov) | $m^3$ | 153.00 | | |
| 5.2.4 | 8.3.3 | Excavation ancillaries (Prov) | | | | |
| 2.4.1 | 8.3.3.1 | Make up deficiency in backfill material | | | | |
| | | a) From other necessary excavations on site | $m^3$ | 244.00 | | |
| | | b) by importation from designated borrow pits | $m^3$ | 826.00 | | |
| | | c) by importation from commercial or off-site sources selected by the | $m^3$ | 300.00 | | |
| **5.3** | **SANS 1200LB** | **BEDDING** | | | | |
| 5.3.1 | 8.2.1 | Provision of bedding from trench excavation: | | | | |
| | | a) Selected granular material | $m^3$ | 75.00 | | |
| | | b) Selected fill material | $m^3$ | 138.00 | | |
| 5.3.2 | 8.2.2.2 | Provision from approved borrow pits including all costs for additional handling and transport. | | | | |
| | | a) Selected granular material (Prov) | $m^3$ | 77.50 | | |
| | | b) Selected fill material (Prov) | $m^3$ | 160.00 | | |
| 5.3.3 | 8.2.2.3 | Provision from commercial or off-site sources, where ordered by the Engineer (Prov) | | | | |
| | | **AMOUNT CARRIED FORWARD** | | | | |

| | | AMOUNT BROUGHT FORWARD | | | | |
|---|---|---|---|---|---|---|
| | | a) Selected granular material | $m^3$ | 77.50 | | |
| | | b) Selected fill material | $m^3$ | 160.00 | | |
| | | c) 19mm crushed stone | $m^3$ | 38.00 | | |
| 5.3.4 | SANS 1200DB 8.3.3.4 | **Overhaul** | | | | |
| | | a) Short haul over 0,5km up to 1,0km (Prov.) | $m^3$ | 230.00 | | |
| | | b) Truck haul over 1,0km (Prov.) | $m^3$.km | 15 501.00 | | |
| 5.4 | SANS 1200L | **Medium Pressure Pipelines** | | | | |
| | | uPVC PIPES | | | | |
| 5.4.1 | 8.2.1 LI | Supply, handle, lay, bed, joint, test and disinfect uPVC Class "12" pipe with spigot and socket ends to SABS 966, Part 2 (1988) | | | | |
| | | a) 250mmØ class 12 (u-PVC) | m | 1 670.00 | | |
| 5.4.2 | 8.2.2 | Extra over Item D4.1 for the Supplying, Laying, and Bedding of Specials Complete with Couplings including jointing, cutting of pipes to length where required, testing and disinfecting. | | | | |
| | | Specials and Fittings in uPVC | | | | |
| *5.4.2.1* | | *Bends:* | | | | |
| | | a) 45° | No | 2.00 | | |
| | | b) 22.5° | No | 3.00 | | |
| | | c) 11.25° | No | 4.00 | | |
| | | *Specials and Fittings in SG Iron* | | | | |
| *5.4.2.2* | | Reducers (for uPVC pipe) | | | | |
| | | a) 315 - 250mmØ | No | | | Rate Only |
| | | b) 200 - 160mmØ | No | | | Rate Only |
| | | Equal Tees (Cast iron) | | | | |
| | | a) 315mmØ | No | | | Rate Only |
| *5.4.2.3* | | Reducing Tees (for uPVC pipe) | | | | |
| | | a) 315 x 200mm diameter | No | | | Rate Only |
| *5.4.2.4* | | Flange Adaptor (for uPVC pipes) | | | | |
| | | a) 315mm diameter | No | | | Rate Only |
| | | b) 250mm diameter | No | 7.00 | | |
| | | AMOUNT CARRIED FORWARD | | | | |

| | | **AMOUNT BROUGHT FORWARD** | | | | |
|---|---|---|---|---|---|---|
| 5.4.3 | | Valves | | | | |
| | | a) PN16 250 mm ND flanged resilient seal gate valve ( Drawing No. CON/DE-02) | No | 3.00 | | |
| | | b) Valve key for opening isolating valves | No | | | Rate Only |
| | | Supply and install the following material complete as per drawing: | | | | |
| 5.4.4 | | | | | | |
| | | a) 80mm Airvalve on 250mm diameter | No | 5.00 | | |
| 5.4.5 | | **Valve Chambers**<br>Supply all material labour and equipment for the construction of valve chambers as per drawings: | | | | |
| | | a) Valve chamber | No | 5.00 | | |
| | | b) Connection chamber | No | 1.00 | | |
| 5.4.6 | SABS 1200L 8.2.11 | Construct anchor/thrust blocks to detail on D for tees, 90° bends and end caps: | | | | |
| | | a) 315mmØ | No | | | Rate Only |
| | | b) 250mmØ | No | | | Rate Only |
| **5.5** | | **ROAD D2950 CROSSING**<br>*Clearance, earthworks, beddings and medium pressure pipes are covered under item no. 3.1, 3,2, 3,3 3.4.and 3.5* | | | | |
| 5.5.1 | | a) Traffic accomodation | Sum | 1.00 | | |
| 5.5.2 | | b) Reinstatement of the road pavement structure: | | | | |
| | | i) 150mm G7 Lower selected layer,93% ModAASHTO | m³ | 10.00 | | |
| | | ii) 150mm G6 Upper selected layer, 95% ModAASHTO | m³ | 10.00 | | |
| | | iii) 150mm C4 Subbase layer, 98% ModAASHTO | m³ | 10.00 | | |
| | | iv) 150mm G2 base layer | m³ | 10.00 | | |
| | | v) 30mm Medium Continoiusly Graded Asphalt including prime @ 1l/m² | m³ | 30.00 | | |
| **5.6** | | **Steel pipes**<br>Steel short pieces (SABS 719, Grade B, 4,5 mm wall thickness), both end flanged, internally lined and externally coated with carboline 891, minimum thickness 250 microns as per drawing (CON/DET-01) | | | | |
| 5.6.1 | | 200-250mmØ | Sum | 1.00 | | |
| 5.6.2 | | PN16 200 mm ND flanged electromagentic flow meter (Proline Promag 50P, 53P compact or approved similar) (Item No. 7 on Drawing No. CON/DET-02) | No | 2.00 | | |
| | | **AMOUNT CARRIED FORWARD** | | | | |

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|---|---|---|---|---|---|---|
| **AMOUNT BROUGHT FORWARD** | | | | | | |
| 5.7 | | Pipe marker posts as shown on Drawing No. STD/PM01 | No | 9.00 | | |
| **TOTAL SCHEDULE 5 CARRIED FORWARD TO SUMMARY** | | | | | | |

**SCHEDULE 6 : WATER RETICULATION**

| ITEM NO. | REF | DESCRIPTION | UNIT | QUANT | RATE | AMOUNT |
|---|---|---|---|---|---|---|
| **6.1** | **SANS 1200DB** | **SITE CLEARANCE** | | | | |
| 6.1.1 | 8.3.1 LI | a) Clear vegetation and tress of girth up to 1 m, stockpile and reinstate topsoil (150mm deep) along route of pipeline | m | 27995 | | |
| 6.1.2 | 8.3.1 LI | b) Clear trees of girth over 1,0m and designated obstacles | No. | 20 | | |
| **6.2** | **SANS 1200DB** | **Earthworks: Pipe Trenches** | | | | |
| | 8.3.2 | **EXCAVATION** | | | | |
| 6.2.1 | 8.3.2 a) | a) Excavate in all materials for trenches for 200ND pipes and smaller. Rates to include backfill, compact, and dispose of surplus material | | | | |
| | | Over Up to and including | | | | |
| | | 1) 0,00 1,50m | m | 27000 | | |
| | | 2) 1,50 2,00m | m | 995 | | |
| | | 3) 2,00 2,50m | m | | | |
| | | 4) 2,50 3,00m | m | | | |
| 6.2.2 | 8.3.2 | b) Extra over Item 2.2.1 above for: | | | | |
| | | 1) Intermediate excavation | $m^3$ | 5590 | | |
| | | 2) Hard rock excavation | $m^3$ | 6998 | | |
| 6.2.3 | 8.3.2 | c) Excavate and dispose of unsuitable material from trench bottom | $m^3$ | 1895 | | |
| | 8.3.3 | Excavation ancillaries (Prov) | | | | |
| 6.2.4 | 8.3.3.1 | Make up deficiency in backfill material | | | | |
| | | a) From other necessary excavations on site | $m^3$ | 3499 | | |
| | | b) by importation from designated borrow pits | $m^3$ | 1400 | | |
| | | c) by importation from commercial or off-site sources selected by the contractor | $m^3$ | 2099 | | |
| **6.3** | **SANS 1200LB** | **BEDDING** | | | | |
| 6.3.1 | 8.2.1 | Provision of bedding from trench excavation: | | | | |
| | | a) Selected granular material | $m^3$ | 1400 | | |
| | | b) Selected fill material | $m^3$ | 4200 | | |
| 6.3.2 | 8.2.2.2 | Provision from approved borrow pits including all costs for additional | | | | |
| | | a) Selected granular material (Prov) | $m^3$ | 840 | | |
| | | **AMOUNT CARRIED FORWARD** | | | | |

| | | AMOUNT BROUGHT FORWARD | | | | |
|---|---|---|---|---|---|---|
| | | b) Selected fill material (Prov) | $m^3$ | 2520 | | |
| 6.3.3 | 8.2.2.3 | Provision from commercial or off-site sources, where ordered by the | | | | |
| | | a) Selected granular material | $m^3$ | 560 | | |
| | | b) Selected fill material | $m^3$ | 1680 | | |
| | | c) 19mm crushed stone | $m^3$ | 400 | | |
| 6.3.4 | SANS 1200DB 8.3.3.4 | Overhaul | | | | |
| | | a) Short haul over 0,5km up to 1,0km (Prov.) | $m^3$ | 200 | | |
| | | b) Truck haul over 1,0km (Prov.) | $m^3$.km | 70546 | | |
| **6.4** | **SANS 1200L** | **Medium Pressure Pipelines** | | | | |
| | | uPVC PIPES | | | | |
| 6.4.1 | 8.2.1 LI | Supply, handle, lay, bed, joint, test and disinfect uPVC pipe with spigot and socket ends to SABS 966, Part 2 (1988) | | | | |
| | | a) 63mm diameter class 9 (u-PVC) | m | 1437 | | |
| | | b) 75mm diameter class 9 (u-PVC) | m | 6147 | | |
| | | c) 75mm diameter class 12 (u-PVC) | m | 12000 | | |
| | | d) 110mm diameter class 12 (u-PVC) | m | 5944 | | |
| | | e) 160mm diameter class 12 (u-PVC) | m | 2406 | | |
| 6.4.2 | 8.2.2 | Extra over Item D4.1 for the Supplying, Laying, and Bedding of Specials Complete with Couplings including jointing, cutting of pipes to length where required, testing and disinfecting. | | | | |
| | | *Specials and Fittings in uPVC* | | | | |
| 6.4.2.1 | | 90° Bends: | | | | |
| | | a) 63 mm diameter | No. | 4 | | |
| | | b) 75 mm diameter | No. | 35 | | |
| | | c) 110mm diameter | No. | 9 | | |
| | | d) 160mm diameter | No. | 7 | | |
| 6.4.2.2 | | 45° Bends | | | | |
| | | a) 63 mm diameter | No. | | | Rate Only |
| | | b) 75 mm diameter | No. | 15 | | |
| | | c) 110mm diameter | No. | 9 | | |
| | | d) 160mm diameter | No. | 0 | | Rate Only |
| | | **AMOUNT CARRIED FORWARD** | | | | |

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|---|---|---|---|---|---|---|
| | | **AMOUNT BROUGHT FORWARD** | | | | |
| 6.4.2.3 | | 22½° Bends: | | | | |
| | | a) 63 mm diameter | No. | 2 | | Rate Only |
| | | b) 75 mm diameter | No. | 38 | | |
| | | c) 110mm diameter | No. | 14 | | |
| | | d) 160mm diameter | No. | 5 | | |
| 6.4.2.4 | | 11¼° Bends: | | | | |
| | | a) 63 mm diameter | No. | 9 | | |
| | | b) 75 mm diameter | No. | 68 | | |
| | | c) 110mm diameter | No. | 25 | | |
| | | d) 160mm diameter | No. | 12 | | |
| | | Specials and Fittings in SG Iron | | | | |
| 6.4.2.5 | | Reducers (for uPVC pipe) | | | | |
| | | a) 200 x 160mm diameter | No. | | | Rate Only |
| | | b) 160 x 110mm diameter | No. | 4 | | |
| | | c) 110 x 75mm diameter | No. | 9 | | |
| | | d) 75 x 63mm diameter | No. | 6 | | |
| 6.4.2.6 | | Reducing Tees (for uPVC pipe) | | | | |
| | | a) 200 x 160mm diameter | No. | | | Rate Only |
| | | b) 160 x 63mm diameter | No. | 4 | | |
| | | c) 110 x 75mm diameter | No. | 9 | | |
| | | d) 75 x 63mm diameter | No. | 6 | | |
| | | e) 63 x 50mm diameter | No. | | | Rate Only |
| 6.4.2.7 | | Equal Tees (for uPVC pipe) | | | | |
| | | a) 200mm diameter | No. | | | Rate Only |
| | | b) 160mm diameter | No. | | | Rate Only |
| | | c) 110mm diameter | No. | 5 | | |
| | | d) 75mm diameter | No. | 54 | | |
| | | e) 63mm diameter | No. | 4 | | |
| 6.4.2.8 | | Socketed Hydrant tees (for uPVC pipes) as per detail on drawing (if flanged, the branch should be flanged to SABS, 1123 Table 1600/3, include for "Denso-wrapping" bolted connections in accordance with PSL.5.3 and 5.4) | | | | |
| | | **AMOUNT CARRIED FORWARD** | | | | |

| | | | | | | |
|---|---|---|---|---|---|---|
| | | **AMOUNT BROUGHT FORWARD** | | | | |
| | | a) 160 x 80mm diameter | No. | 1 | | |
| | | b) 110 x 80mm diameter | No. | 2 | | |
| | | c) 75 x 80mm diameter | No. | 2 | | |
| 6.4.2.9 | | End Caps (for uPVC pipes): | | | | |
| | | a) 63 mm diameter | No. | 15 | | |
| | | b) 75 mm diameter | No. | 49 | | |
| | | c) 110mm diameter | No. | 2 | | |
| | | d) 160mm diameter | No. | 2 | | |
| 6.4.2.10 | | Flange Adaptor (for uPVC pipes) | | | | |
| | | a) 160mm diameter | No. | | | Rate Only |
| | | b) 110mm diameter | No. | | | Rate Only |
| | | c) 75mm diameter | No. | | | Rate Only |
| | | d) 63mm diamter | No. | | | Rate Only |
| | 8.2.3 | Extra over Item D4.1 for the Supplying, Fixing, and Bedding of Valves | | | | |
| 6.4.3 | SANS 1200L 8.2.3 | Supply and Install CI RSV gate valves (socketed ends for uPVC pipe) to SABS 1123 Table 1600/3 and a cap top for key operation for the following diameters (include 15 Mpa concrete anchor block): | | | | |
| | | a) 63mm diameter | No. | 3 | | |
| | | b) 75mm diameter | No. | 10 | | |
| | | c) 110mm diameter | No. | 8 | | |
| | | d) 160mm diameter | No. | 1 | | |
| | | e) 200mm diameter | No. | | | Rate Only |
| 6.4.4 | | Hydrants<br>a) Supply and install complete standard fire hydrant installation complete to detail, Installation to include all fittings. Hydrant Tee and Chamber measured separately. | No. | 4 | | |
| 6.4.5 | 8.2.11 | Anchor/Thrust Blocks and Pedestals | | | | |
| 6.4.5.1 | SABS 1200L 8.2.11 | Construct anchor/thrust blocks to detail on D for tees, 90° bends and end caps: | | | | |
| | | a) 63mm diameter | No. | 5 | | |
| | | b) 75mm diameter | No. | 25 | | |
| | | c) 110mm diameter | No. | 15 | | |
| | | d) 160mm diameter | No. | 15 | | |
| | | **AMOUNT CARRIED FORWARD** | | | | |

| | | | | | | |
|---|---|---|---|---|---|---|
| | | **AMOUNT BROUGHT FORWARD** | | | | |
| 6.4.5.2 | | As for Items D4.5.1 above but for lesser bends: | | | | |
| | | a) 63mm diameter | No. | 2 | | |
| | | b) 75mm diameter | No. | 5 | | |
| | | c) 110mm diameter | No. | 5 | | |
| | | d) 160mm diameter | | | | |
| 6.4.5.3 | | As for Items D4.5.1 above but for reducers: | | | | |
| | | a) 63mm diameter | No. | | | Rate Only |
| | | b) 75mm diameter | No. | 5 | | |
| | | c) 110mm diameter | No. | 10 | | |
| | | d) 160mm diameter | No. | 10 | | |
| | 8.2.13 | Valve Chambers | | | | |
| 6.4.6 | | Construct valve chamber complete to detail on Dwg No. STD/VLVCH01 including manhole cover and locking bar. Allow for painting above ground section of chamber with two coats of yellow road marking paint. | No. | 5 | | |
| | 8.2.13 | Meter Chambers | | | | |
| 6.4.7 | | Construct meter chamber complete to detail on Dwg No. STD/MTRCH01 including manhole cover and locking bar. Allow for painting above ground section of chamber with two coats of yellow road marking paint. | No. | 3 | | |
| 6.4.8 | 8.2.8 | Markings or Marker Posts | No. | 8 | | |
| **6.5** | **SANS 1200LF** | **ERF CONNECTIONS AND PIPEWORK** | | | | |
| 6.5.1 | 8.2.1 | Supply and Install ERF Connections Complete with all saddles and clamps, HDPE Connection Pipes, Reducers, Tees, Couplings and all sundries including for excavation and backfill. Allow for Double ERF Connections that cross the road. | No. | 67 | | |
| 6.5.2 | 8.2.1 | Supply and Install ERF Connections Complete with all saddles and clamps, HDPE Connection Pipes, Reducers, Tees, Couplings and all sundries including for excavation and backfill. Allow for Single ERF Connections that cross the road. | No. | 45 | | |
| 6.5.3 | 8.2.1 | Supply and Install ERF Connections Complete with all saddles and clamps, HDPE Connection Pipes, Reducers, Tees, Couplings and all sundries including for excavation and backfill. Allow for Double ERF Connections on near side from the road. | No. | 215 | | |
| 6.5.4 | 8.2.1 | Supply and Install ERF Connections Complete with all saddles and clamps, HDPE Connection Pipes, Reducers, Tees, Couplings and all sundries including for excavation and backfill. Allow for Single ERF Connections on near side from the road.. | No. | 80 | | |
| 6.5.5 | 8.2.4 | Supply and Install Meters Complete with Couplings Including Yard Tap | | | | |
| | | **AMOUNT CARRIED FORWARD** | | | | **R -** |

| | | | | | | |
|---|---|---|---|---|---|---|
| **AMOUNT BROUGHT FORWARD** | | | | | | **R -** |
| 6.5.5 | 8.2.4 | Supply and Install Meters Complete with Couplings Including Yard Tap | | | | |
| | | Supply and install Elster Kent V130 water meter complete with ball valve, meter box, with Consumer Valve Box complete as per Detail on Drawing No. for Ø15mm size house connection pipe complete with all fittings and sundries including complete yard tap located a minimum of 1.0m and maximum of 5m inside property boundary to detail on Dwg No. STD/ERFCON01 | No. | 882 | | |
| 6.5.6 | 8.2.8 | Markings or Marker Posts | No. | 882 | | |
| 6.6 | | Supply and Install PRV valves (socketed ends for uPVC pipe) to SABS 1123 Table 1600/3 and a cap top for key operation for the following diameters (include 15 Mpa concrete anchor block) as per drawing: | | | | |
| | | i) DN100 | No | 2 | | |
| **TOTAL SCHEDULE 6 CARRIED FORWARD TO SUMMARY** | | | | | | |

| Schedule | Description | Amount |
|---|---|---|
| 1 | Preliminary and Generals | |
| 2 | Masibekela Raw Water Pump Station and Water Treatment Works | |
| 3 | Hoyi Bulkline | |
| 4 | Mbangwane Booster Pump Station | |
| 5 | Mbangwane Bulkline | |
| 6 | Mbangwane Water Reticulation Network | |
| **Sub-Total** | | |
| 10% Contingencies | | |
| 5% Contract Price Adjustment | | |
| **Sub-Total** | | |
| 15% VAT | | |
| **Total Tender Offer** | | |

**Name of Services Provider:** _____ **Name of Authorized Representative:** _____

**Signature:** _____ **Date:** _____

# PART C3: SCOPE of WORK

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# C3.1: DESCRIPTION of WORKS

- C3.1 DESCRIPTION OF THE WORKS

**EMPLOYER'S OBJECTIVES**

The employer's objectives are to deliver public infrastructure using labour-intensive methods with the aim of services delivery, job creation and poverty alleviation. The work entails upgrading of bulk and extension of retricvulation at Mbangwane. As part of the construction, job creation will occur through the employment of local labourers, local subcontractors.

The Employer desires that the work required be of a high standard and be completed in the shortest practical time whilst creating jobs for local labourers and contractors.

**N.B. All labour rates should be as per current SAFCEC rate.**

### C3.1.2 OVERVIEW OF THE WORKS

The project entails the upgrading of the existing bulk water supply infrastructure and the extension of the water reticulation network to improve water service delivery to Mbangwane and surrounding communities, including Hoyi, Kamandulo, Goba, and Ericksville. The proposed works are aimed at addressing current water supply challenges associated with ageing infrastructure, inadequate reticulation coverage, system losses resulting from unauthorised connections, and increasing future water demand. The scope includes the upgrading of bulk water pipelines, improvements to pumping and storage infrastructure, installation of new reticulation networks in previously unserved areas, and associated civil, mechanical, and electrical works. The project has been designed to accommodate the projected 25-year water demand while ensuring reliable, sustainable, and equitable access to potable water for existing and future residents within the project area.

### C3.1.3 EXTENT OF WORKS

The Works to be carried out by the Contractor under this Contract comprise mainly the following:

(a) .....Contractor's establishment on site
(b) .....Compliance with EMP requirements
(c).....Compliance with OHS act requirements
(d) .....Provisions of temporary workforce (ABE)
(e) .....Training of temporary workforce
(f) .....Housing, offices and laboratories for the engineer's personnel
(g) .....Maintenance of the road reserve including daily dust control
(h) .....Identifying and relocating of existing services
(i).....***Masibekela Raw Water Pump Station refurbishment and repairs***

1. .. Removal of suction pipes 500mmØ steel pipe, cleaning and installation of grated screen
2. .. Refurbishment of 2x existing ETANORM KSB pump sets including MCC, testing and commissioning

(j).....***Water Treatment Works***

1. .. Removal and replacement of dysfunctional 1x DN300 PN10 valve at the sedimentation tank
2. .. Removal and replacement of 8x DN300 PN Okzan butterfly valves complete with gearboxes
3. .. Removal and replacement of 3x DN150 valves
4. .. Replacements of existing sand media with new sand media (100m³)
5. .. Prechlorination system at the inlet
6. .. Sealing of clarifies
7. .. Upgrading of existing pump sets with new pump sets with capacity of 170.55m³/h and duty head of 92.94m
8. .. Upgrading of existing MCC panels

9. .. Installation of 250mm ultrasonic flow meter
10. Metering and upgrading of the truck filling point to include guardhouse

(k).....***Masibekela/Hoyi Bulk line***

1. .. Setting out
2. .. Clearing and grubbing
3. .. Excavation
4. .. Bedding and pipe laying 315mmØ uPVC (2.33km)
5. .. Installation of valves including chamber for, isolation valves, air valves and scour valves
6. .. Installation of bulk flow meter on KaMandulo draw-off and connection to existing KaMandulo pipeline (315mmØ to 250mmØ)
7. .. 1x provision road crossing
8. .. 1x railway crossing
9. .. Testing and disinfection

(m) .....***Mbangwane Tanks***

1. .. Dismantling of the tanks (1424kl and 565kl)
2. .. Demolition of concrete base slab
3. .. Construction of new concrete base slab
4. .. Re-assembling of the tanks with new rubber seals, sealants, bolt and nuts including replacement of rusted steel panels
5. .. Connection of pipe works and installation of 2x 150mm electromagnetic flow meters on both inlets.
6. .. Testing, disinfection and commisioning

(n) .....***Mbangwane Booster Pump Station***

1. .. Extension of the building with 12m² guardroom with toilet
2. .. Convention of operator room to include kitchenette, shower and toilet
3. .. Construction of roof slab at the pumphouse with hoist crane with capacity on 1.5ton.
4. .. Replacement of the roof structure (trusses and roof sheeting)
5. .. Replacement and reorientation of the pump sets. Pump capacity is Q=65m³/h with duty head of 93.46m
6. .. Provision of new MCC panels
7. .. Realignment of pipes (inlet and outlet)
8. .. Testing a commissioning

(o) .....***Mbangwane Bulk Line***

1. .. Setting out
2. .. Clearing and grubbing
3. .. Excavation
4. .. Bedding and pipe laying 250mmØ uPVC 1.672km
5. .. Installation of valves including chamber for air valves and isolation valves
6. .. Installation of bulk flow meter at the BPS and the reservoir
7. .. Blanket and main fill
8. .. 3x provisional road crossing
9. .. Connections to the 250mm existing bulk line
10. Testing and disinfection

(p) .....***Mbangwane Water Reticulation Network***

1. .. Construction of water reticulation network scope of works includes construction of approximately 28km water reticulation network consisting of 160mmØ, 110mmØ, 75mmØ and 63mmØ uPVC class 12 and 9 The reticulation network is inclusive of approximately 700 erven connections. The extend of works are:
    i)…. Setting out
    ii)… Clearing and grubbing
    iii)… Excavation
    iv)… Bedding and pipe laying
    v)… Installation of valves including chamber for air valves and pressure reducing valves.
    vi)… Blanket and main fill
    vii). Erf connections including meters and stand taps
    viii). Connection to the existing reservoir pipes

ix)..3x provisional roads crossing
x)...Testing and disinfection
xi)..Removal of unathorized connection and repairs

Details of the work are shown on the drawings and estimated quantities of the various types of work to be carried out under the contract are given in the Schedule of Quantities.

The Contractor's obligations shall also include strict compliance with any Environmental specifications and/or reports deemed to form part of this contract as well as any Occupation Health and Safety requirements.

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.

### C3.1.4 LOCATION OF THE WORKS

The Mbangwane area is located in Mpumalanga, South Africa, near the southern border with Eswatini, within the Ehlanzeni District Municipality. It is predominantly inhabited by Swazi-speaking communities, specifically under the Mahlalela Tribal Authority. This authority includes settlements such as Embuzini and surrounding villages, with its jurisdiction extending close to the borders of Eswatini and Mozambique. Surrounding areas include Tonga, approximately 26 kilometres south of Mbangwane, reachable via the R571, and Malelane, about 62 kilometres southeast, accessible via the R571 and R40, which serves as a gateway to the Kruger National Park. The project area lies within the Mahlalela Tribal Authority, situated east of the R571 from the Mananga border to Tonga. The region is characterized by rural settlements, farmland, and the strong cultural presence of the Mahlalela Swazi community.

| Site | Latitude | Longitude |
|---|---|---|
| Mbangwane | 29°49'45.80"S | 31°53'19.59"E |
| | | |

### C3.1.5 TEMPORARY WORKS

The Contractor shall, as relevant,

a) provide temporary drainage works, temporary pumps and other equipment as might be necessary for the protection, draining and dewatering of the works; and

b) Construct and maintain haulage, temporary access and construction roads, subject to the approval of the Employer, and permit the Employer, other Contractors, statutory bodies or any other person who might require legitimate access to or through the site for the purpose of executing legitimate business, free and unhindered usage of such roads.

c) Temporary water connections, Contractor's offices, storage sheds, latrines, barricading of Works shall be located in an approved position and subject to the approval of all authorities concerned.

d) Safety and Security of the Contractors' temporary works shall be at the Contractors' discretion.

e) The camp shall be adequately guarded during or outside working hours.

f) The Contractor shall supply all details necessary to assist the engineer in the compilation of the as-built drawings.

g) The contractor is to ensure that he obtains the necessary wayleaves and departmental approvals prior to commencing with any works within a road reserve or on public property.

**DESCRIPTION OF THE SITE AND ACCESS**

**PS.2.1 Location of Site**

The Projects is located in Mbangwane, in Nkomazi Local municipality within the Nkomazi Local Municipality, Mpumalanga Province.

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**PS.2.2 Access to Site**

Access to site is per normal vehicle.

**PS.2.3 Nature of the Ground and Subsoil Conditions**

A multi-disciplinary geotechnical materials investigation was conducted for the Upgrading of Bulk and Extension of Reticulation at Mbangwane. The investigation was undertaken in order to assess the engineering geological characteristics of the area, focusing on the geotechnical properties which will affect the proposed works.

The findings of this investigation are elucidated in their report, the summary of which is attached under item C4 of this document. All of the relevant material testing data is included in the report.

**PS.2.4 Construction in Confined Areas**

It will be necessary for the Contractor to work in confined areas. No additional payment will be made for work in "restricted areas", except in the case of structures as described in Sub clause 6108(d) of the Standard Specifications. In certain areas the width of the fill material and pavement layers may reduce to zero and the working space may be confined. The method of construction in these confined areas depends on the Contractor's Constructional Plant. However, the Contractor must note that measurement and payment will be in accordance with the specified cross-sections and dimensions, irrespective of the methods used to achieve these cross-sections and dimensions, and that the rates and amounts tendered will be deemed to include full compensation for any special equipment or construction methods or for any difficulty encountered in working in confined areas and narrow widths, and at or around obstructions, and that no extra payment will be made nor will any claim for payment be considered on account of these difficulties.

**PS.3 CONSTRUCTION AND MANAGEMENT REQUIREMENTS**

**PS.3.1 General**

The Contractor is referred to the relevant provisions of the SANS 1200 Standardized specification for civil engineering construction. These specifications shall be applicable to the contract under consideration and the Contractor shall comply with all requirements relevant to the project.

Certain aspects however require further attention as described hereafter.

**PS.3.2 Contractor Camp Site**

The contractor shall make his own arrangements regarding the establishment of a camp site and housing for his construction personnel and all regulations stipulated by the local authority shall be adhered to.

It is anticipated that the contractor’s choice of a camp site will be influenced by the availability of telephone and electrical connections as well as the supply of potable water.

This contract is to be executed in an area surrounded rural settlements and as such safety will be paramount. Furthermore, all due courtesy must be exercised in so far as local resources are concerned (labour and materials).

The Engineer will facilitate all communication with the target community.

(a) Water and Electricity

The Contractor is to make his own arrangements in this regard and should note that the Employer shall not be held responsible for any shortages of either water or power due to unforeseen

circumstances.

All water required for construction purposes is to be sourced by the Contractor and is to be allowed for in his rates.

(b) Location of Site Office

Suitable sites at each location will be identified once work commences. The contractor will need to make all necessary allowances for his own security, fencing etc.

The contractor is to provide adequate sanitary and waste facilities for his staff and is to ensure that each site camp is kept clean and neat at all times. No littering is to take place at either the camp or on the site.

The site is to be left in a neat, landscaped condition without any improvements on completion of the contract and final retention will not be released until such time as this condition has been complied with.

**PS.3.3 Security**

The Contractor shall be responsible for the security of his personnel and Constructional Plant on and around the Site of the Works and for the security of his camp, and no claims in this regard will be considered by the Employer. Provision is made in these specifications for **the** erection of a security fence around the site offices.

**PS.3.4 Water for Construction Purposes**

The Contract will be undertaken in an arid area with scarce water resources. The Contractor must make adequate provision in his Tender for all negotiations and procurement of water for construction activities, and all related costs will be deemed to be included in his tendered rates.

**PS.3.5 Additional Requirements for Construction Activities**

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

(b) Failure to maintain road signs, warning flashing lights, etc, in a good condition shall constitute ample reason for the engineer to bring the works to a stop until the road signs, etc, have been repaired to his satisfaction.

(c) The contractor may not commence constructional activities before adequate provision has been made to accommodate traffic in accordance with the requirements of this document and the South African Road Traffic Signs Manual (SARTSM – Vol 2, Chapter 13).

(d) The contractor may not proceed with permanent works before the required offices and laboratories of the engineer's site personnel have been erected by him. This includes the provision of electricity, sanitary arrangements, potable water and telephone, e-mail and fax facilities. In the event where the contractor cannot obtain telephone lines timeously from Telkom, a wireless system shall be provided for telephone, e-mail and fax facilities.

**PS.3.6 Temporary Latrines**

The Contractor shall provide sufficient latrine facilities for the use of his employees. He shall be entirely responsible for enforcing their use and for maintaining such latrines in a clean, orderly and sanitary condition to the satisfaction of the Engineer and the Employer. Latrines shall be positioned within walking distance from wherever employees or labourers are employed on the Works.

Where required, latrines shall be provided at the rate of one for ten persons and where applicable, the Contractor shall make his own arrangements and pay all charges for the removal of sewage.

**PS.3.7 Moving Existing Services**

Services belonging to any public or private authority, which require moving, shall be dealt with in the manner specified in SANS1200A.

The plans show the positions of services determined from observations and measurement but neither the Employer nor the Engineer accepts responsibility neither for the accuracy of the information nor for the omission of any information. The Contractor shall locate and mark the positions of hidden services in advance of construction and take all reasonable steps to protect existing works against damage, which may arise as a result of his operations on the site.

The Contractor will be held responsible for direct or consequential damage to any existing works including any claims which may arise as a result thereof and the cost of repair of any such damage shall be borne by the Contractor unless it is established by the Engineer that the Contractor exercised reasonable care and damage was unavoidable.

The owners and the Engineer shall be notified immediately of any damage done to existing works.

If so directed by the Engineer, the positions of existing works shall be changed by the Contractor to meet the requirements of the proposed work. The cost of such work shall be paid for at the applicable rates set out in the Schedule of Quantities or, in the absence of such rates, at rates mutually agreed between the Engineer and the Contractor.

Work required on known services has been tabulated in a services schedule. The schedule must be read in conjunction with the services plans.

All communication by the contractor with the relevant authorities in connection with services must be directed through the Engineer.

**PS.3.8 Training**

Technical skills, generic and management skills training shall be provided with the aim of providing locally employed labour with the technical skills required to undertake the work involved in the Contract, and of furthering small contractor development. Part D of the Project Specifications deals specifically with matters regarding training, and a payment item for that is included in Clause B 1231 of Part B of the Project Specifications.

**PS.3.9 Use of Local Resources**

A major objective of this Contract is the optimum use of local resources. One of the methods to be adopted to achieve this objective is through the implementation of labour-optimising construction methods. Labour-optimising construction is defined in Clause B 1156 of Part B of the Project Specifications.

**PS.3.10 Labour-Optimising Construction Activities**

**(a) General**

The portions of the Works listed in Sub clause (b) below shall, unless otherwise instructed by the Engineer, be constructed under this Contract using labour-optimising construction methods only. Payment for works identified in Sub clause (b) below shall be made in accordance with the pay items provided in the bill of quantities.

In respect of those portions of the Works which are not listed in Sub clause (b), the construction methods adopted and Plant used shall be at the discretion of the Contractor, provided always that the construction methods adopted and Plant used by the Contractor are appropriate in

respect of the nature of the Works to be executed and the standards to be achieved in terms of the Contract.

**(b) Operations to be executed using labour-optimising construction methods**

The following portions of the Works shall be executed using labour-optimising construction methods:

i. Pipe bedding
ii. Pipe laying
iii. Pipe blanket layer and main backfill
iv. Brickwork for buildings and chambers

**PS.3.11 Restrictions on the Use of Personnel in the Permanent Employ of the Contractor**

(a) The Contractor shall limit the use on the Contract Works of his permanently employed personnel to that of key personnel only (as defined in Part C of the Project Specifications) and shall, subject to the further provisions of the following parts of the Project Specifications

(i) Part C - Provision of the temporary workforce
(ii) Part D - Provision of structured training

execute and complete the Works using a temporary workforce employed directly by the Contractor and/or by Subcontractors.

(b) The Engineer may at his discretion, upon receipt of a written and fully motivated application from the Contractor and where he deems the circumstances to warrant, authorise in writing that the Contractor may use in the execution of the Works, workers not being his key personnel but who are in his permanent employ. Without limiting the generality of application of this sub clause, circumstances which may be considered by the Engineer to warrant the authorization of the use of the Contractor's permanent employees not being key personnel, include:
   (i) The unavailability of sufficient numbers of temporary workers and/or Subcontractors to execute the Works, provided always that the Contractor has proven that he has exercised his best endeavours and taken all reasonable actions to recruit sufficient numbers of temporary workers and Subcontractors and has exhausted all reasonable recruitment options
   (ii) The unavailability within the temporary worker pool and/or subcontractor sources available to the Contractor in terms of the Contract, of sufficient of the required knowledge and skills necessary for the execution of the Works or specific portions thereof, in cases where the time for completion allowed in the Contract is insufficient to facilitate the creation of the necessary skills through the provision of training as contemplated in this Contract
   (iii) Any other circumstances which the Engineer may deem as constituting a warrant.

**PS.3.12 Community Liaison and Community Relations**

In all dealings with the various communities and workers employed from within the communities, the Contractor shall take due cognisance of the character, culture and circumstances of the communities involved and shall at all times use his best endeavours to avoid the development of disputes and to foster a spirit of co-operation and harmony towards the Contract.

The Contractor shall at all times keep the Engineer fully informed on all matters affecting the Contract and the communities and shall attend all meetings of the Project Co-ordinating Committee as may be reasonably required by the Engineer. All matters concerning the communities shall be discussed and where possible, resolved at such meetings.

Where any resolution of the Project Co-ordinating Committee shall be contrary to the terms and provisions of the Contract, the Contractor shall not give effect to them without a prior written instruction from the Engineer. Where the Contractor is of the opinion that any instruction of the

Engineer issued in terms of this clause will result in him incurring additional costs which were not provided for in his tendered rates and prices, and/or that a delay in the progress of the Works will result, he will be entitled to submit a claim in terms of Clause 51 of the Conditions of Contract, provided always that the period of twenty-eight (28) days referred to in Clause 51 shall be reduced to three (3) normal working days in respect of all claims submitted in terms of this clause.

**PS.3.13 Construction Programme**

(a) Preliminary Programme

The Contractor shall include with his tender a preliminary programme on the prescribed form. to be completed by all Tenderers. The programme shall be in the form of a simplified bar chart with sufficient details to show clearly how the works will be performed within the time for completion as stated in the Contract Data.

The Contractor shall be deemed to have allowed fully in his tendered rates and prices as well as in his programme for all possible delays due to normal adverse weather conditions and special non-working days as specified in the Special Conditions of Contract, in the Project Specifications and in the Contract Data.

(b) Programme in terms of Clause 5.6 of the General Conditions of Contract

It is essential that the construction programme, which shall conform in all respects to Clause 5.6 of the General Conditions of Contract, be furnished within the time stated in the Contract Data. The preliminary programme to be submitted with the tender shall be used as basis for this programme.

**PS.3.14 Drawings**

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

The contractor shall be supplied with three complete paper copies of the construction drawings free of charge. The Contractor shall at his own expense produce all further paper prints required for the construction of the work.
Any information which the Contractor has control over and which is required by the Engineer to complete the drawings of record shall be made available to the Engineer before the Completion Certificate is issued.
Only written dimensions may be used. Dimensions are not to be scaled from drawings unless ordered by the Engineer. The Engineer will supply all figures / dimensions which are not shown on the drawings. The levels or dimensions given on the drawings are subject to confirmation on site.

**PS.3.15 Quality Assurance (QA)**

The Contractor will be solely responsible for the production of work that complies with the Specifications to the satisfaction of the Engineer. To this end it will be the full responsibility of the Contractor to institute an appropriate Quality Assurance (QA) system on site. The Engineer will audit the Contractor's quality assurance (QA) system on a regular basis to verify that adequate independent checks and tests are being carried out and to ensure that the Contractor's own control is sufficient to identify any possible quality problems which could cause a delay or failure.
The Contractor shall ensure that efficient supervisory staff, the required transport, instruments, equipment and tools are available to control the quality of his own workmanship in accordance with his QA-system. His attention is drawn to the fact that it is not the duty of the Engineer or the Engineer’s representative to act as foreman or surveyor.

**PS.3.16 Health and Safety**

The Works will be constructed in an area inhabited by people including many children.

It is a requirement of this contract that the Contractor shall provide a safe and healthy working environment and to direct all his activities in such a manner that his employees and any other persons, who may be directly affected by his activities, are not exposed to
hazards to their health and safety. To this end the Contractor shall assume full responsibility to conform to all the provisions of the Occupational Health and Safety Act No 85 and Amendment Act No 181 of 1993, and the OHSA 1993 Construction Regulations 2025 issued on 12 March 2025 by the Department of Labour.

For the purpose of this contract the Contractor is required to confirm his status as mandatory and employer in his own right for the execution of the contract by entering into an agreement with the Employer in terms of the Occupational Health and Safety Act in the form as included in Section C1.2.2
The rates and prices tendered by the Contractor shall be deemed to include all costs for conforming to the requirements of the Act, the Construction Regulations and the Employer's Health and Safety Specification as applicable to this contract.

Should the Contractor fail to comply with the provisions of the Construction Regulations, he will be liable for penalties as provided in the Construction Regulations and in the Employer's Health and Safety Specification.

**PS.3.17 Management of the Environment**

Respect for the environment is an important aspect of this contract and the Contractor shall pay special attention to the following:

(a) Natural Vegetation

Only those trees and shrubs directly affected by the works and such others as the Engineer may direct in writing shall be cut down and stumped. The natural vegetation, grassing and other plants shall not be disturbed other than in areas where it is essential for the execution of the work or where directed by the Engineer.

(b) Fires

The Contractor shall comply with the statutory and local fire regulations. He shall also take all necessary precautions to prevent any fires. In the event of fire the Contractor shall take active steps to limit and extinguish the fire and shall accept full responsibility for damages and claims resulting from such fires which may have been caused by him or his employees.

(c) Environmental Management Plan

In addition to the above, all requirements of the Environmental Management Plan (EMP) as detailed in C3.3, Particular Specifications, will be adhered to.

**PS.3.18 Climatic Conditions**

- *The following are the most reliable climatic information available and shall be used unless other values are mutually agreed upon beforehand:*

| Month | Average Rainfall (mm) | Ave Rain Days (Nn) |
|---|---|---|
| JAN | 192.5 | 8 |
| FEB | 153.4 | 7 |
| MAR | 109.5 | 6 |
| APR | 52.4 | 3 |

| | | |
|---|---|---|
| MAY | 16.1 | 1 |
| JUN | 7.6 | 1 |
| JUL | 6.7 | 1 |
| AUG | 12.8 | 1 |
| SEP | 24.8 | 2 |
| OCT | 75.1 | 5 |
| NOV | 99.1 | 6 |
| DEC | 145.1 | 8 |
| Total | 895.1 | 49 |

Rainfall gauging will be taken and recorded by the Contractor at his Site Office and agreed with the Engineer on a daily basis.

**PS.3.19 Drawings of Record**

Any information in the possession of the Contractor, which is necessary for the Engineer's Representative to complete his "drawings of record", must be submitted to the Engineer's Representative before a final payment certificate and a certificate of completion will be issued.

**PS.3.20 Borrow Pit Investigation**

A borrow pit investigation was undertaken of a proposed material source in close vicinity of the project site. An investigation was undertaken in order to assess the engineering geological character of the material source, focusing on the geotechnical properties which will affect the construction of the proposed new road.

The findings of this investigation are elucidated in their report, the summary of which is attached under item C4 of this document. All of the relevant material testing data is included in the report.

# C3.2: ENGINEERING

- C3.2 ENGINEERING

## C3.2.1 DESIGN

(a) The Employer is responsible for the design of the permanent Works as reflected in the Contract Documents unless otherwise stated.

(b) The Contractor is responsible for the design of the temporary Works (if applicable) and their compatibility with the permanent Works.

(c) The Contractor shall supply all details necessary to assist the Engineer in the compilation of the record drawings.

## C3.2.2 EMPLOYER'S DESIGN

The Employer's Design is contained in the Tender Documentation and Drawings. Amendments to the design, if necessary, will be issued during the construction phase.

## C3.2.3 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.

## C3.2.4 DRAWINGS

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 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.

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

The Drawings prepared by the Employer for the permanent Works are listed below and are bound in a separate document or is attached at the back of this volume. The Employer reserves the right to issue and/or amended additional drawings during the Contract.

## C3.2.5 DESIGN PROCEDURES

Not applicable.

# C3.3: PROCUREMENT

- C3.3 PROCUREMENT
- C3.3.1 PREFERENTIAL PROCUREMENT
- C3.3.1.1 Requirements

Tenders will be evaluated in terms of the Nkomazi Local Municipality Preferential Procurement Policy. Points will be awarded for price and specific contract participation goals as contained in the Tender Data.

- C3.3.1.2 Resource standard pertaining to targeted procurement

The Preferential Procurement Policy (PPP) of the Nkomazi Locall Municipality is applicable to this project. Refer to the Tender Data.

- C3.3.2 SUBCONTRACTING
- C3.3.2.1 Scope of mandatory subcontract works for LI items (Labour Rates)

a) Erection of diamond mesh fence including netting for site camp – R60m
b) Brick wall – R 80m
c) Plastering - R65/ m²
d) Painting – R65 / m
e) Relocation of Pit toilets – R 1200/Toilet
f) Hiring of Mobile toilets – R2500/month

However, local subcontractors should be considered provided they are capable.

- C3.3.2.2 Preferred subcontractors/suppliers

Where possible, local subcontractors should be considered for subcontract work provided they are capable.

- C3.3.2.3 Subcontracting procedures

The contractor is solely responsible for negotiating with local subcontractors.

- C3.3.2.4 Attendance on subcontractors

Not applicable.

# C3.4: CONSTRUCTION

- C3.4 CONSTRUCTION
- C3.4.1 WORKS SPECIFICATIONS

**AMENDMENTS TO THE STANDARD SPECIFICATIONS**

PSA SANS 1200 A: GENERAL
PSC SANS 1200 C: SITE CLEARING
PSD SANS 1200 D: EARTHWORKS
PSDB SANS 1200 DB: EARTHWORKS (PIPE TRENCHES)
PSG SANS 1200 G: CONCRETE (STRUCTURAL)
PHA SANS 1200 HA: STRUCTURAL STEELWORK (SUNDRY ITEMS)
PSL SANS 1200 L: MEDIUM PRESSURE PIPELINES
PSLB SANS 1200 LB: BEDDING (PIPES)

**PARTICULAR SPECIFICATIONS**

PB BUILDING WORKS

PC FENCING

**PSA GENERAL (SABS 1200 A)**

**PSA 1 STANDARDISATION MARK (CLAUSE 3.1)**

Add the following to the Clause:
All material delivered to the site shall bear the Official Standardisation Mark.

**PSA 2 CONTRACTOR'S CAMP (CLAUSE 4.2)**

**PSA 2.1 Restrictions on employee accommodation (Sub-clause 4.2)**

No housing is available for the Contractor's employees. The Contractor shall make his own arrangements to house his employees.
The Employer shall place an area at the disposal of the Contractor to enable him to erect his site offices, workshops and stores. Any temporary housing and facilities shall comply with the requirements of the local authority. The Contractor shall provide his own fencing and site security.

**PSA 3 DEALING WITH WATER (SUBCLAUSE 5.5)**

In addition to the items as set out in Subclause 5.5 the contractor shall also provide pumping equipment, pipes and other equipment as may be necessary.

**PSA 4 MEASUREMENT AND PAYMENT**

**PSA 4.1 Fixed charge and Value Related Items (Sub-clause 8.2.1)**

*Replace the sub-clause with the following:*
Payment shall be a lump sum to provide for the Contractor's expenses in connection with:
(a) setting up and maintaining his organisation, camps and plant on the site;
(b) effecting the insurance's and indemnities required in terms of the General Conditions of Contract
(c) meeting all other general obligations and liabilities which are not specifically measured for payment in these contract documents.
The lump sum total of items (a), (b) and (c) as measured and Fixed Charge Items and time Related Items shall not exceed 15% of the nett total Tender Amount. If the Tenderer should tender a higher amount for this item it shall be reduced to the amount allowed above and all other tendered prices increased in the proportion required to retain the same Nett Total Tender Amount.
The tendered lump sum shall not be subject to any variation if the actual value of work done under the Contract exceeds, or falls short of, the Tender Amount, or as a result of an extension of time for completion in terms of Clause 42 of the General Conditions of Contract.
Any payment made under this item shall not be taken into account when determining whether the value of a certificate complies with the "minimum amount of monthly certificate" laid down in the Appendix.
Before any payment is made under this item the Contractor shall satisfy the Engineer that he has provided on site an establishment and plant of good quality and in value exceeding that of the first instalment. The

Contractor may be asked to furnish documented proof that he owns the offices and plant on site, the value of which should exceed the amount claimed in the first certificate. In the event that the Contractor cannot satisfy the Engineer as to the value or ownership, the Engineer shall have the right to withhold part of any payments to be made under this item, until the Works have been completed.

Payment of the lump sum shall be made in three separate instalments as follows:

(a) The first instalment, 50% of the lump sum, will be paid in the first payment certificate after the Contractor has met all his obligations under this sub-clause and has made a substantial start on construction in accordance with the approved programme.

(b) The second instalment, 35% of the lump sum, will be paid when the value of the work done reaches one half of the Nett Total Tender Amount.

(c) The third and final instalment, 15% of the lump sum, will be paid when the works have been completed and the Contractor has fulfilled all requirements of this sub-clause. No payment for the scheduled Fixed Charge Items for this contract will not be made until the requirements regarding and the erection of name boards have been met.

**PSA 4.2 Time-Related Items (Sub clause 8.2.2)**

*Replace this sub clause with the following:*

Subject to the provisions of 8.2.3 and 8.2.4, payment of item 8.4.1 (time-related item) will take place in equal monthly amounts, calculated on the tendered amount for the item, divided by the contract period in months, with the understanding that the total of the monthly payments which was paid for this specific item does not exceed the proportion that the progress of the works to date bears in relation to the works as a whole.

Should the Engineer grant an extension of time, the Contractor is entitled to an increase in the amount tendered for time related items, and this increase must be kept in the same proportion to the original tender amount as the extension of time is to the original time of the completion of the works.

Payment for such increased amounts will be considered as full compensation for all time related, provisional and general costs which arise as a result of the extension of time.

**PSA 4.3 Facilities for Engineer (Sub clause 8.3.2.1)**

*Change the item descriptions of the following items as follow:*

**PSA 4.3.1 Item:**

a) Engineer's office Unit: sum

The tendered sum shall provide for an air-conditioned office and boardroom for the Engineer.

The boardroom shall be furnished with:

- 1 x conference table to seat 14 people
- 14 chairs

The office shall be furnished with:

- 2x office desks and chairs
- 2 x cabinets
- 1 x A1 plan holder
- 1 x fridge
- 1x Microwave
- 1x Kettle
- Aircon

**PSA 4.3.2 Item:**

c) Name board Unit: sum

The tendered sum shall provide for two contract name boards.

**PSA 4.4 Exposing of existing services**

Add the following new pay item:

**PSA 4.4.1 Item:**

Excavation by hand in all materials to expose existing services

Unit: cubic meter ($m^3$)

The tendered sum must include full compensation for all hand excavation as per the dimension approved by the Engineer for the locating, exposing and moving of existing services. Excavation outside of approved dimensions will not be paid. The rate must also include for backfill and compaction to 90% of mod AASHTO density and, if applicable, the removal of excess material not used for backfill, the securing of excavations, for handling surface and subsurface water, for protection of existing services and for any other activity necessary to complete the work. Free haul of 1,0 km will be applicable on the transport of excess material. No distinction will be made between classes of material or types of services.

Note: The Contractor must provide sufficient supervision over labourers when services are exposed."

**PSA 4.5 Occupational Health and Safety**

Add the following new pay items:

Provision for the cost related to the Occupational Health and Safety Act, 85 of 1993, and the relevant Regulations:

a) Preparation of a Health & Safety Plan. Unit: Sum

b) Compilation of a Risk Assessment prior to Construction. Unit: Sum

c) Health & Safety induction Training of employees. Unit: Sum

d) Compilation and keeping up to date the Health & Safety file which shall include all documentation required in terms of the act. Unit: Sum

e) Implementation of the Health and Safety Plan over the entire construction period. Unit: Sum

The tendered sum shall include full compensation for providing the above services as required from the Occupational Health & Safety Act. The rate shall include all related costs incurred by the Act, remuneration of personnel, trainers, etc. and equipment required for the execution of the required services as depicted by the Act. The tendered amount for items a, b, c and d shall only be paid on the successful completion of the task as approved by the client. The tendered amount for item shall be paid on a monthly basis.

**PSA 4.6 SUMS STATED PROVISSIONALLY BY THE ENGINEER**

*Add the following new pay items:*

**PSA 4.6.1 Item:**

a) Community Liaison Officer Unit: Sum

The total cost is calculated at a salary of R6,500 per month for the CLO and a handling fee will be paid to the main Contractor.

**PSA 4.6.2 Item:**

b) Additional laboratory testing as and when required by the Engineer Unit: Sum

**PSA 4.6.3 Item:**

c) Training for Civil Engineering Students Unit: Sum

The total cost is calculated at a salary of R 8, 000 per month for one Student and a handling fee will be paid to the main Contractor

**PSA 4.6.4 Item:**

d) Nominated sub-Contractor for **Civil** work. Unit: Sum

The above items are sums allowed for work to be carried out by nominated sub-Contractors. These sub-contractors will become the responsibility of the main Contractor and a handling fee is payable to the main Contractor.

**PSA 4.6.5 Item:**

g) Accredited Training for unskilled labour. Unit: Sum

The above items are sums allowed for work to be carried out by the Training provider and a handling fee is payable to the main Contractor.

## PSC SITE CLEARING (SANS 1200 C)

### PSC 1 GENERAL

The areas where work is to be carried out must be kept clean for the duration of the contract. All rubbish must be removed without delay and the site must be left clean and tidy on completion of the service.

### PSC 2 DUMPING SITE

No dumping is allowed on site other than at the designated and approved fill areas. Dumping will only be allowed for filling sinkholes and do lines and may not be detrimental to the natural storm water drainage of the area. Only soil, rock, clean masonry and concrete rubble may be dumped in the designated dump areas.

### PSC 3 REMOVAL OF TREES

No trees may be removed without written permission from the Engineer

### PSC 4 MEASUREMENT AND PAYMENT

**PSC 4.1 Item:**

Clear & Grub (Clause 8.2.1) Unit: ha or m or km

Add the underlined text to the second sentence of the item description to read as follow:

"The rate shall cover the cost of clearing the surface, removing boulders of size up to 0,15 m³, grubbing of trees and tree stumps (except large trees (**with girth over 1m**) and stumps as specified in 8.2.2 below), cutting of trunks and branches exceeding **0,5m up to 1,0m** in girth into transportable lengths....."

*Add the following to the pay item description:*

"The rate shall include for transport and disposal of material and debris to unspecified site and disposal thereof."

"The area (in ha) shall comprise the entire site to be cleared and grubbed within the limits to be indicated by the engineer on site in writing.

The area of clear and grub measured in linear meter (or km) shall be the sections outside the initial cleared area (measured in hectares), specifically applicable to pipeline routes outside the original cleared site area. The width and length shall be indicated by the engineer on site in writing."

## PSD SABS 1200 D: EARTHWORKS

### PSD 1 CONSTRUCTION (CLAUSE 5)

#### PSD 1.1 Excavation for working space (Sub-clause 5.2.2.1 b) and c))

*Add the following to the clause:*

Other than for the sides of strip or pad footings or where specifically authorized by the Engineer, no concrete shall be placed against the sides of excavations.

For external concrete faces below ground level, (other than concrete placed against the sides of excavations as above) the Contractor shall over-excavate to provide sufficient working space for the erection of formwork.

Tenderers shall allow in their rates for excavation for any over-excavation required for working space.

Excavation volumes for structures will be calculated as the nett volume of the structure below ground level after general site excavations have been completed. No additional payment shall be made for working space.

All water retaining structures shall be shuttered externally on vertical and on other faces inclined within 45º from the vertical.

#### PSD 1.2 Inspection (Sub-clause 5.2.2.1 d))

*Add the following to the clause:*

Excavation to final level, ready to achieve a binding layer or concrete footing, shall be completed less than 24 hours before such layer or footing is cast.

The Contractor shall arrange for the inspection by the Engineer or his Representative of all surfaces immediately before casting concrete.

#### PSD 1.3 Over-excavation to sides of excavation (Sub-clause 5.2.2.1 e))

*Add the following to the clause:*

Where the sides of excavations are over-excavated to establish safe slopes, provide access to excavations, or for other purposes not specifically required by the Engineer, such over-excavation shall be backfilled with material as required by the Engineer and compacted to a minimum density of 93% Mod AASHTO.

No separate payment will be made for this work.

#### PSD 1.4 Over-excavation (Sub-clause 5.2.2.1 e))

*Add the following to the clause:*

If the material in the bottom of an excavation is loosened, or if there is any over-excavation, any loose or disturbed soil shall be removed, and the over-excavation shall be replaced by mass concrete mix 15 MPa.

No separate payment will be made for replace over-excavation with concrete. No separate payment will be made for over excavation as defined in PSD 1.3 and PSD 1.4.

**PSD 1.5 Trimming of surface of bulk earthworks (add the following sub-clause 5.2.2.1 f))**

Where blinding, mass or structural concrete is to be cast or where precast elements are to be placed on surfaces established by bulk earthworks, the Contractor shall:

a) Arrange his bulk excavation operation so that over-excavation is avoided, taking into account the requirements in PSD 1.3.

b) Over-fill embankments while placing fills as necessary to allow for trimming and arrange his compaction operations to ensure that the specified density is achieved throughout the finally trimmed embankment; and

c) Shortly before casting concrete or placing precast elements, carefully remove the final layer and trim such surfaces to the design levels and profiles within Grade II degree of accuracy.

**PSD 1.6 Disposal of surplus material (Sub-clause 5.2.2.3)**

*Add the following to the clause:*

All surplus material from bulk excavation for concrete units and for pipework shall be dumped, levelled and spread on site at the areas as indicated by the Engineer.

**PSD 1.7 Free haul (Sub-clause 5.2.5.1)**

*Replace the sub-clause with the following:*

All haul within the site of works or within a distance of 1.0 km outside the extremities of the boundaries of the contract as indicated on the drawings shall be regarded as free haul.

**PSD 2 MEASUREMENT AND PAYMENT (CLAUSE 8)**

**PSD 2.1 Restricted excavation (add the following to sub-clause 8.3.3)**

*Add the following to this item:*

The volume of restricted excavation will be calculated from the net plan dimensions and the difference between the original ground profiles (or terraces), and the blinding layer (or no-fines) levels shown on the drawings. On the sides, the volume will only be calculated to the outside dimensions of the concrete structures. No additional payment will be made for the provision of working space, although it will be provided.

**PSDB SABS1200DB: PIPE TRENCHES**

**PSDB 1 CONSTRUCTION**

**PSDB 1.1 Free haul Distance**

All haul within the site of works or within a distance of 1.0 km outside the extremities of the boundaries of the contract as indicated on the drawings shall be regarded as free haul.

**PSDB 1.2 Measurement and Payment (Sub clause 8.1.1)**

The scheduled rates for excavation shall include dewatering of trenches.

## PSG SABS 1200 G: CONCRETE (STRUCTURAL)

### PSG 1 SCOPE OF WORKS

This specification covers the construction of all structural concrete elements.

### PSG 2 CONSTRUCTION

#### PSG 2.1 Classification of finishes (Sub-clause 5.2.1)

Add the following to the sub-clause:

Concrete surfaces which will be in contact with the natural ground or which will otherwise be covered on completion of the works, shall have a rough finish as specified in sub clause 5.2.1 (a).

Horizontal surfaces and surfaces with a slope not exceeding one vertical to two horizontal shall be finished to a wood float finish. For this finish the surface must be given a finish as specified in sub-clause 5.5.10.1 and after the concrete has hardened sufficiently, it shall be floated to a uniform surface free of trowel marks.

The finished surface shall be accurate to degree 1 as defined in sub-clause 6.2.

The visible vertical or near vertical surfaces of valve chambers, and culvert head walls or parapets shall be finished to a smooth surface, repaired and rubbed to remove projections.

The bagging of concrete surfaces to repair defects will not be permitted.

All concrete edges shall be provided with 25 mm x 25 mm chamfers.

#### PSG 2.2 Cover (Sub-clause 5.1.3 and 5.5.1.5)

Add the following to the sub-clauses:

The exposure conditions for all structures in the works shall be deemed to be “severe”. The minimum cover to reinforcement shall be 40 mm for water retaining concrete and 25 mm for all other concrete, unless otherwise specified on the Engineers drawings and bending schedules.

#### PSG 2.2.1 Spacers for reinforcement (sub-clause 5.1.3)

Add the following to the sub-clause:

Spacers of approved design include purpose made precast mortar blocks. No plastic spacer blocks will be allowed.

Where mortar blocks are used, they shall be properly shaped so as not to slip out of position and shall be made of the same mix as the mortar of the concrete in which they are to be placed.

The mortar shall be well compacted by approved means into the moulds to result in blocks with a density of at least 2 300 kg/m; and which are free from honeycombing. They shall be cured in water for at least seven days. Mortar blocks which have not been manufactured and cured strictly in accordance with these requirements or which are in any other way considered unsatisfactory by the Engineer, will be rejected and shall be removed from the Site.

**PSG 2.3 Strength concrete (Sub-clause 5.5.1.7)**

*Add the following sub-clause:*

The grade of strength concrete for each portion of the works will be indicated on the drawings and/or specified in the Schedule of Quantities. The grade of concrete will be designated as “Class S/A”, where “S” is the characteristic strength in Mpa and “A” is the maximum nominal size of coarse aggregate in mm.

With the exception of mixes weaker than 15 Mpa, all concrete for the Works shall be considered to be strength concrete in terms of Sub-clause 5.5.1.7.

No concrete shall be cast until the mix designs have been approved by the Engineer. The Engineer may call for revised mix designs at any stage during the contract.

Contractor to supply and test 6 No. cube test results for approval prior to commencement of the works.

Unless otherwise specified on the drawings or in the Schedule all structural concrete shall have a strength of 35 Mpa.

The concrete to be used on this contract shall be as follows:

(a) For all water retaining structures 35/19 MPa with a minimum cement content of 360 kg/m3 and a maximum of 420 kg/m3. The maximum water content shall not exceed 210 liter/ m3. The slump limits shall be 10-60mm. The water/cement ratio shall not be greater than 0,53.

(b) For all other structures not in contact with water 25/19 MPa concrete.

(c) For anchor blocks, benching and mass concrete, 25/19 MPa concrete.

(d) For no-fines concrete 15/19 Mpa concrete

These mixes shall be designed for vibration. All data reports prepared by the Institute shall be submitted to the Engineer for information and approval.

***DESIGN OF CONCRETE MIX***

The concrete mix design shall be prepared by an approved independent laboratory and submitted to the Engineer for approval. Historical data shall be provided for a similar mix design to the same strength.

The successful Tenderer will be required to submit samples of the fine and coarse aggregate which he proposes using, to an approved laboratory for tests regarding the suitability of such aggregates. The laboratory shall prepare trial mixes of the two stronger grades of concrete required for the contract to establish acceptable design mixes.

**PSG 2.4 Formwork and finishes (Sub-clause 5.2)**

*Add the following to the sub-clause:*

*FORMWORK TIES*

The use of sleeves through the concrete for formwork ties will not be permitted. Ties, when cast in, shall have some form of positive shear key to prevent any rotation when loosening formwork.

The formwork ties and bolt holes shall be placed with regularity and precision.

The finish of exposed concrete surfaces of concrete structures shall be “smooth” as detailed in (b) of sub-clause 5.2.1.

*FILLETS AND CHAMFERS*

All internal and external angles in concrete works shall have 25 mm x 25 mm fillets and chamfers unless shown otherwise on the drawings.

The units rate tendered for formwork shall cover the cost of forming these chamfers and fillets.

**PSG 2.5 Joints (Clause 5.5.7)**

*Add the following to the sub-clauses:*

**PSG 2.5.1 General**

Notwithstanding Sub-clause 2.4.3 “designated joints” shall only be joints shown on the drawings and in the Schedule. Further joints required by the Contractor because of construction limitations or any other reason, shall be deemed to be “undesignated joints”.

The position and pattern of all joints (designated or undesignated) shall be to the Engineer’s approval.

All joints (designated or undesignated) except expansion and contraction joints shall be treated in accordance with Sub-clause 5.5.7.3.

Joints between tank bottoms, floors or wall bases and the walls and columns standing on them, shall not be made flush with the supporting surface, but shall be made in the wall or the column a distance of 140 mm above the base. The 140 mm high “riser” shall be cast as an integral part of the bottom, floor or base, i.e. the concrete in the riser shall be deposited at the same time as the concrete in the bottom, floor or base adjacent to it.

In cases where there is a fillet at the bottom of the wall or column, the construction joint shall be made 140 mm above the fillet.

The Contractor should note that the details of the undesignated joints shall be identical to the designated joints shown on the drawings where the joint is in a similar situation and performs the same duty.

The Contractor shall further note that the position and the type (where no identical designated joints exist) of undesignated joints shall be subject to the Engineer’s approval.

**PSG 2.5.2 Construction joints (Sub-clause 2.4.3 and 5.5.7)**

All joints other than expansion, contraction or other movement joints, shall be treated as follows :
As soon as practical, but not before 15 hours after placing, the joint surface shall be prepared to receive fresh concrete.
This preparation, as specified in Sub-clause 5.5.7.3 (a) to (d) shall be such as to remove all laitance or inert and strengthless material which may have formed and the specified chipping and sand blasting shall be such as to produce a roughened surface all over.

Concrete surfaces, where concreting is interrupted, shall be protected from the sun as specified in Sub-clause 5.5.8 (d).

PSG 2.5.3 **Construction joints** (Sub-clause 5.5.7.3)

No vertical construction joints other than those shown on the Drawings may be formed without prior approval. Horizontal construction joints may be formed if the method of construction does not allow for one continuous pour. However, these construction joint will be indicated to and approved by the Engineer. It must be noted that should the Contractor wish to form a construction joint in water retaining concrete, the water tightness of this joint will remain the responsibility of the Contractor. In addition to the precautions to be taken as prescribed under clause 5.5.7.3, the Contractor may ensure water tightness by providing additional means (such as a bandage on the joints or wet to dry epoxy) to the approval of the Engineer. No additional payment will be made to the Contractor for ensuring that construction joints are watertight and the Contractor will have to include such costs in the rate for the concrete.

PSG 2.5.4 **Expansion and construction joints**

Expansion and contraction joints shall be made in the position and to the details shown on the drawings. The specified filler strips shall be attached to the complete side of the straight or grooved concrete joint by means of an approved adhesive.

**PSG 2.6 Items to be casted in or grouted into concrete (sub-clause 5.4)**

*Add the following to the sub-clauses:*

**PSG 2.6.1 Fixing for equipment and pipe specials supplied under this Contract**

a) The Contractor will be responsible for the forming of pockets and grouting in of pipe items and/or holding down bolts for equipment supplied under the contract.
b) Upon completion of the positioning and alignment of equipment, the Contractor shall, grout up pipe items, pockets and base plates (subject to (c) below) necessary for the permanent installation of the equipment.
b) Only after the Engineer is satisfied with the alignment and the level of each item of plant shall the Contractor grout up the base plates/pipe specials with an approved non-shrink grout.

**PSG 2.6.2 Fixing for equipment supplied under this contract**

Holding down bolts or other fixings required for the installation of hand stops, crane beams, ladders, handrails and other items supplied under the Contract, shall be provided by the Contractor. These fixings shall be cast in or grouted into pockets or installed by other means as approved by the Engineer.
Where anchor bolts are used which are installed into holes drilled into concrete or masonry, these shall be a type approved by the Engineer.

All anchor bolts shall be stainless steel grade 316.

**PSG 2.6.3 Pipes and conduits embedded in concrete**

Except with the written approval of the Engineer, no pipes other than those shown on the drawings shall be embedded in concrete and the approval of the Engineer for the position of all services to be embedded shall be obtained before concreting commences. The clear space between pipes of any kind embedded in reinforcement concrete and the clear space between such pipes and reinforcement shall not at any point be less than:

(a) 40 mm, or

(b) 5 mm plus the maximum size of coarse aggregate, whichever is the greater.

**PSG 2.6.4 Casting/grouting in of pipes and specials**

Where pipes are to be cast into concrete, the Contractor shall provide a box-out in the wall and grout the unit in at a later stage. When constructing such a box-outs, reinforcement shall not be cut, but shall run through the opening. Reinforcement shall be cut and/or bent out at a later stage to suit the item being cast in. After installation of the item the remaining reinforcement shall be bent back in position.
Where box-outs for pipes/specials have been provided in the walls, the Contractor shall be responsible for the grouting in of such pipes/specials regardless of whether or not these have been supplied by himself.
An approved non-shrink grout shall be used for the grouting in of pipes and specials after they have been positioned. The details and method statement is to be submitted to the Engineer for approval prior to the commencement of any grouting. The approval by the Engineer shall not relieve the Contractor from his obligation to provide a watertight joint between the concrete and grout used.

**PSG 2.7 Curing and protection (Sub-clause 5.5.8)**

*Add the following to the sub-clauses:*
Level or gently sloping surfaces shall be cured by one of the methods described in Sub-clause 5.5.8 (a) or (b) and vertical surfaces by the methods described in Sub-clause 5.5.8 (e) for a period of five days after casting for an ambient temperature of 5ºC or above and for eight days for an ambient temperature of below 5ºC.

**PSG 2.8 Concrete surfaces (Sub-clause 5.5.10)**

*Add the following to the sub-clauses:*

**PSG 2.8.1** Screed finish

After placing and compacting, the concrete on a top (unformed) surface shall be struck off with a template to the designated grades and tamped with a tamping board to compact the surface thoroughly and to bring mortar to the surface, leaving the surface slightly ridged but generally at the required elevation. No mortar

shall be added, and noticeable surface irregularities caused by the displacement of coarse aggregate shall be made good by re-screeding after the interfering aggregate has been removed or tamped.

**PSG 2.8.2 Wood float finish**

Where wood floating is ordered or scheduled, the surface shall first be given a finish as specified in PSG 2.5. and, after the concrete has hardened sufficiently, it shall be wood-floated, either by hand or machine, only sufficiently to produce a uniform surface free from screed marks.

**PSG 2.8.3 Steel float finish**

The surface of tank bottoms, floors and roof slabs, etc. shall be given a steel float finish in accordance with Sub-clause 5.5.10. To Degree 1 accuracy.

**PSG 2.8.4 Power floated finish**

Where power floating is required the surface shall be treated as specified in PSG 3.11.2 to a degree necessary.

**PSG 2.9 Screeds (add the following sub-clause 5.5.16)**

*GRANOLITHIC SCREED*

Granolithic screed shall consist of: Cement - 1 part; Sand - 1.25 part; Coarse aggregate - 2 parts.

The coarse aggregate shall consist of granite or other approved chips which shall pass a 10 mm sieve and be retained on a 5mm sieve.

The cement/water ration of the mix shall be at least 2,0 mass.

**PSG 2.10 Repairs and defects (add the following sub-clause 5.5.17)**

All defects to the concrete shall be attended to, in full, as soon as possible after the formwork is removed. Further concreting of the element concerned may be prohibited by the engineer until he is satisfied that this remedial work has been satisfactorily attended to.

**PSG 2.11 Porous Concrete (add the following sub-clause 5.5.1.8)**

Porous concrete shall be laid under foundations and floor slabs, and behind walls, etc., where shown on the drawings and where directed by the Engineer.

Porous concrete shall be placed behind shuttering to form a vertical layer against the external face of foundations, etc. where shown on drawings and where directed by the Engineer.

The thickness of the horizontal, sloping and vertical layers shall not be less than that shown on the drawings.

The exposed faces, both horizontal and vertical, of the porous concrete shall be finished with a cement mortar seal, as specified in Clause PSG2.11.3, where reinforced concrete is to be cast against it.

The schedule rates for porous concrete shall include the cost of the mortar seal and steel float finish.

Porous concrete shall comprise water, cement, coarse aggregate and not more than 5 % by mass of fine sand. Every size of aggregate shall be a single size aggregate, graded in accordance with SABS 1083.
The voids ratio of porous concrete shall not be less than 27,5 %.

No-fines concrete shall be classified by the prefix NF and the size of the aggregate to be used. Class NF19 means a no-fines concrete with a 19 mm nominal size. The volume of aggregate per 50 kg of cement is to be as follows:

| Class | Aggregate Size | Aggregate per 50kg cement | Minimum Average Strength of a set of three test cubes after 28 days (MPa) |
|---|---|---|---|
| NF38<br>NF19<br>NF13 | 38<br>19<br>13 | 0.33 m³<br>0.30 m³<br>0.27 m³ | 5.5<br>5.5<br>5.5 |

**PSG 2.11.1 Batching and Mixing**

The quantity of water to be added shall be just sufficient to form a smooth grout which will adhere to and coat completely each and every particle of aggregate, and which is just wet enough to ensure that at points of contact of aggregate the grout will run together to form a small fillet to bond the aggregate together. The mix shall contain no more than 20 liters of water per 50 kg of cement.
Mixing shall be carried out in an approved batch type mechanical mixer. The whole batch of aggregate together with half of the water shall be placed into the mixer and mixed together for at least half a minute. The cement, followed by the balance of water, shall subsequently be added and the mixing shall continue for at least 1,5 minutes or as much longer as is necessary to ensure that all aggregates are uniformly coated with cement grout.
Testing of porous concrete shall be carried out in accordance with test method 3 of BS 1881 Part 3 : 1970.

**PSG 2.11.2 Placing**

The Engineer shall be timeously advised to enable him to inspect the excavations or form work before no-fines concrete is placed.
After the placing of the concrete has commenced, it shall be continued uninterrupted and may only be halted at the construction joints approved by the Engineer. Control shall be exercised to ensure that no placed green concrete lies for longer than 30 minutes before being covered with fresh concrete and that the concrete is placed in its final position within 20 minutes after the cement has been loaded into the mixer.
The concrete shall be worked sufficiently to ensure that it completely fills the space to be concreted and that adjacent aggregate particles are in contact with one another. Excessive tamping or ramming shall be avoided and under no circumstances shall the concrete be vibrated.

**PSG 2.11.3 Mortar seal over porous concrete**

Where concrete is to be cast against previously cast porous concrete, the surface of the porous concrete shall be sealed with a 5 mm thick layer of mortar composed of one part normal Portland cement to two parts of fine aggregate by mass, trowelled on before screed to provide a dense, smooth, uniform plane surface without filling any of the internal voids of the porous concrete. The surface of the seal shall have a steel float finish.

**PSG 2.11.4 Protection**

All no-fines concrete shall be protected from the elements, particularly from strong wind, flowing water, damage to the surface and loss of moisture. Protection against loss of moisture shall be accomplished by one or more of the following methods :-

(a) Keeping form work in place.
(b) Covering exposed surfaces with sacking or other approved material that is kept continuously wet.
(c) Covering exposed surfaces with plastic sheeting

**PSG 2.11.5 Sealing of surface of no-fines concrete**

Where indicated on the drawings or instructed by the Engineer, the surface of the no-fines concrete shall be sealed with a layer of 1:8 cement mortar to prevent loss of moisture from the structural concrete.
This seal shall be placed after the no-fines concrete has hardened and must be leveled off to the same level as the top of the no-fines concrete.

**PSG 3 MATERIALS (CLAUSE 3)**

**PSG 3.1 Concrete**

**PSG 3.1.1 Cement (Sub-clause 3.2.1)**

*Add the following to the sub-clause:*
The type of cement to be used for concrete structures shall be approved by the Engineer.

**PSG 3.1.2 Storage of cement (Sub-clause 3.2.3)**

*Add the following to the sub-clause:*
Cement shall not be kept in storage for longer than eight weeks without the Engineer's permission.
Cement which has been damaged in any way or which has been stored on site for a period exceeding three months shall be condemned and removed from site.

**PSG 3.1.3 Aggregates (Sub-clause 3.4)**

*Add the following to the sub-clause:*
Concrete with reactive aggregates:

The Contractor shall supply a test certificate for the aggregate confirming that it is not reactive.
With each delivery of materials under this clause the Contractor shall supply acceptable written evidence that this clause is being complied with.

**PSG 3.1.5 Use of plumbs (Sub-clause 3.4.2)**

*Add the following to the sub-clause:*
The use of plumbs shall not be permitted.

**PSG 3.1.6 Admixtures (Sub-clause 3.5)**

*Replace this sub-clause with the following*
Admixtures may only be used with the prior approval of the Engineer. Super plasticizers of the sulphated naphthalene formaldehyde condensates are preferred. No air-retaining properties will be tolerated.

**PSG 3.2 Joint materials (add the following new sub-clause 3.9)**

**PSG 3.2.1 Primer**

An approved primer, fully compatible with and/or manufactured for the specified jointing and sealing materials shall be applied to the joint surfaces.

**PSG 3.2.2 Filler**

Fillers shall be closed-cell expanded polyethylene.
Fillers shall be pre-cut to suit the application with a tear-out strip for forming the specified recess for the bondbreaker and sealant.

**PSG 3.2.3 Sealer and breaker**

The elastomeric sealant shall be a two-pack polyurethane type (gun grade for vertical joints) generally conforming with the physical properties specified in SABS 110, and used with primers as specified above.
The bondbreaker placed immediately prior to application of the sealant shall be a self-adhesive vinyl type (or similar approved material) with a width the same as the joint recess into which it is to be applied.

**PSG 4 TESTING (CLAUSE 7)**

**PSG 4.1 Grouting (add the following new sub-clause 7.4)**

The Contractor shall, where so ordered, carry out a site test for each grouting procedure and each grouting gang to be used. The tests shall be carried out on a dummy bedplate similar in configuration to that which is to be grouted, but not exceeding 1 $m_2$ in area unless otherwise ordered.
When the dummy bedplate is dismantled, the underside shall show a minimum grout contact area of 80 % with reasonably even distribution of the grout over the surface grouted except that, in the case of expanding

grout, the minimum grout contact area shall be 95 %. The test shall show evidence of good workmanship and materials and the results shall be to the satisfaction of the Engineer.

The Contractor shall, when so ordered, make standard test cubes from various grout mixtures and also subject them to compression tests to determine whether the specified strength has been achieved.

Test procedures shall comply with the relevant requirements of Sub-clause 7.2.1 to 7.2.3.

**PSG 5 TOLERANCES (CLAUSE 6)**

**PSG 5.1 Permissible deviations (Sub-clause 6.2)**

*Add the following to the sub-clause:*

The degrees of accuracy of construction shall be as follows:

(a) All structures (including water retaining structures) – Degree II accuracy.

(b) All weirs (concrete) and weir plates shall have a tolerance of +1/-1 mm

**PSG 6 MEASUREMENT AND PAYMENT (CLAUSE 8)**

**PSG 6.1 Subsoil drainage (add the following sub-clause 8.9)**

Add the following pay item:

**Item:**

Subsoil drainage as per Engineers instruction

Unit:m

Add the following:

The rate tendered shall include the following items:

a) Excavation for the filter drain (0.125$m_3$/m)

b) Backfill around filter.

c) Non-woven geofabric (u-24 or similar approved) – 1500mm/m

d) 19mm stone wrapped in geofabric (0.12$m_3$/m)

e) 100mm Dia. Slotted PVC drain pipe

The rate tendered shall include for the delivery to site and the installation of the filter to the satisfaction of the Engineer. The rate tendered to be deemed to cover in full any of the three options as may be instructed by the Engineer.

**PSG 6.2 Grouting / casting in of pipe specials (add the following sub-clause 8.10)**

*Add the following pay item:*

**Item:**

Grouting / casting in of pipe pieces in the following diameters (Refer to PSG 2.6.4)

i) 150 dia flanged steel pipe Unit (No)

ii) 200 dia flanged steel pipe Unit (No)

The rate shall include all labour, plant and material for the grouting/casting in of pipes of the above items as per PSG 2.6.4. The actual pipe/item to be cast in is measured elsewhere.

**PSG 6.4 No-fines concrete (add the following sub-clause 8.12)**

*Add the following pay item:*

**Item:**

No fines concrete (NF19) to a minimum thickness of 80mm underneath structures, complete with mortar seal Unit ($m_2$)

The rate shall include all labour, material, plant and resources to provide a no-fines concrete layer complete with mortar seal as specified in clause PSG2.11 (porous concrete).

**PSG 6.5 Items cast into concrete (add the following sub-clause 8.13)**

*Add the following pay items:*

**Item:**

Supply and install the following pipe pieces to be cast into concrete):

i) 32 dia uPVC pipe - 200mm long Unit no
ii) 110 dia uPVC pipe - 200mm long Unit no
iii) 150 dia uPVC pipe - 200mm long Unit no
iv) 250 dia uPVC pipe - 200mm long Unit no

Small pipes in diameter less than 200 mm cast into concrete to form a conduit will be measured by number. Separate items will be scheduled for different diameter pipes and different lengths. The rates shall cover the cost of supply of the pipes and cutting it to length. The installation and casting it in is measured elsewhere.

**PSG 6.6 Step irons (add the following sub-clause 8.16)**

*Add the following pay items:*

**Item:**

Step irons (Calcamite or similar approved) Unit : No

The rate shall cover all costs to supply and install the step iron. The rate shall include for the drilling into the concrete, supplying and installing chemical anchors as well as the setting out of the step irons in the correct position.

**PSG 6.8 Scour valve outlet (add the following sub-clause 8.17)**

*Add the following pay items:*

**Item:**

Scour valve outlet Unit : Sum

The rate shall cover all costs to construct the scour valve outlet. The rate shall include for all labour and materials to construct the complete scour outlet including excavation and compacting, blinding layer, concrete, reinforcing, stone pitching, brickwork and plastering etc.

**PSHA SABS 1200 HA: STRUCTURAL STEELWORK (Sundry Items)**

**PSHA 1 MATERIALS (CLAUSE 3)**

**PSHA 1.1 Structural Steel (Clause 3.1)**

*Add the following to this clause:*

All structural steelwork, including pipe supports and ladders will be to SANS 1421 Grade 300 W. The Contractor must allow in his rates to provide for shop details. Corrosion protection to be hot dipped galvanising to the requirements of EN 10240 : 1997 and SANS ISO 1461 : 1999 unless indicated differently. All handrails and flooring, including supports and fasteners shall be manufactured from hot dipped galvanised mild steel to the requirements of EN 10240 : 1997 and SANS ISO 1461 : 1999 unless indicated differently.

**PSHA 2 CONSTRUCTION (Clause 5)**

**PSHA 2.1 Holes for Fasteners (Clause 5.2.3)**

*Add the following to this clause:*

Holes for holding-down bolts shall not be flame-cut.

**PSHA 2.2 Welding (Sub-clause 5.2.4) (site welding)**

*Add the following to this clause:*

Manual flame-cutting is allowed only where authorised. Edges shall be grinded to be free of unevenness, defects and distortions.

Welding shall comply with SABS 044 Part III, SABS 044 Part iv and SABS 0162.

Welding shall be minimum grade B welding.

The qualification of welders shall be in accordance with the relevant clauses of the above standards, and specifically SABS 044 Part III and shall be Grade 1 welders. Grade 2 welders will be permitted only with the Engineers written approval.

The Contractor shall provide evidence, acceptable to the Engineer, that welding procedures and welders have been tested in accordance with the requirements of AWS D1.1-81.

No welding shall be permitted on site without the express approval of the Engineer, with the exception of those details shown on the drawings as Site Welded.

**PSHA 2.3.4 Handrails (cause 5.2.6)**

Handrails shall be of the two rail type, ball and stanchion, top mounted, type Mentis MT 90 or similar approved.

**PSHA 2.3.5 Prefabricated open and chequer plate floors (clause 5.2.8 & 5.2.9)**

Open grid steel covers and floor panels shall be pressure locked and welded as “Maclock” type “Eggcrate” or similar approved. All span bars shall have a depth of 40mm and be of such a width and at such a spacing

that the maximum deflection of any bar under a 10 kN/m2 uniformly distributed load shall not exceed 1/360 of the clear span. Under no circumstances will cutting and welding be permitted on site.

Framing to open grid "Maclock" or "Eggcrate" covers or panels shall be assembled and welded to the detail as shown on the drawings.

Chequer-plate flooring shall be of 6mm minimum thickness "treadplate" flooring or similar approved with raise 5-bar pattern and lifting key holes at each end of each plate.

Frames shall be angle and bar welded together and as detailed on the drawings.

## PSHA 4 MEASUREMENT AND PAYMENT (Clause 8)

### PSHA 4.1 Handrails (clause 8.3.2)

*Replace sub-clause 8.3.2 with the following:*

**Item:**

a) Top mounted handrailing Unit: m

b) Side mounted handrailing Unit: m

a) Stair mounted handrailing Unit: m

Measurement of handrails will be made per linear meter of complete handrail and will include for rails, stanchions, bends, end caps, end bends, joints, fixing materials, welding, fixing and corrosion protection (galvanising). Differentiation will only be made between top mounted, side mounted and stair mounted handrailing. The tendered rate shall include all labour, materials, equipment etc. Where temporary scaffolding is required for the erection of handrails no additional item is schedule and the rate shall include for this. The rate shall include for supply and installation.

### PSHA 4.2 Ladders (clause 8.3.3)

*Add the following to the clause:*

Ladders will be measured by number or specified length. The unit rate will be held to include for all materials and fastening supplied, for welding, erection and corrosion protection (galvanising). The rate shall include for supply and installation. The fasteners shall be the same material as the ladders.

### PSHA 4.3 Open grid/chequer plate flooring (clause 8.3.4)

*Add the following to the clause:*

The open grid or chequer plate flooring covers or panels will be measured by area, and the unit rates will be held to include for all cutting, welding, galvanising, etc. The cast-in angle support will be measured separately per linear meter. This rate will include for installation, galvanising, fixing complete with cement mortar and/or bolts/fishtail lugs which may be required to secure the frame. The rate shall include for supply and installation.

### PSHA 4.4 Manhole cover and frame (additional clause 8.3.7)

Supply and install complete 1000 x 1000mm access manhole cover and frame

*Add the following to the clause:*

Manhole covers and frames will be measured by number. The unit rate will be held to include for all materials and fastening supplied, for welding, erection and corrosion protection (galvanising). The rate shall include for supply and installation.

**PSHA 4.7 Pipe supports (additional clause 8.3.10)**

*Add the following new pay item:*

Pipe supports will be measured by number. The unit rate will be held to include for all materials supplied, for welding, drilling of holes, bolts, erection and corrosion protection. The rate shall include for supply and installation.

**PSHA 4.8 Galvanised MS I-beam (additional clause 8.3.11)**

The I-beam will be measured per linear meter as supplied and cast into the reinforced concrete roof. The unit rate will be held to include for all materials supplied, for welding, supplying of cast-in lugs, erection and corrosion protection. The rate shall include for supply and installation.

**PSL SABS 1200 L: MEDIUM PRESSURE PIPELINE**

**PSL 1 SCOPE**

All water pipelines in this contract shall be deemed to be medium pressure pipelines.

**PSL 2 MATERIALS**

**PSL 2.1 General (Sub-clause 3.1)**

*Add the following to the sub-clause:*

**Pipes**

All pipes shall be of class as indicated on the drawings. The corrosion protection to the flanged steel pipe material shall be either Epoxy Coated or Hot dipped galvanized to SABS specifications

**PSL 2.2 Isolating valves (Sub-clause 3.10)**

*Add the following to the sub-clause:*

Except where otherwise specified, isolating valves shall be of the resilient seal gate type, with a non-rising spindle and shall be arranged for clockwise closing. All valves shall be standard coated and shall receive a final coat of light blue enamel paint after installation. All valves shall be flanged and drilled to the specification.

Materials shall comply to the following specifications:

*Materials of Construction (minimum specifications)*

| *Component* | *Specification* |
|---|---|
| Body | Cast Iron to BS 1452 Gr 14 |
| Bonnet | Cast Iron to BS 1452 Gr 14 |
| Spindle seal housing | Cast Iron to BS 1452 Gr 14 |
| Hand wheel | Cast Iron to BS 1452 Gr 14 |
| Cap top | Cast Iron to BS 1452 Gr 14 |
| Gate | Spheroidal Graphite Iron to BS 2789 Gr 17 covered with nit rile rubber |
| Spindle | EN57 Stainless Steel |
| Spindle seal “O” rings | Nit rile rubber |
| Seal housing “O” rings | Nit rile rubber |
| Seal bush “O” rings | Nit rile rubber |
| Wiper ring | Nit rile rubber |
| Seal housing | Nylon |
| Spindle nut | Bronze to SABS 200 Code 30 |

A copy of the relevant valve specification of the proposed valves shall be attached to this tender document.

**PSL 2.2.1 Marking of valves**

The design pressure in Megapascal (MPa) shall be engraved on the side of the valve where it is legible. Valves shall be marked with the item number of the schedules when delivered to site.

**PSL 2.2.2 Handwheels and closure**

Where handwheels are specified edges shall be machined to a smooth surface. Wording “OPEN” and “CLOSE” will be casted into handwheels. Valves will close clockwise except where it is otherwise specified. Spindles will be of the non-rising type.

**PSL 2.2.4 Protection of valves**

Valves shall be painted externally with a zinc chromate primer according to SABS 679 Type 1. (Dry film thickness of 50 mnc) After installation damaged primer shall be made good with compatible primer in accordance with valve suppliers specifications.

Subsequently to making good of the primer the valve shall be painted with two layers of alkide based enamel according to SABS 630 Grade 1 (dry film thickness of 250 micro meter per layer) to match the colour of adjoining pipe work.

**PSL 2.2.5 Handling, delivery and installation**

All valves and related items shall be handled with the necessary care throughout all processes of manufacture, testing, delivery and installation. Valves furnished with lifting eyes shall be handled only by those eyes and other valves shall be handled solely with slings that will cause no damage.

In particular the inlet and escape orifices of air valves and special valves shall be effectively sealed after manufacture until completion of installation and this sealing shall be examined regularly to ensure that it is still effective.

Valves shall be effectively supported, packed or fastened down for transporting and care taken to avoid valves knocking together during transport.

Valves shall be stored in a safe place above ground and shall be protected against the ingress of foreign matter.

**PSL 2.3 Fittings (Sub-clause 3.12)**

*Add the following sub-clause:*

Generally all special fittings are to be manufactured in mild steel as applicable. No aluminum fitting shall be permitted. Fittings shall be compatible in respect of working and test pressure to those of the pipelines.

**PSL 3 CONSTRUCTION**

**PSL 3.1 Laying Depths and Cover (Sub-clause 5.1.4)**

*Add the following to sub-clause 5.1.4.1:*

Water mains shall be laid to follow the grades of the existing adjoining water, except where otherwise instructed by the Engineer. The depth from finished sidewalk level to the top of the pipe barrel shall be as follows, except where otherwise directed:

a) on sidewalks = 900 mm

b) below carriageways = 1 200 mm

c) outside road reserves = 900 mm

**PSL 3.2 Anchor / thrust blocks and pedestals (Sub-clause 5.5)**

*Add the following to the sub-clause:*

Dimensions of all anchor / thrust blocks shall be supplied by the Engineer as and when required. The Contractor shall request such information not less than 14 seven calendar days in advance.

**PSL 3.3 Crossing existing services (Sub-clause 5.1.4.3)**

There will be existing services that will be crossed. Generally these areas can be identified and careful hand excavation will be required to expose these services.

**PSL 3.4 Pipe laying personnel (Sub-clause 5.1.1)**

The laying of pipes and ancillary fittings shall be performed only by a qualified person who is registered as an artisan in the pipe fitting or drain laying trades, or is qualified by reason of having attended and passed the course on pipe laying of the Civil Engineering Industry Training Board.

**PSL 3.5 Steel pipes, specials and fittings scope**

This specification covers the manufacture, corrosion protection, delivery, erection, installation, making good of corrosion protection as well as over-coating as may be required, site-testing and commissioning of steel pipes, specials and fittings mostly for the conveyance of water, but also for air, at normal ambient temperatures between 5ºC and +70ºC.

**PSL 3.5.1 Manufacture of steel pipes**

Steel pipes with normal bore up to 150mm diameter shall be manufactured to conform to all the requirements of SABS 62 whereas steel piping of larger diameter shall be manufactured to conform to all the requirements of SABS 719, all as may be amplified or amended below.

The requirements regarding pipe sizes and grades, wall thicknesses, pipe lengths and pipe and requirements are specified in the Pipe Schedule and / or stated in the Schedule of Quantities.

The following minimum wall thicknesses shall apply:

| External Diameter (mm) | Minimum wall thickness (mm) |
|---|---|
| 168 – 406 | 4,5mm |
| 419 – 508 | 5,9mm |
| 570 – 864 | 6,0mm |

With regard to Sub-clause 4.2.2.1 in SABS 719 the Contractor shall, before commencing with pipe manufacture, satisfy the Engineer that the welding methods to be used in the pipe manufacture are adequate by:

a. The preparation of a weld sample employing precisely the same welding process, equipment and artisans by which the pipe shall be manufactured.

b. The preparation and destructive testing of the sample in (a) above, as laid down in Clause 7.2 of SABS 719.

The results of the tests on the test pieces shall comply with the requirements of Clause 7.2 of SABS 719 in all aspects.

Such destructive testing shall be carried out for each grade of steel and for each thickness of steel in that grade.

With regard to sub-clause 4.2.2.2 and 4.2.2.3 in SABS 719 the height of the inner weld reinforcement shall not exceed 1mm.

**PSL 3.5.2 Manufacture of pipe specials**

Only pipe conforming to the requirements of Clause PSL 3.5.1 above, may be used for the manufacture of pipe specials.

For pipes of nominal bore, up to 150mm diameter T-pieces shall be heavy class pipe only, with the same wall thickness for both main and branch pipes. The manufacturing process and quality requirements are as specified in the relevant section of BS 806 (Section 3).

Dimensions and joint types for pipes specials are specified in the Pipe Schedule and / or stated in the Schedule of Quantities.

Welding shall be done by a welder holding a valid competence certificate (Grade 1) in terms of SABS 044 – Part V. Butt-welded joints shall conform to the requirements for welding for pipes, and the Contractor shall prove all butt and fillet welded joints to be crack-free by carrying out dye penetrant tests, following the procedure laid down in BS 4416.

If at all practicable, pipe specials shall be subjected to hydraulic pressure tests as specified. Where this is not feasible, butt-welds must be subjected to radiographic inspection over their full length, with inspection procedure and acceptability limits for defects as specified in API 1104, keeping a record of all weld inspection and repair.

Where working pressures allow the use of malleable cast iron fittings for nominal bore up to 150mm diameter, these shall conform to the requirements of SABS 509.

**PSL 3.5.3 Pipe flanges, bolts and jointing**

**PSL 3.5.3.1 Material and dimensions for flanges**

The requirements for the materials and dimensions for flanges are in all respects as specified in SABS 1123.

A raised joint face shall be provided on all flanges of pressure rating higher than 2,5 MPa unless otherwise agreed to by the Engineer or as stated in the Schedule of Quantities, and the backs of cast of forged flanges shall be machined.

The machined surfaces of flanges shall be covered immediately after machining by a temporary rust preventative film of a suitable type as specified in BS 1133 (Section 6).

All flanges shall be drilled to SABS 1123 (Table 1600/3) or otherwise to the class as stated in the Schedule of Quantities or on drawings.

**PSL 3.5.3.2 Welding on of flanges**

The procedure for the welding-on of flanges, shall comply with the requirements of BS 806 (Section 3).

The proficiency of the welder and the quality requirements for the weld are the same as those specified in Clause PSL 3.6.3 above.

As a rule, the bolt holes in flanges for pipe specials shall not be on the vertical centre line.

When so specified in the Schedule of Quantities, flanged pipes shall be hydraulically tested after the welding-on of the flanges to a test pressure of 1,5 times the pressure rating of the respective flange.

**PSL 3.5.4 Bolts**

Materials and dimensional requirements of bolts and nuts are specified in SABS 135 or 136. These requirements shall correspondingly be prescribed by the Contractor when ordering.

The threaded length shall be adequate to allow two full threads to protrude beyond the nut after the latter is fully tightened.

Each bolt shall be fitted with a nut and steel washer and bolts, nuts and washers shall be cadmium plated in accordance with and to a thickness specified for Class A in BS 1706.

Unless otherwise indicated in the Pipe Schedule, the number of bolts to be supplied shall be determined on the basis that each flange is to be supplied with half the number of bolts required for that flange.

**PSL 3.5.5 Jointing**

Insertion for flanges shall be of compressed asbestos fibre jointing and shall have a uniform thickness between 1,5mm and 3mm and the material shall comply with BS 2815 for the specific pressure rating.

PSL 3.5.6 Pipe joints and coupling other than flanges

Pipe ends shall be prepared for the type of jointing and coupling as specified in the pipe schedule and / or stated in the Schedule of Quantities with the requirements for and preparations as specified in SABS 62 and 719 as applicable.

Standard couplings and flange adapters shall be of the Viking Johnson type or equivalent and all loose bolts with nuts and washers shall be cadmium plated in accordance with and to a thickness specified for Class A in BS 1706 and shall be lined and coated as specified in Clause PSL 3.6.8 below.

**PSL 3.5.7 Lining and coating of steel pipes, specials and fittings**

Corrosion protection onto the inside of pipework

Pipework with diameters up to 150mm

Hot dip galvanised in accordance with the specification.

Pipework with diameters greater than 150mm

All pipes, specials and fittings, including couplings and flange adapters, shall be fully lined and coated by COPON 2300 with a minimum of three coats to a minimum total dry film thickness of 250 micrometres on a steel surface that has been prepared by sandblasting to Grade SA 2.5 as specified in SIS 055900, with a delay of not more than four hours between sandblasting and the application of the first paint coat.

Successive paint coats shall be of different colours, and the colour of the final coat shall be approved by the Engineer prior to painting. Over-coating time between the applications of successive coats shall not exceed 24 hours.

Tape wrapping

All underground steel pipes joints (flanged, flexible coupling, etc.) shall be tape wrapped in accordance with this specification. No additional payment shall be made as the rate for the coupling shall include for the tape wrapping.

External steel pipe coating and wrapping specification:

A Denso Corroklad 750 tape or equivalent should be applied to the external surface of the steel pipeline.

The tape consists essentially of a specially formulated polyethylene film laminated to a pressure sensitive, non-hardening thermoplastic adhesive. The adhesive layer is generally one and a half times thicker than the polyethylene film.

The composite wrapping system provides a durable impact and cut resistant rockshiled for normal and rugged service conditions.

Technical Data

The following information pertains to the Corroklad 750 tape:

- The base layer is made of polyethylene and is 0,3mm thick.
- The adhesive layer consists of rubber modified bitumen and is 0,45mm thick.
- The product thickness is 0,75mm.
- The tape has a minimum tensile strength of 15 MPa.
- The minimum elongation at failure is 300%.
- The adhesive and peel strength of the tape at 25°C is 2,2N/mm and 1,65N/mm respectively.
- The minimum dielectric strength of the tape is 25 KV.
- Cathodic disbondment by ASTM G8 Method B is 425mm².
- The service temperature of the tape is –10°C to 65°C.

Application Procedure

Corroklad tape can be successfully wrapped by hand (maximum tape width 100mm) and by machine. The general application is detailed below.

Surface Preparation

- All dirt, loose ruste/mill scale and grease must be removed from the pipe surface.
- The minimum surface preparation acceptable for tape wrapping with Corroklad is ST2 (Swedish Standard SIS 055900-1967, Mechanical wire brushing).

Priming the Pipe Surface

- The primer to be used is Denso Primer D or equivalent Polymer Bitumen Solution, and is to be applied by means of a medium pressure cop gun.
- The primer may be thinned for application with white spirits or toluene.
- The primer should nominally cover 9m² liter.
- The minimum drying period at 20°C is 20 minutes.
- The flash point occurs above 23°C.
- If the pipes are prepared and primed off site, it may be necessary to apply a second coat of primer on site in order to rejuvenate the first application. This is only required if the pipe is being wrapped on site.
- The primer should be dust free prior to the application of the tape wrap system. Should the primer be contaminated, the surface must be reprimed.
- The primer should be allowed to dry for approximately 30 minutes at 20°C to 25°C prior to the application of the tape system.

Tape Application

- The Corroklad tape or equivalent should be spirally wrapped onto the primed pipe, utilising a 55% overlap.
    - 55% Overlap will ensure a minimum of two layers of tape at any point.
    - Ensure that a constant web tension of 10 to 15kg/100mm is maintained during wrapping.
    - At no time is the shrinkage of the total width of tape to exceed 2%.

Pipe Handling

- Non-metallic slings are to be utilised when handling the wrapped pipe sections or pipe, in order to ensure that no mechanical damage occurs to the tape.

**PSL 3.5.8 Making good and over-coating of steel pipes, specials and fittings**

**PSL 3.5.8.1 Steel pipes, specials and fittings**

After erection, all damage to the COPON coatings, shall be made good strictly in accordance with the paint supplier's detail specification. Prior to making good, a copy of these specifications shall be submitted to the Engineer.
Subsequent to the repair of COPON painted areas, all exposed pipework, as listed in the Schedule of Quantities, shall be cleaned of dirt, oil and such substances. These exposed pipe surfaces shall then be over-coated with two coats of polyurethane paint compatible with the COPON coating and in accordance with the paint supplier's detail specification including abrasion as may be necessary.

**PSL 3.5.8.2 Handling, delivery and installation**

All pipes, pipe specials and fittings shall be handled throughout the processes of manufacturing, corrosion protection, delivery and installation with all care necessary to prevent any damage.

After the corrosion protection of the outside of pipes and specials has been carried out, these items must be handled only by means of straps that will in no way damage the protection.

After completion of corrosion protection at the place of manufacture, all pipe ends shall be effectively closed off by at least a sheet of plastic held fast to the pipe and by binding wire.

This seal shall be checked specifically during delivery and after off-loading on site to confirm that it is still fully effective and shall immediately be repaired or replaced if damaged. Should there be the slightest danger of the ingress of foreign matter into the pipework during installation, the ends shall be kept sealed off all the time.

Pipes shall be supported during travelling on shaped and padded cradles while pipe specials shall be adequately supported and separated from each other to prevent any damage.

At the delivery points on site, pipes, pipe specials and fittings shall be supported by plastic sandbags of sufficient strength, such that the under sides of the pipes and pipe specials are at least 200mm off the ground. The number and positioning of supports under the pipes, shall be such as to prevent any undue pipe deflection.

Bolts, nuts, washers and jointing, shall be packed in strong metal or wooden containers with effective lids, with each different sizes of bolts grouped separately in hessian bags all clearly labelled as to their contents.
Pipe work shall be securely clamped in its final position by means of galvanised fittings.

**PSL 3.6 Flexible couplings at structures**

Flexible couplings shall be provided at the point where pipelines enter all structures.

**PSL 3.7 Valves (Sub-clause 3.10)**

**PSL 3.7.1 Scope**

This specification covers the requirements for material, manufacture, delivery, installation, over-coating as may be required, site-testing and commissioning for gate valves for use in pipe work, mainly for the delivery of raw and purified water, but also for air supply, at ambient temperatures up to 70°C.

**PSL 3.7.2 Break into main**

The Contractor shall break into and connect up to the existing water pipeline after all the work on the water main has been completed and tested. The Contractor shall arrange in co-operation with the local authority for the emptying of pipes and canal, excavations, etc. complete as required for the connection.

**PSL 3.8 Testing of pipelines (Sub-clause 7.3)**

**PSL 3.8.1 Test pressure (Sub-clause 7.3.1(a))**

*Replace the Sub-clause 7.3.1 with the following:*
All pipes shall be tested at 1.25 the working pressure at the specific point where the pressure test be executed. The Contractor shall identify the points on the pipeline where the hydrostatic pressure test be executed and shall notify the Engineer in advance in order for the Engineer to be able to furnish the Contractor with the required test pressure at the specific test point.

**PSL 3.8.2 Method of testing (Sub-clause 7.3.1(b))**

Add the following new clauses:

a) The Contractor shall provide an approved test pump, an accurate water meter, sealed pressure gauge, tested and certified by an independent testing organisation, and all other equipment, materials and labour required for the test.

b) The section of pipeline to be tested shall be clean and closed off at the ends by isolating valves, end caps or approved end-closure pieces

c) During the initial filling stage, the pipe section joints and all specials, fittings and valves shall be visually inspected for visible leaks and same rectified before proceeding with the test.

d) The pressure shall be maintained for one hour and if a pressure drop occurs, more water shall be added to reinstate the test pressure and the valve closed again. The quantity of water added shall be measured by recording the readings before and after pumping. This procedure shall be repeated for a period of 24 hours, with water added at hourly intervals where necessary to reinstate pressure and water meter reading

recorded. At the end of the 24 hour period, the aggregate quantity of water required to reinstate pressure over 24 hours shall be determined.

e) The Contractor shall give the Engineer 48 hours written notice of his intention to commence pressure testing and the Engineer may attend and supervise all or any part of tests. All records and recording charts shall be handed to the Engineer as soon as tests over any section have been completed.

f) All valves, specials, fittings and exposed joints, shall be inspected visually during the 24 hours pipeline test and all visible signs of leaks, sweating and distress shall be reported and attended to without delay.

g) Immediately after completion of the prescribed 24 hours hydrostatic test, all air valves shall be tested in turn before test pressure in the pipeline is released. Each air valve shall be isolated and the drain plug removed. The air valve shall work freely without restraint. The isolating valve shall be checked for leakage before replacing the plug. Finally, the automatic resealing of the air valves shall be checked by re-opening the isolating valve.

h) After completion of tests on air valves, the section of pipeline under test shall be completely refilled with water, if necessary, and pressured to the static head shown on the drawings or indicated by the Engineer. Each scour valve shall be checked by opening isolating valves where applicable for a duration sufficient to check the complete opening and closing cycles. If necessary, the pipeline shall be refilled after each individual test and re-pressurised to the prescribed static pipeline head in order to test all scours within the section under test.

**PSL 3.8.3 Remedial measures (Sub-clause 7.3.1 (c))**

Add the following new clauses:

a) Should the maximum leakage limits as specified be exceeded, the Contractor shall determine the position and cause of the leaks and shall take remedial measures at his own expense and to the satisfaction of the Engineer to stop such leaks and ensure the specified degree of water tightness.

b) If during the contract period of maintenance, the number of leaks and other defects is considered by the Engineer to be more than could reasonably be expected from a well laid pipeline operating under normal conditions, he may order the Contractor to re-test parts or the whole of the pipeline at the Contractor's own expense and no claims for escalation in costs or for whatever other reasons the Contractor might consider to submit claims shall be considered, except where such re-tests are the result from damages caused to the pipeline by the Employer."

**PSL 3.9 Concrete work (Sub-clause 5.13)**

*Add sub-clause 5.13 as follows:*

**PSL 3.9.1 Encased pipe work**

a) Where pipes and / or specials are permanently encased in concrete, e.g. in thrust blocks, walls of concrete valve chambers, stream crossings, etc., the coating over the portion to be so encased

shall be to the same standard as the rest of the pipeline, except where indicated to the contrary in the Schedule of Quantities or on the drawings.

b) Whenever it is necessary to encase pipes in concrete, the flexible joints shall not be encased and the concrete shall terminate 300 mm from the flexible joint.

c) All specials encased in concrete shall be painted with one coat of bitumen primer and two coats of bit mastic paint to a dry film thickness of 180 micrometers.

**PSL 3.9.2 Brickwork (Sub-clause 5.14)**

*Add sub-clause 5.14 as follows:*

a) Brickwork is to be built to the dimensions, thicknesses and heights as shown on the drawings.

b) All exposed brickwork shall be plastered and shall have joints raked out to a depth of 12 mm to ensure good plaster fond.

c) Mortar shall consist of one part cement to four parts approved sand by volume and shall be used within one hour of mixing.

d) Brickwork shall be built in stretcher bond and all common bricks shall be well wetted before being laid.

**PSL 4 MEASUREMENT AND PAYMENT**

**PSL 4.1 Steel specials and fittings (sub-clause 8.2.2)**

*Add the following payment item:*

**Item:**

Fabrication, supply, transport and install and test the following pipe fittings. All items to be approved by Engineer prior to ordering.

Unit: number (no)

The unit of measurement for payment for the manufacture, corrosion protection and final over-coating as may be required, delivery, installation of pipes, site-testing and commissioning of pipes, pipe specials and fittings conforming with this Specification shall be measured by number for each type, class and size as stated in the Schedule of Quantities.

The rates tendered and paid for valves and fittings must include the cost of the provision of an approved coating and the cost of any additional couplings other than those listed in the Schedule of Quantities to connect to the water mains.

All adapters and distance pieces required for the extension to the specified level and length as shown on the drawings for air and scour valves must be included in the rates for the units.

The cost of providing couplings, cutting pieces, etc. shall be allowed for in the rate tendered for pipe work.

**PSLB SABS 1200 LB: BEDDING (PIPES)**

**PSLB 1 MATERIALS**

**PSLB 1.1 Selected granular material (Sub clause 3.1)**

*Add the following to this sub-clause:*

Granular materials shall be selected from trench excavations. If the contractor elects not to apply selection of material from excavations, he shall provide suitable material from any other approved source at his own expense.

Bedding material shall be either of the following type:

a) Type A : Finally graded, composed of material with the following properties:

i) Percentage by mass passing:

4,75 mm screen - 100 %

0,425 mm screen - 80 to 100 %

0,002 mm screen - 0 to 45 %

ii) Liquid limit (LL) as determined in accordance with SABS Method 852 shall not be more than 15, when performed on all the material passing the 0,425 mm sieve.

iii) Plasticity index (PI) as determined in accordance with SABS Method 852 shall not be more than 15, when performed on all the material passing the 0,425 mm sieve.

iv) Linear shrinkage (LS) as determined in accordance with SABS Method 853 shall not exceed 5 %, when performed on all the material passing the 0,425 mm sieve.

b) Type B : Medium graded, composed of material with the following properties:

i) Percentage by mass passing:

*4,75 mm screen - 80 to 100 %*

*0,425 mm screen - 60 to 80 %*

*0,002 mm screen - 0 to 40 %*

ii) Liquid limit (LL) as determined in accordance with SABS Method 852 shall not be more than 35 %, when performed on all the material passing the 0,425 mm sieve.

iii) Plasticity index (PI) as determined in accordance with SABS Method 852 shall not be more than 18, when performed on all the material passing the 0,425 mm sieve.

iv) Linear shrinkage (LS) as determined in accordance with SABS Method 853 shall not exceed 7 %, when performed on all the material passing the 0,425 mm sieve.

c) Type C : Granular, composed of material with the following properties:

i) Percentage by mass passing:

*9,5 mm screen - 100 %*

*4,75 mm screen - 70 to 100 %*

*0,425 mm screen - 30 to 60 %*

*0,002 mm screen - 0 to 45 %*

ii) Liquid limit (LL) as determined in accordance with SABS Method 852 shall not be more than 40 %, when performed on all the material passing the 0,425 mm sieve.

iii) Plasticity index (PI) as determined in accordance with SABS Method 852 shall not be more than 20, when performed on all the material passing the 0,425 mm sieve.

iv) Linear shrinkage (LS) as determined in accordance with SABS Method 853 shall not exceed 10 %, when performed on all the material passing the 0,425 mm sieve.

Items a), b) and c) are conveniently summarized in the following table:

| Material | PERCENTAGE BY MASS PASSING SCREENS | | | | ATTERBERG LIMITS SHALL NOT EXCEED | | |
|---|---|---|---|---|---|---|---|
| | 9,5 mm | 4,75 mm | 0,425 mm | 0,002 mm | Liquid Limit (LL) % | Plasticity Index (PI) | Linear Shrinkage (LS) % |
| Finely graded / A | 100 | 100 | 80 - 100 | 0 - 45 | 30 | 15 | 5 |
| Medium graded / B | 100 | 80 - 100 | 60 - 80 | 0 - 40 | 35 | 18 | 7,5 |
| Granular / C | 100 | 70 - 100 | 30 - 60 | 0 - 35 | 40 | 20 | 10 |

**PSLB 1.2 Bedding (Sub-clause 3.3)**

*Add the following to this sub-clause:*

All steel pipes in the works shall be classed as “rigid” with flanged joints and shall be bedded on Class C bedding as described in sub-clause 5.2 of SABS 1200 LB, unless otherwise specified or instructed by the Engineer.

**PSLB 1.3 Backfilling of pipe trenches (Sub-clause3.5)**

*Add sub-clause 3.5 as follows:*

No backfilling of pipe trenches on top of the selected fill layer may commence without the written consent of the Engineer or his Representative.

**PSLB 2 CONSTRUCTION**

**PSLB 2.1 Waterlogged trench bottoms (Sub-clause 5.5)**

*Add sub-clause 5.5 as follows:*

a) Where trench bottoms are too soft and water logged to permit placement and compaction of bedding material in the normal manner, such trench bottoms shall be excavated to a depth of at least 300 mm below the underside of pipes and specials for the full width and length of the trench affected.

b) The full width and length of the trench bottom and at least 500 mm height of both sides of trench walls shall be covered by an unwoven approved geotextile, similar to Kaymat U24.

The full width and length of the trench shall thereupon be covered by a 300 mm thick layer of coarse gravel, coarse sand or 19 mm nominal size crushed stone, fully compacted within the confines of the geotextile to take the mass of the pipe filled with water and all loads on the pipe without settlement.

The free drainage layer shall be covered over the full width of the trench by a single layer of geotextile with the cloth on trench walls folded over and overlapping to completely seal off the free drainage layer against ingress of sand or fine soil particle.

Pipes shall be laid directly on the bed prepared as above and pipe bedding and selected backfill completed as specified.

**PSLG SABS 1200 LG: PIPE JACKING**

Refer to SABS 1200LG for pipe jacking and add the following:

a) Unless otherwise specified, the pipes for jacking shall be reinforced concrete pipes of the SC type and D-load designation 100D which complies with the relevant requirements of SANS 677. The actual diameters of pipes supplied shall be not less than the nominal diameters given on the Drawings or stated in the Schedule of Quantities. In addition to withstanding the specified two (or three) edge-bearing test load, the pipes shall be capable of withstanding, without being damaged, the maximum longitudinal force to be transmitted by the jacks during jacking.

Each Pipe jacking length for this project will not exceed 20m.

b) The Contractor shall furnish detailed design calculations, specifications and working drawings to explain his methods of installation and of providing temporary support for the road or structure and any modifications to structures required before pipe jacking commences. The above information shall, when required by the Engineer, also be provided in the case of pipe boring. The design shall be carried out by a professional engineer with adequate experience in this field. Calculations, specifications and drawings shall be signed by the engineer responsible for their preparation.

c) Before commencing work under a roadway, the Contractor shall measure levels on the road surface directly above the jacking line and for a distance of at least 5m on each side of the jacking line. These levels shall be measured at 500mm intervals and 300mm from the edges of the surfacing. In order to facilitate control of the measuring of levels, the exact position of each spot height shall be discreetly marked on the road surface before the levels are measured.

After completion of the Works the Contractor shall re-measure the levels in the same manner as before, and he shall submit to the Engineer the final records of levels taken before and after jacking. The submission of such records shall be a prerequisite for any consideration by the Engineer of the acceptability or otherwise of the Works or the issue of any certificate of completion. If, within the Defects Liability Period, the road shows any sign of settlement in the vicinity of the jacked pipe, the road authority may re-measure the levels on the site.

The Contractor shall be held responsible for the rectification, to the satisfaction of the road authority and the Engineer, of any deformation that occurs in the road surface as a result of the jacking operation during the said period of one year.

Should level measurements in accordance with this sub-clause also be required in respect of boring, it will be specified in the Project Specifications.

d) For pipe jacking, no blasting shall be carried out without the prior written permission of the Engineer, and without the necessary approval or clearance having been obtained from the relevant authority

d) Pipe Jacking Unit. Each.

(Road Crossing & River Crossing)

The unit rate must include full compensation for the establishment on site, full execution of the works and the subsequent removal of all special equipment and plant for pipe jacking, including the thrust block when

applicable, for maintaining the safety of existing structures, services, stream, etc. for bracing, lighting, watching, dewatering and surveying, and for maintaining all temporary works and execution of the works, until all of the works is completed.

This work will be paid ones each road crossing or river crossing is completed and the site reinstated to a condition acceptable to the Engineer.

e) Pipe Jacking Unit. Each.

The unit rate must include full compensation for the execution of the works and the subsequent removal of all special equipment, including the thrust block when applicable, for maintaining the safety of existing structures, services, etc. for bracing, lighting, watching, dewatering and surveying, and for maintaining all temporary works and execution of the works, until all of the works is completed. The culvert crossings are expected to not exceed 5m.

This work will be paid ones each Culvert Crossing is completed and the site reinstated to a condition acceptable to the Engineer.

**SECTION PB: BUILDING WORK**

**PB1 SCOPE**

This section of the Specifications deals specifically with all the building work associated with the Works.

Concrete work, steelwork, cladding, pipe laying, mechanical and electrical equipment, etc. forming part of or to be housed in a building erected in terms of this specification shall conform to the requirements of the relevant standardized or particular specifications referred to in the Project Specification.

**PB2 INTERPRETATIONS**

The relevant SABS 1200 Standardized Specifications such as Site Clearance, Earthworks, Earthworks (pipe trenches), Concrete (structural), Fabricated steel works, Mechanical works, Electrical Works, Low pressure pipelines, Bedding (pipes), Sewers and Stormwater drainage shall also apply to the work under this section.

**PB3 MATERIALS**

All materials used for the Building Work shall, where such mark has been awarded for a specific type of material, bear the SABS mark.

**PB3.1 Brick and Plasterwork**

Cement, sand and water shall conform to the requirements of SABS 1200 G - Concrete.

Unless otherwise described, cement mortar shall be composed of six parts by volume of sand to one part by volume of cement. The materials are to be mixed dry until the mixture is of a uniform colour and then clean water is to be added gradually through a fine rose and the mixture turned over until the ingredients are thoroughly incorporated.

Cement mortar must be mixed in small quantities and must be used within one hour of mixing, as the use of cement mortar that has commenced to set will not be permitted.

Plaster on concrete ceilings, beams, columns etc. shall be mixed one part cement to three parts sand.

Bricks shall be of the best quality sound hard burnt pressed bricks or in the absence of clay bricks, concrete bricks; even in size and shape and equal to a sample submitted to and approved by the Engineer prior to commencement of work.

Clay bricks shall conform with the requirements of SABS 227 and concrete bricks to SABS 987.

Damp proof courses, unless otherwise described, shall be an asphaltic damp proof course with a base of fibre felt, and complying with the requirements of SABS 248 Horizontal Damp Proof Courses, and with a mass of 3,25 kg/m2 or a plastic damp proof course of 15 micron thickness as Type B, complying with the requirements of SABS 952.

## PB3.2 Paintwork

### PB3.2.1 Primers

Plastered surfaces must be cleaned down and have one coat alkali resisting primer of an approved brand applied in strict accordance with the manufacturer's instructions, before any undercoats are applied.

Galvanised metal surfaces must be treated with one coat Metal Etch Primer complying with the requirements of SABS 723.

Steel surfaces must be treated with one coat Type Zinc Chromate Primer complying with the requirements of SABS 679.

Steel windows and doors and steel door frames, before being built in, must have all loose primer together with all rust spots, dirt, etc. removed and be treated with one coat red oxide or zinc chromate primer complying with the requirements of SABS 909.

Wood surfaces to receive paint finish must be cleaned down, all knots treated with knotting and be primed with Type I Wood Primer externally and Type III Wood Primer internally, both complying with the requirements of SABS 678.

### PB3.2.2 Paints

Emulsion paint for interior use must be Grade I Emulsion Paint complying with the requirements of SABS 663. Emulsion paint for exterior use must be of the Synthetic Polymer Base Type complying with the requirements of SABS 634.

High Gloss Enamel Paint Shall be used on all surfaces other than specified above. High Gloss enamel paint must be Grade I paint complying with the requirements of SABS 630 for decorative High Gloss Enamel Paints with a Non-Aqueous Solvent Base, for Interior and Exterior use.

Undercoats for paints, except Emulsion paints, must be Type I undercoat Paint complying with the requirements of SABS 681.

## PB3.3 Doors, Windows and Glazing

PB3.3.1 Doors

Unless indicated otherwise on drawings, all doors and door frames shall be of solid hardwood. Frames shall be fitted with suitable tie bars and braces at bottom, and lugs for building in, three to each jamb of frames without fanlights and four to each jamb of frames with fanlights. All doors shall be provided with locks to the requirements of SABS 4 and each lock shall be provided with a duplicate key.

PB3.3.2 Windows

Steel windows must be of approved manufacture and design, constructed of rolled mild steel sections, properly mitred and welded at angles with welding cleaned off smooth on all faces and complying with the requirements of SABS 727. Window types and sizes shall be as specified on the drawings.

PB3.3.3 Glazing

Sheeting glass for glazing, unless otherwise specified, must be flat drawn clear glass of the thicknesses indicated below:
For panes not exceeding 0,65 m2 : 3 mm
For panes exceeding 0,65 m2 and not exceeding 1,5 m2 : 4 mm

**PB3.4 Tiling**

PB3.4.1 Adhesives and Grouts

a) Wall adhesive

A grey, cement-based thin bed, wall tile powder adhesive for fixing tiles to walls mixed with a bonding agent such as 'Tylon - Bond It'.

b) Floor adhesive

A grey, cement-based thick bed, floor tile powder adhesive for fixing heavy tiles to floors or walls.

c) Wall grout

A cement-based, plasticized grouting compound for wall tile installation.

d) Bonding agent

A latex modified for use with adhesives and grouts to improve water resistance.

e) Silicone sealant

A silicone-based sealant of nearest approximate colour to tile, used to seal the corners of permanently wet areas and expansion joints (made at consistent interval positions) on large tiled surfaces.

PB3.4.2 Tiles

Tiles shall be of first grade quality glazed ceramic tiles, white in colour, a maximum size of 160 mm square, of a maximum thickness of 5 mm, unless otherwise specified.

## PB4 PLANT

Plant, equipment, tools, scaffolding, etc. utilised in building work shall be of suitable capacity, condition and design to ensure the satisfactory and timeous completion of the Works within the specified period and in terms of these specifications and good building practices.

Only registered artisans (e.g. plumbers, electricians, etc.) shall be employed on any work where this is compulsory building practice.

## PB5 CONSTRUCTION

### PB5.1 Brick- and Plasterwork

#### PB5.1.1 Normal Brick Walls

Brickwork must be built in stretcher bond. No false headers are to be used and none but whole bricks except where legitimately required to form bond. The bricks are to be well wetted (satured in hot weather) with water before being laid and the course of bricks last laid is to be well wetted before bedding fresh bricks upon it. All perpends and angles are to be kept plumb. The brickwork is to have the joints flushed up at every course solid throughout the whole width of the course, and each course is to be laid on a solid bed of mortar. Pointing is to be done as the work proceeds.

The joints of all walls to be plastered are to be raked out 15 mm as the work proceeds to form a key for plaster or screed. All walls are to be built up in regular and horizontal courses and carried out so that no part built is more than 1,2 m higher than any adjoining walls. Mortar beds generally are not to exceed 12 mm thickness.

#### PB5.1.2 Face brick walls

In all faced brickwork the bond must be set out on the first level course of brickwork, at floor level internally and two courses below ground level externally. The bond, if necessary, is to be broken in the centre of panels under windows or to piers between windows. All perpends must be kept true and all courses must be built to gauge rods. Facings must be carefully protected from damage, mortar droppings, paint splashes, etc. during the whole period of the Contract and, on completion, they must be thoroughly cleaned down and left perfect. The practice of oiling facings on completion will not be allowed.

#### PB5.1.3 Reinforced Brick Lintels

Brick lintels are to be built of normal, sound, well burnt, good quality building bricks, similar to the facings where exposed, properly bonded longitudinally and bedded and pointed in cement mortar as described. Special care must be taken to ensure solid bedding, particularly where the reinforcement occurs.

The lintels are to be reinforced with straight continuous mild steel rods of the size and number scheduled. The rods must each extend 300 mm on each side of the opening and are to be evenly spaced across its thickness in the first horizontal joint above the soffit.
Brick lintels in cavity walls must have all rods placed below the solid sections of the walls, excepting for those rods specifically scheduled to occur below the cavity.

Where two or more openings are less than 665 mm apart, the lintel shall be continuous over all such openings and the dividing piers, plus 300 mm bearing at each extreme end as before, shall have such height and reinforcement as scheduled for widest opening spanned.

| Span in mm | Min. height of lintels above soffit course, in brick courses | Reinforcement per half brick thickness of wall above for solid walls | |
|---|---|---|---|
| | | No. of Rods | Dia (mm) |
| 600 | 2 | 1 | 6 |
| 900 | 3 | 2 | 6 |
| 1200 | 3 | 2 | 6 |
| 1500 | 4 | 3 | 6 |
| 1800 | 4 | 3 | 6 |
| 2400 | 6 | 3 | 6 |

In addition to any reinforcing specified in the table above one layer of brick reinforcing shall be placed at every alternate brick course above the lintel. The brick reinforcing thus placed shall extend at least 300 mm on each side of the opening.
All brick lintels are to be supported by two 114 x 38 timber bearers (on edge) for a duration of 7 days. Extreme care shall be taken beforehand to ensure a level and straight support.

PB5.1.4 Damp proof courses

The sheeting is to be cut into strips of the required width and laid on all foundation walls to the full thickness of the walls and without any longitudinal joints. At ends, angles and intersections the sheeting must be lapped 150 mm and sealed.
Under all window sills exposed to the weather, the sheeting must be laid on the brickwork in the first joint immediately below the sill and turned up with an easy bend and tucked into window frame.

Over reinforced brick lintels exposed to the weather, the sheeting must be laid to form damp proof course as detailed above for solid walls and cavity walls.

PB5.1.5 Reinforcing in Brick walls

Reinforcing (brickforce) of an approved manufacture shall be placed on every fourth course in all brick walls. In halfbrick and cavity walls 80 mm wide reinforcing mesh shall be used and 150 mm wide mesh in the case of the one-brick walls.

PB5.1.6 Plaster work

All chases must be cut and electrical conduiting and boxes fixed before any plastering is done. On no account will chasing be allowed in finished plaster work, and if such chasing is necessary, the entire wall surface must be hacked off and replastered.

Except where otherwise described, all external plaster is to be finished with a wooden float and all internal plaster is to be finished with steel trowel, all to perfectly true and even surfaces, free from tool marks and other defects on completion.

All finished surfaces are to be protected from injury. All joints in brickwork are to be well raked out, all surfaces, brickwork and concrete, to be plastered must be brushed down to remove all dirt and dust and be thoroughly wetted directly before plastering. Concrete surfaces must be roughened or hacked as necessary to give a proper key for plaster. The surfaces must then be slashed with coarse cement grout before plastering is commenced. The surfaces of all internal plaster must be steel troweled to a smooth even and true finish. External plaster must be finished to a true and even surface with wood float. Plaster must be returned into reveals and soffit of openings and all angles and edges must be true and straight. All plaster surfaces must be free from blemish and any cracks, blisters, or other defects must be cut out and made good and the whole left perfect at completion. Plaster on walls must be not less than 12 mm or more than 20 mm in thickness, and plaster on concrete work must be not less than 10 mm or more than 15 mm in thickness, except where specifically otherwise described.

PB5.1.7 Slip joints

Slip joints shall be provided between brickwork and concrete slabs and beams by leveling up and steel trowelling smooth the bearing surfaces of brickwork with 3:1 mortar and covering the bearing surface before concrete is cast with 2 layers of 0,500 mm (five hundred micron) black general purpose sheeting membrane. The ends and sides of beams and edges of concrete slabs shall be separated from the brickwork with 12 mm polystyrene placed vertically against the brickwork before the concrete is cast.

PB5.1.8 Beam filling

Unless otherwise specified, beam filling shall be half brick thick, built in cement mortar, cut in between roof timbers and carried hard up to underside of roof covering and flushed up in mortar with a groove formed between covering and mortar. Care shall be taken to protect cladded surfaces from mortar, prior to beam filling.

## PB5.2 Paintwork

All surfaces not being painted, such as face brickwork, sills, floors and stained woodwork, must be covered up and protected against paint and distemper sports before any painting is commenced. All floors must be swept clean and walls dusted down before any paintwork is commenced and no sweeping or dusting must be done while painting is in progress.

All plastered wall; ceiling and similar surfaces must be perfectly dry and in a fit state to receive the finishing's, before the work is put in hand.
All coats of paints, etc. must be thoroughly dry before subsequent coats are applied, and rubbed down where necessary.

All work must be finished to colours approved by the Engineer.

The tints of undercoats must approximate those of the finishing colour and in order to indicate the number of coats applied and to avoid misses when applying a succeeding coat a slight difference shall be made in the tint of each coat.
The Contractor must provide all necessary dust sheets, covers, etc., and shall exercise all necessary care to prevent marking the surfaces of joinery, walls, floors, glass, electrical fittings, etc., and must keep all parts of the works perfectly clean and free at all times from spotting, accumulation of rubbish, debris or dirt arising from the painting operations. Any surface disfigured or otherwise damaged must be completely renovated or replaced as necessary, by the Contractor at his own expense. The premises must be left clean and fit for occupation at the completion of the work.

**PB5.3 Floor and roof slab Finishes**

Where a floated concrete floor finish is specified on the drawings, the requirements of SABS 1200G or GA, whichever is relevant, shall apply.
Floor and roof slabs shall be constructed to line and level as indicated on the drawings.

**PB6 TOLERANCES**

Where tolerances are not specified in the clauses above those generally accepted as re-presenting good workmanship in the building trades shall apply.

**PB7 TESTING**

The Engineer reserves the right to order any tests, whether at place of manufacture or on site, necessary to evaluate the quality of the work and to ensure the finished building conforms to all the specified requirements.

**PB8 FEATURES REQUIRING SPECIAL ATTENTION**

**PB8.1 Formed openings in brickwork**

All formed openings in brickwork shall be plastered on all faces internal to the opening, true to line and level with finished minimum internal dimensions as indicated on the plans.

**PB9 <u>MEASUREMENT AND PAYMENT</u>**

**PB9.1 <u>Schedule Items</u>**

PB9.1.1 Brickwork

Brickwork, if measured as a separate item, shall be measured in square meter of the nett brick-walled area (with the wall width and type of brick-finish, indicated). No deductions will be made for small openings such as air bricks, etc. The tendered price per square meter of brickwork shall include also for the following:

a) Brick forcing (every fourth layer)

b) Reinforcing of lintels

c) Miscellaneous items built into brickwork shown on the drawings such as air bricks.

PB9.1.2 Wall, ceiling, roof and floor finishes

Cement plaster on walls and ceilings, roof screeds, floor screeds, paint and any other finish described or specified, shall if measured as separate item be measured in square meter of the nett surface area. No deductions shall be made for small openings nor shall additions be made for small protrusions and reveals. No separate payment shall be made for the processes involved and material supplied for the complete painting of all fixtures and fittings, as specified herein and the costs thereof shall be included in the tendered price for the supply, manufacturing and erection of all such items to be erected.

PB9.1.4 Services:

a) Reticulation of services shall be measured per lump sum. The tendered rate for the specified service shall include for the supply, erection/construction, installation and commissioning of the services/system as indicated on the drawings. The tendered rate shall include for all fittings, specials, etc. The rates shall include for all plant, material, labour and other related costs.

The distribution board shall have ample capacity to be extended for future extensions to the electrical reticulation of the building. The distribution board shall have an additional 50 A circuit breaker to cater for the connection of the luminaire lighting system to be installed by on a nominated sub-contract.

b) The installation of the luminaire lighting system in the pump hall area shall be done by a specialist nominated sub-contractor.

c) The lump sum tendered under for the connection of services shall include all costs incurred for the installation and commissioning of the mentioned services under this item. The tendered lump sum shall include for all fees and duties payable to the Local Authority/Council or Bulk Service Provider for the application and connection of the service to the municipal service network. All connections to the municipal service network shall be to the specification and regulation of the relevant Local Authority.

# C3.5: MANAGEMENT

- C3.5 MANAGEMENT

## C3.5.1 MANAGEMENT OF THE WORKS

### C3.5.1.1 Applicable SANS and SABS Standards

SANS 1200 Standardized specification for civil engineering construction listed in C3.4.1.1 are applicable.

- C3.5.1.2 Particular/Generic Specifications

Not applicable.

- C3.5.1.3 Methods and Procedures

**(a) Maintenance of access and streets**

The operation of construction vehicles on existing roads or streets, or streets that have been completed to the level of subbase, base or surfaced treatment, shall be limited to the traffic with an axle load not exceeding that allowed by the Road Traffic Ordinance of the authority concerned, or any amendment thereof. Hauling is strictly forbidden on sections of road or streets that have been completed as described above. The Contractor shall make use of a temporary haul road, or where not practically possible, program his work in such a manner that the haulage materials shall be restricted to that required for the particular section of street. No additional payment shall be made for the use of temporary haul roads and all relevant costs shall be deemed covered by the appropriate rates.

No additional payment will be made for the construction of temporary access roads to the construction site, borrow areas or the spoil sites, except for payment made under payment item 15.01 in the Bill of Quantities.

Should the Contractor make use of existing roads or streets for haulage, he shall be held responsible to clear the road or street of any spillage caused by his activities within one (1) day after such spillage occurred. No additional payment will be made for the cleaning of the spillage.

**(b) Blasting operation**

All blasting shall be carried out by a competent, registered blaster. The blaster shall furnish to the Engineer copies of all the permits required to purchase, transport, use and dispose of unused blasting material. The Contractor shall inform the commander of the local SAPS at least 1 day prior to the date and time blasting is about to take place.

No blasting operations shall take place on weekends or holidays or weekdays after 17h00.

The Contractor shall ensure that sufficient suitable material, to the satisfaction of the blaster, is available and in place before the blast is initiated.

**(c) Normal working hours**

Normal working hours shall be from 07h00 until 17h00 on weekdays from Monday to Friday. It shall be from 07h00 until 13h00 on Saturdays.

Work on other days will only be allowed after written approval has been granted by the Engineer.

**(d) Interference with municipal staff and operations**

The Contractor shall ensure that none of his staff interfere in any way with any municipal staff member or their functions.

Any person ignoring this shall be removed permanently from site, all at the expense of the Contractor.

**(e) Access for other contractors**

The Contractor shall provide reasonable access to other Contractors carrying out work on the site from time to time, as and when such access is required. The Contractor is entitled to request reasonable notification of at least 24 hours before access by others is required.

The contractual responsibilities of the Contractor shall remain in full force in spite of the other Contractors having access to the site.

**(f) Giving notice of work to be covered up**

The Contractor shall give the Engineer at least 24 hours' notice prior to a request for examination of materials or work to be covered up. This request must be made in the request book on site.

Should such a request be made and upon inspection the Engineer found that the works or materials are not yet ready for inspection, the Contractor shall reimburse the Engineer within 30 days of invoice for all expenses incurred as a result.

**(g) Sequence of the works**

The Contractor shall execute the Works in accordance with the approved programme.

- C3.5.1.4 Quality plans and control (Testing)

Refer to Section C3.4.2.5(b).

- C3.5.1.5 Environmental Management Plan (EMP)

**(a) Demarcation of the site**

For the purpose of the EMP, the site shall be demarcated into two distinct areas, viz.;

(i) The construction camp comprising all buildings, hostels, offices, lay down yards, vehicle wash areas, fuel and material storage area, batching areas and other infrastructure that is required for the running of the job.

(ii) The working area in which construction activities are permitted to take place. No infrastructure, permanent lay down or storage areas shall be established in this working are unless specified in the project specification or prior approval is obtained from the Engineer.

**(b)** Construction camp

The Contractor shall provide the Engineer with a plan showing the positions of all buildings, yards, vehicle wash areas, batching areas and other infrastructure for approval by the Engineer at least ten (10) days prior to the commencement date.

**(c)** Fencing of site

If a temporary fence is required, the Contractor shall erect and maintain such a fence (demarcating the boundary of the working area, construction camp and access roads) to the satisfaction of the Engineer.

This fence shall be erected before the commencement of any other work on site. The fence shall be removed after completion of the project and the site reinstated to its original state.

**(d)** Workshops

All workshops shall be located inside the demarcated construction camp area as approved by the Engineer prior to establishment. The workshop shall have a smooth impermeable concrete floor sloped to one side where oil is trapped in an oil trap or sump to contain any spillages of substances such as oil.

Waste material shall be disposed of in accordance with the national, regional and local by-laws regulations and by-laws. The waste shall be regularly removed and disposed of at an approved site.

**(e)** Eating areas

The Contractor's employees shall eat in a designated eating area indicated on the drawing approved by the Engineer. The Contractor shall provide adequate shade and provide scavenger proof and waterproof refuse bins. Cooking will only take place in this area on well-maintained gas cookers with fire extinguishers present. Open fires other than the gas cookers shall not be allowed.

**(f)** Watchmen

The Contractor shall have a watchman present on site during non-working hours and on holidays to ensure the safety of plant and materials on site.

**(g)** Ablution facilities

The exact location of toilets shall be approved by the Engineer. The Contractor shall provide the toilets and maintain and service it on a daily basis. The toilets shall be kept clean. Regular inspections shall be conducted by the Engineer. Burial of waste on site is strictly forbidden. Leaking or broken toilets shall be removed and replaced immediately by the Contractor.

**(h)** Solid waste

"Solid waste" refers to construction debris, chemical waste, tins, cans, paper, wrappers, excess concrete, waste timber, etc.

The Contractor shall establish a waste control and removal system. He shall submit a method statement to the Engineer for approval prior to commencement.

Appropriate solid waste containers shall be provided for the storage of waste. The containers shall be water proof. The waste shall be removed on a regular basis to prevent the accumulation of waste on site and disposed of at an approved waste site.

**(i)** Wastewater

Water shall be used sparingly on site. Where possible, wastewater shall be recycled. A wastewater management plan shall be submitted to the Engineer for approval 10 days prior to the commencement date.

The management plan shall detail the expected extent of the contamination of each wastewater stream and how the Contractor plans to deal with it.

Wastewater shall be prevented from flowing into the Olifants River.

**(j)** Fuel storage area

Fuel shall be stored on site in a depot at a location as agreed with the Engineer. The Contractor shall ensure that liquid fuels are stored in tanks with lids. The tanks shall be

placed on a sloped smooth concrete surface with an oil trap on the lower end to collect any spillage.

Fuel shall be kept under lock at all times.

**(k)** Concrete batching area

Cement and concrete is hazardous to the environment due to the high pH of the material and the chemicals it contains.

The Contractor shall furnish to the Engineer for approval a method statement for the mixing of concrete. Concrete shall not be mixed directly on the ground. Care must be taken to ensure that wastewater and contaminated material is collected and disposed of correctly.

**(l)** Equipment maintenance and storage

All equipment and vehicles shall be kept in good working order and serviced regularly. Leaking equipment shall be repaired immediately or removed from site. Where possible, maintenance and service shall take place only in the workshop. Permission must be obtained from the Engineer if the aforementioned cannot be adhered to.

The Contractor shall demarcate an area in which the equipment and vehicles may be stored. The location shall be approved by the Engineer.

**(m)** Materials handling, use and storage

The Contractor is responsible to ensure that all material suppliers are aware of the EMP's restrictions and conditions. The Contractor shall be held responsible should deliveries not comply with the EMP requirements.

The Contractor shall comply with all relevant national, regional and local legislation with regard to the transport, use and disposal of hazardous material.

The Contractor shall furnish to the Engineer a list of all hazardous materials to be used on site, together with the handling, storage and disposal procedures of the materials. This information shall be available to all personnel on site.

The location of the hazardous material store shall be within the demarcated construction camp area. The location shall be approved by the Engineer.

Where possible, the Contractor shall ensure that the refueling of vehicles takes place only at the fuel storage area in the construction camp. If this is not possible, the Contractor shall obtain permission from the Engineer to refuel at any other place. Contaminated material and wastewater at the refueling area shall be contained and disposed of correctly.

**(n)** Emergency procedures

The Contractor shall ensure that emergency procedures for the following situations are submitted for approval to the Engineer;

Fire – the Contractor shall inform the relevant authority immediately as soon as a fire starts. The Contractor shall ensure that his staff and subcontractors are fully aware of the procedures to be followed in the event of a fire.

Spillages – the Contractor shall ensure that his staff and subcontractors are fully aware of the procedures to be followed in the event of a spillage. The Engineer must be informed immediately about a spill. The Contractor shall ensure that the necessary materials and

equipment is on site to deal with spills and leaks. The cleanup of spills and leaks shall be for the account of the Contractor.

**(o)** Care of surrounding areas

The Contractor shall ensure that no contamination of or damage to the surrounding areas or watercourses shall occur as a result of any of his activities during construction.

- C3.5.1.6 Planning and programming

  The programme to be furnished by the Contractor to the Engineer for approval shall be in the form of a Gantt chart. The critical path shall be indicated in red.

- C3.5.1.7 Other Contractors on site

  No other road construction contractors will be on site during the implementation of the project.

- C3.5.1.8 Recording of weather

  The Contractor shall record the weather conditions on a daily basis in the site diary. Rainfall figures and strong wind which could delay the Works shall be noted and recorded.

- C3.5.1.9 Format of communications

  All communication regarding the Contract shall be channelled through the Engineer or his representative.

- C3.5.1.10 Planning and programming

  Management meeting shall be held monthly on site for the duration of the project on dates to be agreed upon.

- C3.5.1.11 Daily records

  Daily records of plant, personnel, materials, etc., shall be kept daily by the Contractor and noted in the site diary to be supplied by the Contractor before commencement date of the project.

## C3.6 HEALTH AND SAFETY

### C3.6.1 Health and Safety Requirements and Procedures

It is a requirement of this contract that the contractor shall provide a safe working environment and to direct all his activities in such a manner that his employees and any other persons who may be directly affected by his activities are not exposed to hazards to their health and safety.

To this end the contractor shall conform to all the stipulations of the Occupational Health and Safety Act (Act 85 of 1993) and the regulations applicable at the time of tender, which inter alia provide for the designation of a health and safety representative (or representatives) when an employer has more than 20 employees in his employ.

This specification covers the health and safety requirements to be met by the Contractor to ensure a continued safe and healthy environment for all workers, employees and subcontractors under his control and for all other persons entering the site of works.

This specification shall be read with the Occupational Health and Safety Act (Act No 85 and amendment Act No 181) 1993, and the corresponding Construction Regulations 2025, and all other safety codes and specifications referred to in the said Construction Regulations.

In terms of the OHSA Agreement in Section (C1.4) of the Contract document, the status of the Contractor as mandatory to the Employer (client) is that of an employer in his own right, responsible to comply with all provisions of OHSA 1993 and the Construction Regulations 2025.

This safety specification and the Contractor's own Safety Plan as well as the Construction Regulations 2025, shall be displayed on site or made available for inspection by all workers, employees, inspectors and any other persons entering the site of work.

The following are possible risks associated with this project:

- Soil collapse
- Strike of underground utilities
- Confined space entry
- Struck-by accidents
- Rigging and lifting failures
- Vehicle collisions
- Manual handling strains
- Environmental exposure
- Hydrostatic testing pressure risks

Additional risks may arise from specific methods of construction selected by the Contractor which are not necessarily covered in the above.

### C3.6.2 Protection of the Public

The Contractor shall fence or otherwise protect all parts of the works dangerous to the safety of the public or property.

All excavations are to be barricaded. Barricades shall consist of at least three 19mm diameter hemp ropes or 2,5mm wires, or more if required, stretched tightly between poles, standards, etc. securely planted in solid ground, well clear of the excavation and enclosing the spoil from the excavations.

The poles, standards, etc. shall not be more than 15m apart, but if circumstances require it they shall be placed closer. The ropes or wires shall be stretched tight approximately 0,5m, 1,0m and 1,5m above the ground. Red flags shall be fixed to the barricades at distances not exceeding 15m along excavations for pipelines and structures, at the end of trenches, at manhole excavations, etc. All posts shall be painted white with bands 0,3m wide of red reflecting material painted around at 0,3m spacing.

All protection, lighting and barricading measures shall be carried out to the satisfaction of the Engineer.

No specific payment will be made for watching, lighting and protecting the costs of which will be deemed to be included in the rates tendered for excavation

**C3.6.3 Barricades and Lighting**

Areas where a restriction or prevention of unauthorised persons accessing (e.g. trenches, excavations, wall and floor openings, etc.) is required will be provided with barricades and guards to prevent entry.

All barricading shall be of the rigid type, unless otherwise approved by the Agent, and secure in assembly.

All openings and edges must be barricaded with solid barricading. Physical barriers and warning signage shall be provided to prevent persons falling into openings in floors, stairwells, staircases, open-sided buildings and any structure in the course of erection, where dangerous openings exist.

**C3.6.4 Traffic Control on Roads**

Traffic control and safety shall be done in accordance with the South African Traffic Safety Manual, with the relevant signs, flagmen, barriers, etc being provided at the various access points. Traffic control shall be done in co-operation with local traffic officials. All laws and regulations applicable on the public road system are enforceable on the construction site.

Due to the activities involved in the construction phase, trucks and other related vehicles will be using the roads leading to the site. These vehicles will need to be roadworthy and abide by the speed limits. The Contractor should ensure that additional construction vehicles do not produce excess noise and that generation of dust is kept to a minimum. Contractors must ensure that their vehicles are road-worthy and that loads are properly secured.

**C3.6.5 Measures Against Disease and Epidemics**

**Compensation for Occupational Injuries and Diseases**

The Contractor shall submit, and shall ensure that each Subcontractor submits evidence of current registration and a Letter of Good Standing with the Compensation Fund or, with a licensed compensation insurer. This shall be renewed as and when required to remain valid for the duration of the Contract.

**Occupational Hygiene**

The Contractor shall identify the occupational stressors which could include exposure to chemical and biological hazards, noise, dust, vibration, heat, etc., to which any person may be exposed as a result of his work activities.

Once the occupational stressors have been identified the risk shall be assessed in accordance with statutory requirements, including the nature of the stressor, the work process, the exposure severity and duration, possible adverse effects etc.

The Contractor shall provide details of all control measures that shall be implemented to eliminate or reduce exposure to occupational stressors. Where mechanical means are employed he shall provide details of how these

shall be maintained to ensure that they operated at maximum efficiency.

The Contractor shall provide and adhere to effective monitoring procedures. These procedures shall include the planning, carrying out and recording of the results of the measurement programme. This is to confirm the effectiveness of the implemented control measures and the results shall be made available to the Agent on request.

Necessary measures must be adopted and implement occupational health and safety measures to reduce and eliminate the escalations of infections in workplaces against disease, epidemics and pandemics on site as and when directed by the Department of Labour.

## C3.6.6 Aids Awareness

This generic specification contains requirements applicable to the reduction of the risk of transfer of the HIV virus between and among construction workers and the local community through the following four strategies:

- raising awareness about HIVAIDS;
- providing construction workers with access to condoms;
- HIV counseling, testing and referral services; and
- Sexually Transmitted Infection diagnosis and treatment.

**Objectives**

The objectives are to:

a) reduce the risk of transfer of the HIV virus between and among construction workers and the local community;
b) raise awareness amongst construction workers and the local community of the risk of infection with the HIV virus;
c) promote early diagnosis; and
d) assist affected individuals to access care and counselling.

**General requirement**

The contractor shall, in order to satisfy the objectives stated under objectives:

a) make condoms complying with the requirements of SABS ISO 4074 available to all construction workers at readily accessible points on the site, suitably protected from the elements, for the duration of the contract;
b) either place and maintain HIV/AIDS awareness posters of size of not less than A1 in areas which are highly trafficked by construction workers, or provide construction workers with a pamphlet, in languages largely understood by construction workers, which reinforce the outcomes of the HIV Awareness Programme stated in 5.2.3
c) encourage voluntary HIV/STI testing;
d) provide information concerning counselling, support and care of those that are infected services; and
e) comply with the requirements of HIV awareness programme.

**HIV awareness programme**

i. The contractor shall:

a) engage a qualified service provider as described in the scope of works to conduct an HIV Awareness Programme which is structured to achieve the outcomes stated in 5.2.3 for contract workers as soon as a construction workers camp is established and populated or, where no such camp is established, within two weeks of the commencement of a significant portion of the works and at subsequent intervals, if any, provided for in the scope of works; and
b) arrange for, provide a suitable venue, and instruct all construction workers to attend the HIV Awareness Programme and notify the Employer's Representative of the date, time and venue whenever a session with construction workers is conducted.

ii. The contractor shall do nothing to dissuade construction workers from attending such an HIV Awareness Programme and shall take all reasonable steps to ensure that a minimum of 90% of construction workers engaged in the works attend such a programme, when it is conducted.

iii. The outcomes of the HIV Awareness Programme shall as a minimum, result in contract workers exposed to such a programme being able to:
- communicate the existence of problems of HIV and be able to outline the consequences of transmission of HIV to or from the local community
- recall and communicate the mode of HIV transmission and preventative measures including the proper use of the condom.

# PART C4 SITE INFORMATION

## C4.1. SITE LOCATION

The Mbangwane area is located in Mpumalanga, South Africa, near the southern border with Eswatini, within the Ehlanzeni District Municipality. It is predominantly inhabited by Swazi-speaking communities, specifically under the Mahlalela Tribal Authority. This authority includes settlements such as Embuzini and surrounding villages, with its jurisdiction extending close to the borders of Eswatini and Mozambique. Surrounding areas include Tonga, approximately 26 kilometres south of Mbangwane, reachable via the R571, and Malelane, about 62 kilometres southeast, accessible via the R571 and R40, which serves as a gateway to the Kruger National Park. The project area lies within the Mahlalela Tribal Authority, situated east of the R571 from the Mananga border to Tonga. The region is characterized by rural settlements, farmland, and the strong cultural presence of the Mahlalela Swazi community. Coordinates for Mbangwane: Latitude: 29°49'45.80"S and Longitude: 31°53'19.59"E

*Figure 0:1 - Project Locality Map*

## C4.2. CLIMATE CONDITION

Mbangwane is in the lowveld of Mpumalanga province experiencing a subtropical climate that features hot humid summers with potential thunderstorms and mild dry winters. Winter conditions are experienced between June and August with temperatures ranging between 13°C and 27°C. Summer conditions are experiences between November and March with highest temperature exceeding 35°C. Heaviest precipitation usually occurs during the summer (October and March).

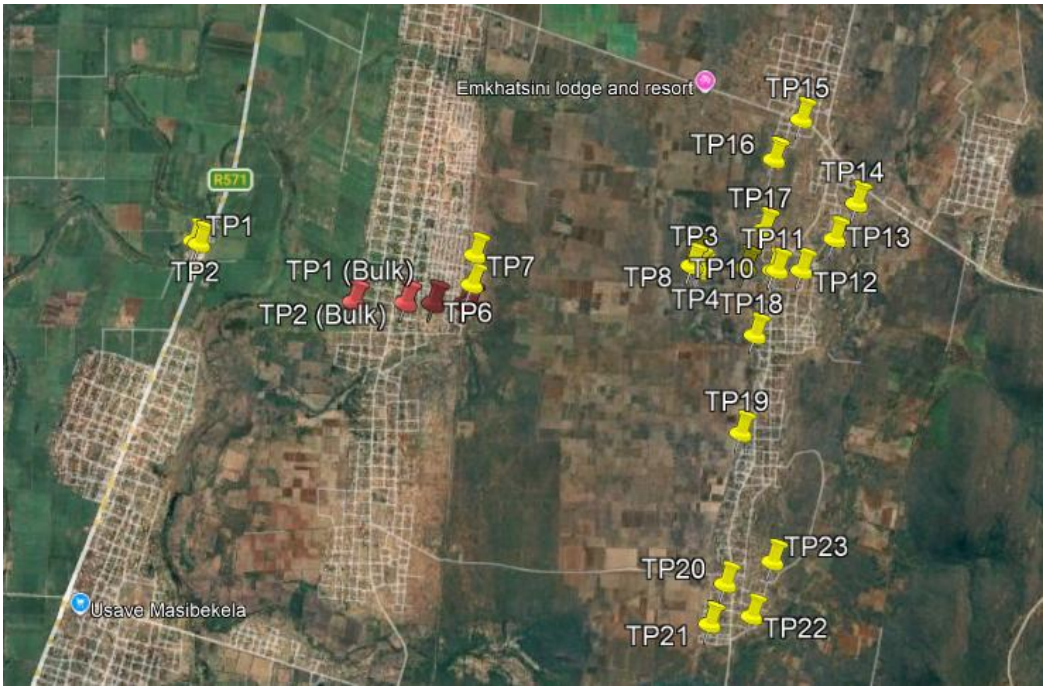
## C4.3. GEOTECHNICAL INVESTIGATION

The investigation comprised a desk study, field investigation and laboratory testing programme. A total of twenty-eight (28) test pits were excavated across the project area, comprising five (5) test pits within the WTW/BPS area, five (5) test pits along the Bulk Pipeline alignment and eighteen (18) test pits within the Reticulation Network. Twenty-eight (28) representative disturbed samples were recovered and submitted to SGS Matrolab for laboratory testing, including particle size distribution analyses, Atterberg Limits determinations, Foundation Indicator testing, Modified AASHTO compaction testing, California Bearing Ratio (CBR) testing and selected chemical testing.

The investigation indicates that the project area is predominantly underlain by Quaternary alluvial and colluvial deposits, residual granitic soils and volcanic-derived colluvial materials associated with the Lebombo Group. The Bulk Pipeline alignment traverses both Clarens Formation sandstone and Letaba Formation volcanic rocks, whilst the WTW/BPS area is underlain predominantly by residual granitic and transported colluvial materials. The Reticulation Network is characterized by residual and colluvial gravelly soils derived from both granitic and volcanic parent materials.

Laboratory testing indicates that the majority of the materials encountered comprise of gravelly sands, sandy gravels and silty sands with moderate to high gravel contents. Plasticity Index values ranged from non-plastic to 25%, whilst CBR values obtained at 95% Modified AASHTO density range from approximately 3.8% to 22.0%. The highest CBR values were generally associated with dense gravelly soils derived from residual granite and volcanic colluvium, whilst the lower values were recorded within isolated clay-rich horizons and transported materials.

Ground water was not encountered within the majority of the test pits during the investigation. Localized wet conditions were observed within TP9, TP19 and TP20 and are interpreted to represent seasonal moisture accumulation and perched groundwater conditions associated with local drainage pathways. These occurrences are considered localized and do not indicate the presence of a continuous shallow groundwater table across the project area.



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The field investigation demonstrated that all test pits could be excavated using a tractor-loader-backhoe (TLB). Refusal encountered during excavation appears to be associated primarily with dense gravel horizons, cobbles, boulders, granite core stones and partially weathered volcanic rock rather than a continuous shallow bedrock horizon. Although widespread hard excavation is not anticipated, localized difficult excavation conditions may be encountered within portions of the Bulk Pipeline alignment and within isolated sections of the Reticulation Network.

The majority of the materials encountered appear to be suitable for re-use as general trench backfill, subject to appropriate selection, moisture conditioning and compaction. Bedding, haunching and pipe surround materials should comprise selected granular materials free from organics, clay lumps and oversized particles. Localized clay-rich and moisture-sensitive materials encountered within TP9, TP18, TP19, TP20, TP21 and TP22 may require selective handling and should not be used within critical pipe support zones without prior approval.

Based on the results of the investigation, the overall geotechnical conditions are considered favorable for the proposed upgrading of the Mbangwane Water Supply Scheme. No geotechnical conditions were identified that are expected to preclude the proposed development, provided that appropriate construction controls, material selection procedures and ground water management measures are implemented during construction.

## PART C4: SITE INFORMATION

**ANNEXURE A: DRAWINGS FOR TENDER PURPOSES**

# C5.2 GOVERNING CONDITIONS OF CONTRACT

This Contract shall be governed by the General Conditions of Contract for Construction Works, Third Edition (2015), issued by the South African Institution of Civil Engineering (SAICE), hereinafter referred to as GCC 2015.

GCC 2015 shall be read together with the Contract Data and the Special Conditions of Contract contained in this tender document. In the event of any ambiguity, discrepancy or inconsistency, the Special Conditions of Contract and Contract Data shall take precedence over the General Conditions of Contract, but only to the extent of the applicable amendment or inconsistency.

Any reference in this tender document to the General Conditions of Contract 2010 or any other edition shall be deemed to refer to the General Conditions of Contract for Construction Works, Third Edition (2015), unless expressly stated otherwise.